
Sector insights: what is driving climate change action in the world's largest companies?

Global 500 Climate Change Report 2013

12 September 2013



Report writer and global advisor

The evolution of CDP

With great pleasure, CDP announced an exciting change this year.

Over ten years ago CDP pioneered the only global disclosure system for companies to report their environmental impacts and strategies to investors. In that time, and with your support, CDP has accelerated climate change and natural resource issues to the boardroom and has moved beyond the corporate world to engage with cities and governments.

The CDP platform has evolved significantly, supporting multinational purchasers to build more sustainable supply chains. It enables cities around the world to exchange information, take best practice action and build climate resilience. We assess the climate performance of companies and drive improvements through shareholder engagement.

Our offering to the global marketplace has expanded to cover a wider spectrum of the earth's natural capital, specifically water and forests, alongside carbon, energy and climate.

For these reasons, we have outgrown our former name of the Carbon Disclosure Project and rebranded to CDP. Many of you already know and refer to us in this way. Our rebrand denotes our progress as we continue to catalyze action and respond to business, finance, investment and environmental needs globally.

We now have a bolder, more dynamic look and logo that reflects the scale of the work we must undertake in the coming years to move the markets ahead of where they would otherwise be on these issues and realize truly sustainable economies.

- ▶ **Over 5,000 companies from all over the world have been asked to report on climate change through CDP this year;**
- ▶ **81% of the world's 500 largest public companies listed on the Global 500 engage with CDP to enable effective measurement of their carbon footprint and climate change action;**
- ▶ **CDP is a not-for-profit organization. If you would like to support our vital work through donations or sponsorship opportunities, please email paul.robins@cdp.net or telephone +44 (0) 7703 184 312.**



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To read 2013 company responses in full please go to
www.cdp.net/en-US/Results/Pages/responses.aspx

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CEO Foreword



As countries around the world seek economic growth, strong employment and safe environments, corporations have a unique responsibility to deliver that growth in a way that uses natural resources wisely. The opportunity is enormous and it is the only growth worth having.

This year we passed a significant landmark of 400ppm of carbon dioxide in the atmosphere and are rapidly heading towards 450ppm, accepted by many governments as the upper limit to avoid dangerous climate change. The Intergovernmental Panel on Climate Change (IPCC) 5th assessment report (AR5) strengthens the scientific case for action.

Fears are increasing over future climate change impacts as we see more extreme weather events, Hurricane Sandy the most noted with damages totalling some \$42 billion¹. The unprecedented melting of the Arctic ice is a clear climate alarm bell, while the first 10 years of this century have been the world's hottest since records began, according to the World Meteorological Organization.

The result is a seismic shift in corporate awareness of the need to assess physical risk from climate change and to build resilience.

For investors, the risk of stranded assets has been brought to the fore by the work of Carbon Tracker. They calculate around 80% of coal, oil and gas reserves are unburnable, if governments are to meet global commitments to keep the temperature rise below 2°C. This has serious implications for institutional investors' portfolios and valuations of companies with fossil fuel reserves.

The economic case for action is strengthening. This year, we published the 3% Solution² with WWF showing that the US corporate sector could reduce emissions by 3% each year between 2010 and 2020 and deliver \$780 billion in savings above costs as a result. 79% of US companies responding to CDP report higher ROI on emission reductions

investments than on the average business investment. Meanwhile, governments are taking new action: The US Administration has launched its Climate Action Plan, with a new emphasis on reducing emissions from utilities; China is developing air pollution measures and moving toward pilot cap and trade schemes; the UK Government has mandated greenhouse gas emissions reporting for all large listed companies; the EU is looking at improving environmental and other reporting.

The pressure on corporations, investors and governments to act continues. At CDP, we have broadened our work to add forests to climate and water so our programs now extend to an estimated 79% of natural capital, by value³. To reflect this, we rebranded at the start of the year from the Carbon Disclosure Project to CDP and are increasing our focus on projects to accelerate action. One explores how corporations influence public policy on climate change both positively and negatively. Some corporations are still acting – both directly and through trade associations – to prevent the inevitable: nations need sensible climate regulation that protects the public interest over the long term.

As countries around the world seek economic growth, strong employment and safe environments, corporations have a unique responsibility to deliver that growth in a way that uses natural resources wisely. The opportunity is enormous and it is the only growth worth having.

Paul Simpson
CEO CDP

¹ New York State Hurricane Sandy Damage Assessment; Governor Andrew Cuomo; November 12, 2012 <http://www.governor.ny.gov/press/11262012-damageassessment>
² <https://www.cdproject.net/CDPResults/3-percent-solution-report.pdf>
³ Based on findings from the report Natural Capital at Risk: The Top 100 Externalities of Business, published by TEEB for Business Coalition in April 2013.

Investor Perspective



We seek to ensure the companies we invest in achieve and maintain high standards of corporate responsibility which includes the measurement and management of environmental impacts. CDP is a critical partner, for us, in fulfilling this responsibility.



CDP plays an important role in making available to investors high quality comparable data on company environmental performance, covering carbon emissions, water usage and forestry issues. Quantifying a company's use of 'natural capital' enables investors to integrate sustainability issues into investment decision making and company engagement. CDP is therefore working to improve market efficiency and enabling responsible investment.

Increases in extreme weather events, water shortages, pollution, loss of biodiversity and deforestation are among the environmental issues that must be confronted. Projected increases in atmospheric CO₂ levels would lead to climate change that would inflict suffering on humanity and costs to the global economy on a fundamentally different level than that of any financial crisis we have ever experienced. These issues are now well known and broadly accepted. However, the collective response from governments to date has been disappointing in their focus on short term political desires rather than longer term mutual necessity.

The understandable temptation for policy makers and businesses is to focus on the short term pressures of the market and to postpone facing up to environmental challenges until the global economy is restored to full health. This would compound the situation. CDP challenges companies to do more on both reporting and absolute emission reductions. Despite progress in reducing emissions in overall terms by some companies a significant scope for improvement across sectors remains. For there to be a meaningful movement towards absolute emissions reductions, companies must test the concept of a trade-off between economic performance and environmental responsibility. Top performing companies demonstrate that improving environmental

performance can add to the bottom line. The evidence in this report suggests linking incentives and business strategy to environmental metrics is an effective approach in achieving this goal. These are business issues that the investor community can clearly engage with companies on.

At Henderson Global Investors we manage almost £70bn on behalf of our clients who demand top class performance and responsible investment that meets their long-term requirements. We therefore seek to ensure the companies we invest in achieve and maintain high standards of corporate responsibility which includes the measurement and management of environmental impacts. CDP is a critical partner, for us, in fulfilling this responsibility.

Alongside a number of other investors, Henderson is a member of CDP's Carbon Action Initiative. This collaborative engagement exercise is designed to encourage the world's largest companies to move beyond measurement to actively work to reduce emissions over time by setting and publicly reporting emissions reduction targets. We believe that those companies that become leaders in this area and anticipate future regulatory actions, will gain significant business benefits over the long run.

I would like to thank CDP for the work it has done to date, and look forward to its continued success.

Andrew Formica
CEO Henderson Global Investors

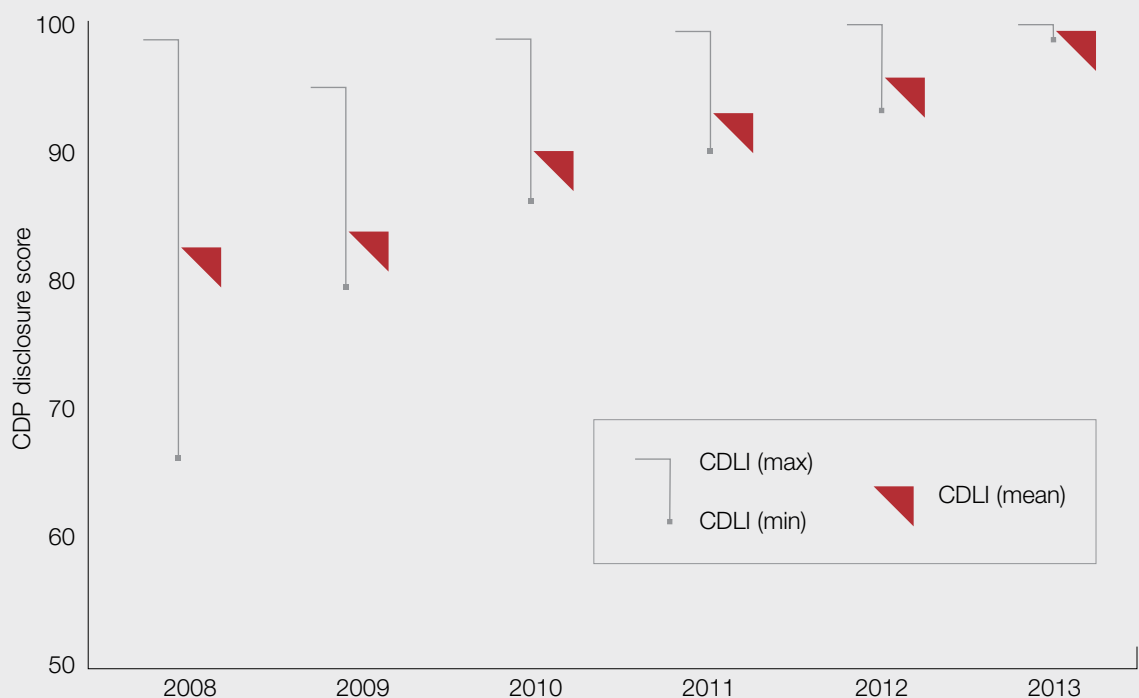
Executive Summary

Businesses increasingly face the dual risks of climate and policy shocks. How companies build and demonstrate their resilience to these climate risks has important implications for their reputation with their stakeholders and for the value of their businesses. It is for these reasons that 722 investors representing US\$87 trillion of assets this year requested that the 500 largest listed companies measure and report what climate change means for their business through CDP's climate change program.

This year, 81% (403) of companies in the Global 500¹ took part. Demonstrating corporate understanding of the need for climate transparency, the quality of the information provided by companies has continually improved. To secure a position on CDP's Climate Disclosure Leadership Index (CDLI), companies must achieve a disclosure score in the top 10% of the Global 500 sample. The minimum score for entering the CDLI has risen to 97% (up from 94% in 2012 and 90% in 2011). The number of performance leaders demonstrating a strong approach to climate strategy and emissions reduction in their CDP responses has increased since last year. This highlights how seriously corporations treat their carbon reporting and that this reporting increasingly translates into action.

This report is written for companies, investors and policy makers that want to understand the climate change related risks and opportunities facing business. It assesses how ten key sectors are addressing these challenges and eliciting competitive advantage from this. It looks at how growing markets for products and services are impacting companies' responses to climate change. It also outlines trends seen in companies which are reporting barriers to actions.

Figure 1: Improving scores for Climate Disclosure Leadership Index (CDLI) over time



¹ The Global 500 are the largest companies by market capitalization included in the FTSE Global Equity Index Series, as at 1 Jan 2013. The Global 500 report is based on the analysis of the 389 responses received by July 1st 2013.

This year's report presents sector-specific analysis. However, three main findings apply across the Global 500 sample:

1

Big emitters are not doing enough to reduce emissions

Total scope 1 and 2 emissions have not changed significantly in the past five years. The 50 largest emitters have increased their emissions since 2009.

2

Companies are yet to report emissions from the most relevant parts of their value chains

Current reporting of indirect scope 3 emissions does not reveal the full impact of companies' value chains.

3

Money talks: financial incentives are driving emissions reductions

Monetary rewards for employees, particularly at board-level, are powerful catalysts of climate action.

Executive Summary continued

1) Big emitters are not doing enough to reduce emissions

Total scope 1 and 2 emissions² from the Global 500 have fallen steadily from 4.2 billion metric tons CO₂e in 2009 to 3.6 billion metric tons CO₂e in 2013. However, scope 1 and 2 emissions from the 50 largest emitters³, which emitted 73% of total emissions in 2013, have increased by 1.65% since 2009 (see Table 1). The five largest emitters of each sector have also seen their scope 1 and 2 emissions increase by an average of 2.3% since 2009⁴ (see sector snapshots for details). This suggests that the biggest emitters, who have the largest impact on global emissions and so present the greatest opportunity for large-scale change, need to do more to reduce their emissions. Policy makers could help to accelerate the necessary change by increasing incentives.

The difference in the direction of change between the Global 500 sample and the largest emitters can to some extent be explained by a change in the number and composition of companies within the Global 500 since 2009. However, emissions of the largest emitters remain globally significant.

Energy, utilities and materials companies, for example, represent less than a quarter of the Global 500 population but are responsible for well over three quarters (87%) of scope 1 and 2 emissions. The proportion of companies from these high emitting sectors has fallen from 26% in 2009 to 23% today. Had the proportion stayed the same, emissions in 2013 would have been significantly higher. Indeed, the scope 1 and 2 emissions of each of these sectors are individually more than double the combined scope 1 and 2 emissions of all other sectors. The drop in scope 1 and 2 emissions from utility companies alone since last year is equivalent to more than the combined scope 1 and 2 emissions from healthcare, consumer staples, consumer discretionary, telecommunication services, IT and financials.

This year the majority of Global 500 companies report emissions reduction targets (84%) and resulting emissions reductions⁵ (75%) in some areas of their business. However, with an increase since 2009 in scope 1 and 2 emissions for the highest emitters across the Global 500 and in each sector, there is a disparity between companies' strategies, targets and the emissions reductions which are required to limit global warming to 2C.

Table 1: Change in emissions reported by the 50 largest emitters in 2013 between 2009 and 2013

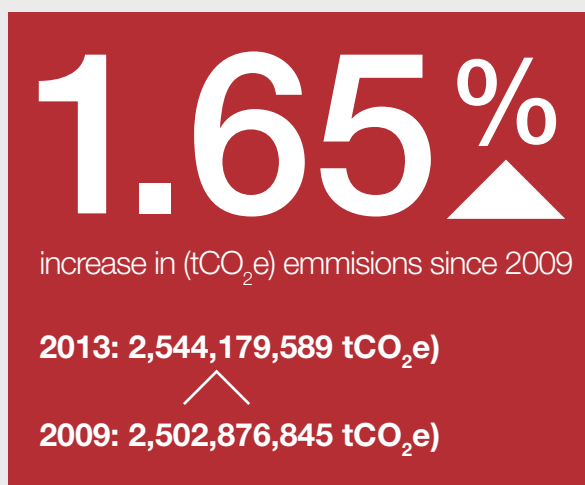
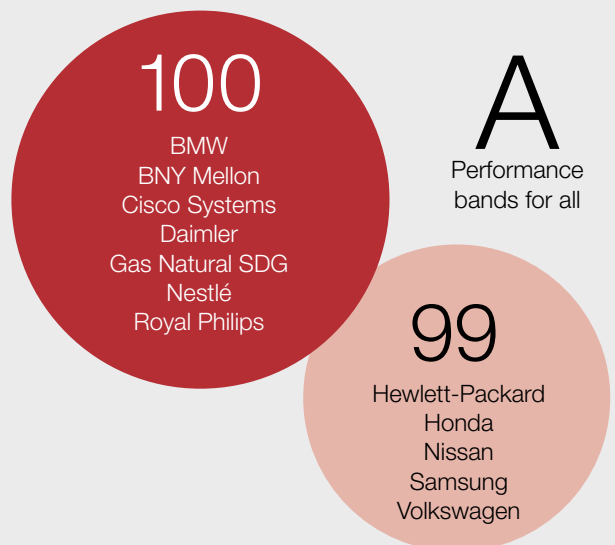


Figure 2: Highest scoring companies across both performance and disclosure



² Total reported scope 1 and 2 emissions. It should be noted that scope 2 figures for 2013 are not directly comparable with 2012 as companies can now incorporate the specific emissions factors associated with renewable energy purchases where supported by an appropriate tracking instruments.

³ Analysis of the 50 largest emitters in 2013 for whom complete emissions data is available from 2009. See Appendix IV.

⁴ Analysis of the 5 largest emitters per sector in 2013 for whom complete emissions data is available since 2009 (50 companies).

⁵ Emissions reductions can be reported against a business-as-usual projection, which might represent a company's overall increase in absolute emissions.

2) Companies are yet to report emissions from the most relevant parts of their value chains

Most companies (97%) disclose scope 1 and 2 emissions from their operations. However, while companies are able to identify the most carbon intensive activities from their value chains, the emissions of nearly half (47%) of these activities are yet to be quantified.

Instead of measuring carbon-intensive activities in their value chain, companies often focus on relatively insignificant opportunities for carbon reductions. Figure 3 shows the disparity in the proportion of companies reporting the different types of scope 3 activities and the actual scope 3 emissions reported for each of these activities. While ‘use of sold products’ is reported by 25% of companies, it accounts for 76% of reported scope 3 emissions. Meanwhile, 72% of companies report emissions from business travel, which accounts for only 0.2% of total reported scope 3 emissions.

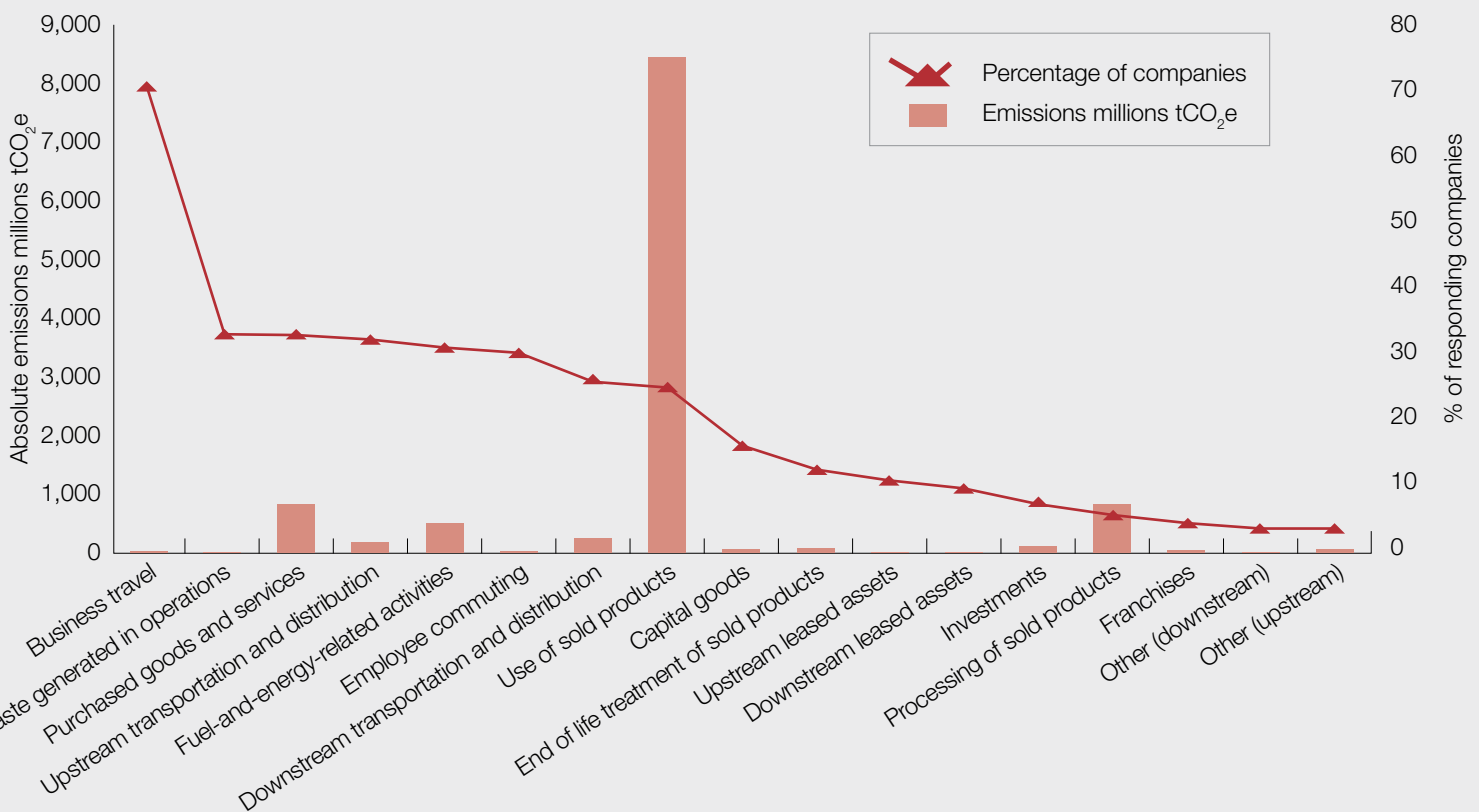
The importance of different scope 3 categories varies between sectors. However, companies do not always report their primary sources of scope 3 emissions. For example, while 83% of financial companies report emissions associated with business travel, only 6%

of them report emissions from their investment activity, where the significant majority of their scope 3 emissions originate. Similarly, only 22% of industrials report emissions from the use of sold products, which is where the majority of their scope 3 emissions come from.

Overall, this suggests that current scope 3 reporting does not reflect the full impact of companies’ activities, and may mislead as to the full carbon impact of a company.

The biggest emitters, who have the largest impact on global emissions and so present the greatest opportunity for large-scale change, need to do more to reduce their emissions.

Figure 3: Percentage of companies reporting scope 3 categories and disclosed emissions by category



Executive Summary continued

3) Money talks: financial incentives are driving emissions reductions

Monetary rewards for employees are powerful tools to drive climate action. Figure 4 shows that companies with monetary rewards are more likely to achieve absolute emissions reductions.

With the exception of the energy sector, companies reporting monetary rewards linked to energy or emissions reductions are more likely to report decreases in emissions. 85% of companies that provide monetary incentives to the board, executive team or all employees, report emissions reductions in the past year. By comparison, only 67% of other companies report reductions in emissions.

4) Other findings from the Global 500

Companies find it easier to quantify risks rather than opportunities

Global 500 companies identify a range of risks and opportunities (see Figures 5 & 6). However, they are more likely to quantify and monetize the impact of risks than opportunities: 54% of companies quantified at least one risk while only 41% quantified at least one opportunity. Companies tend to focus on tangible risks in areas such as carbon taxes or energy prices, whereas the benefits from climate-related opportunities are often less tangible, such as changing consumer behavior. Companies are consequently less likely to quantify the impact of these opportunities. This suggests that businesses may be missing some significant risks and opportunities because valuation methods are unavailable.

The broad categories of climate risk reported are: regulation (84%), physical impacts (83%), and other related risks such as reputation (77%). Within these, reputation, changes in seasonal rainfall, cap-and-trade schemes and carbon taxes are mentioned by 51%, 43%, 42% and 39% of companies respectively. The most common climate-related opportunities mentioned by Global 500 companies are the less tangible changing consumer behavior (53%) and reputation (51%).

Longer payback times linked to strategic advantage

When considering capital investments in emissions reduction activities, companies can face challenges in justifying investments with longer payback periods (three years or more). However, companies that are making longer term investments to reduce their emissions are more likely to report that their climate change strategy affords them a strategic advantage over their competitors. 77% of companies with at least one investment with a payback time of three years or more state that their climate strategy gives them a competitive advantage (65% in 2012). Of the companies which do not have long-term investments in emissions reductions, only 54% report a strategic advantage from their response to climate change (2012: 58%).

Rise in independently verified emissions ensures data quality

71% of responding companies verified their emissions in 2013: a 29% increase from 2012 and almost double the percentage in 2011. Investors and shareholders have always demanded accuracy in a company's financial information. Increasingly, they are demanding accuracy in non-financial information as well. This positive trend should increase the trust in the data and therefore its use.

Figure 4: Percentage of companies with monetary rewards related to energy and emissions reductions reporting decreased emissions

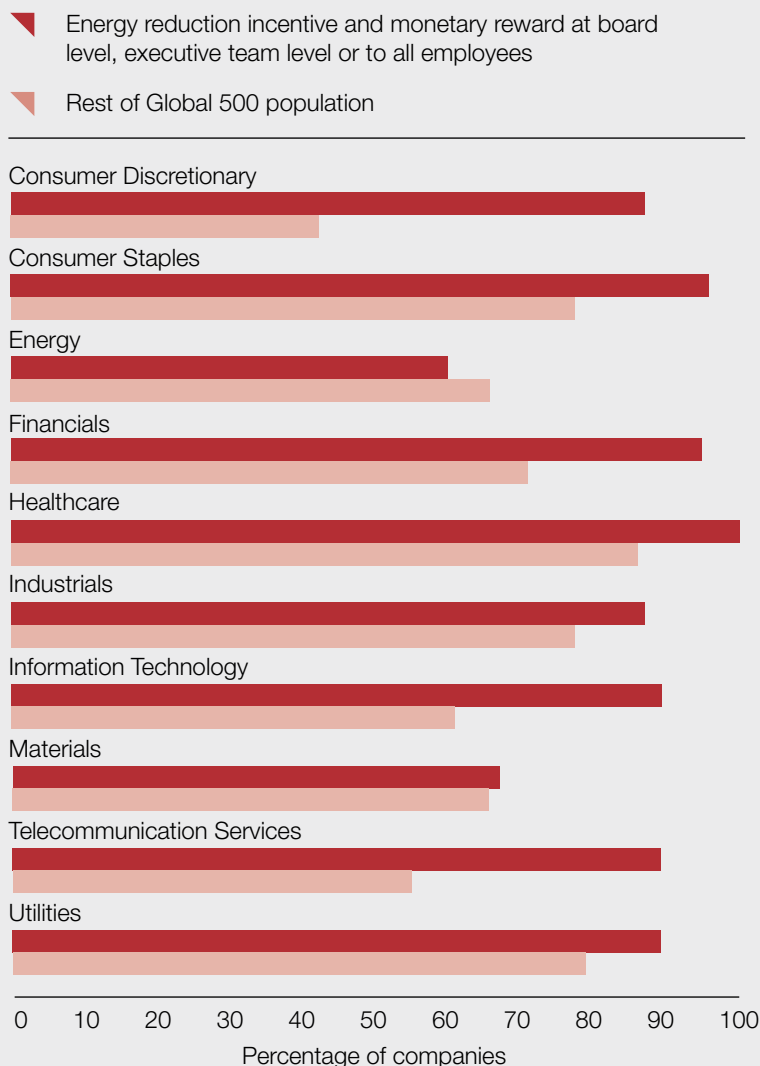


Figure 5: Percentage of companies selecting most commonly reported 5 risks



Figure 6: Percentage of companies selecting most commonly reported 5 opportunities

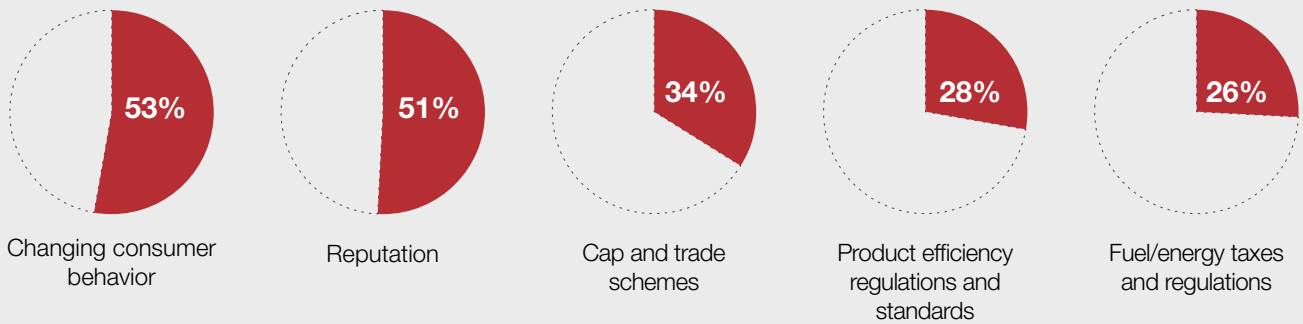


Figure 7: Methods used to drive investments in emissions reduction activities

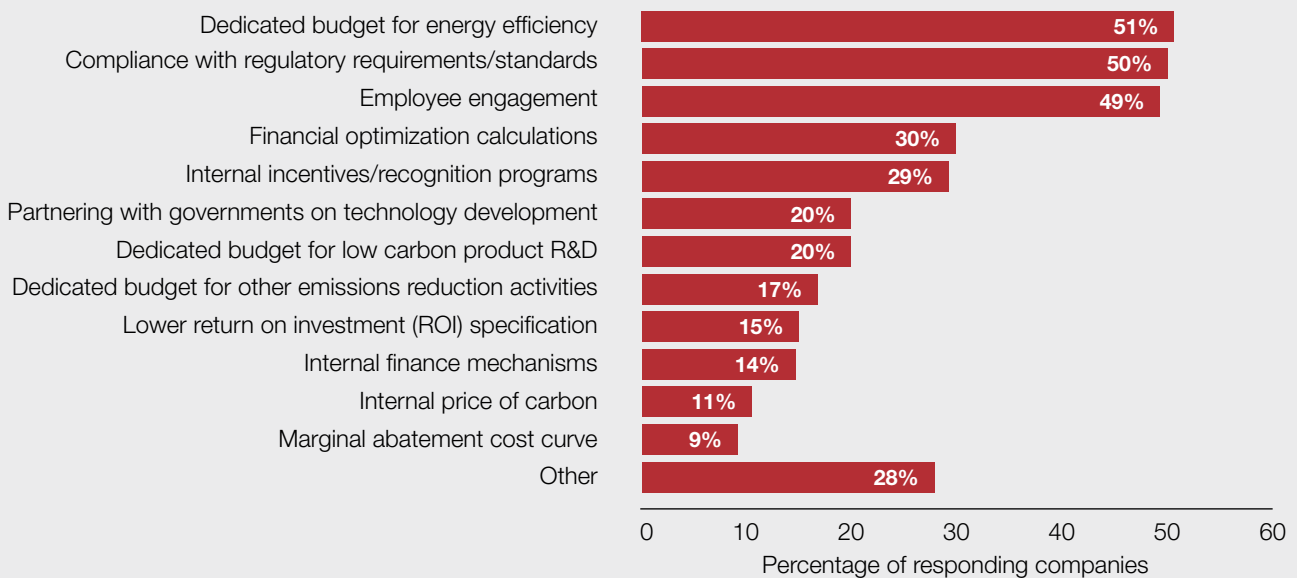
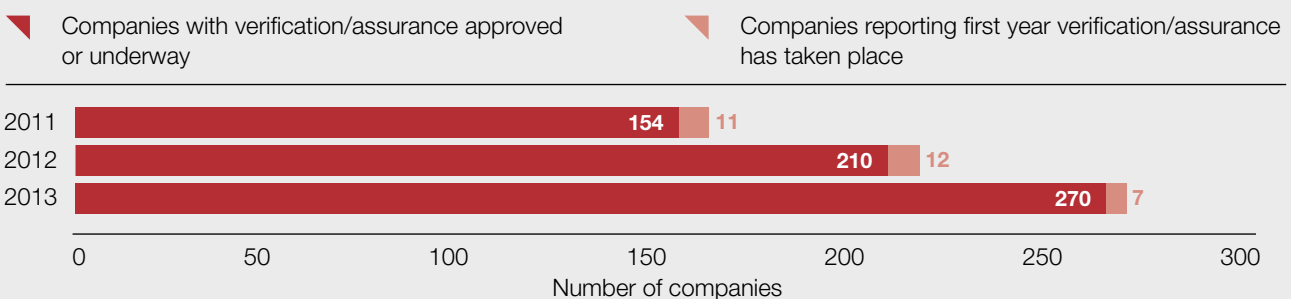


Figure 8: Number of companies with verification/assurance of emissions complete or underway



Global 500 Sector Assessment 2013⁶

Table 2: Assessment of each sector's performance against the Global 500 average

Sector	Performance Assessment			
	Emissions performance	Governance	Strategy	Verification / stakeholder engagement
Consumer Discretionary	Average	Average	Average	Average
Consumer Staples	Significantly above average	Average	Average	Average
Energy	Significantly below average	Average	Significantly below average	Significantly below average
Financials	Average	Significantly below average	Average	Average
Healthcare	Average	Average	Significantly below average	Average
Industrials	Average	Average	Average	Significantly above average
Information Technology	Average	Average	Average	Average
Materials	Significantly below average	Significantly above average	Average	Average
Telecommunication Services	Average	Average	Average	Average
Utilities	Significantly above average	Significantly above average	Significantly above average	Significantly above average

Table 2 compares sectors' climate performance scores with the average score across the Global 500. Across the four categories which were analyzed, utilities significantly outperformed average Global 500 companies while energy under-performed.

Sector overviews:

Consumer Discretionary

Total scope 1 and 2 emissions in consumer discretionary are not as significant as emissions in other sectors. However, the scope 3 emissions are 19 times higher than the sector's total scope 1 and 2 emissions. Emissions of the five biggest emitters have not changed significantly since 2009, although a majority of companies in the sector has reported absolute emission reduction targets as well as a decrease in emissions due to emissions reduction activities. Sector leaders have obtained outstanding results in the CPLI and CDLI, with three companies (BMW, Daimler and Royal Philips) achieving the maximum disclosure score of 100 as well as the highest performance band A. Nevertheless, the sector remains average in its overall performance relative to the Global 500 sample.

Consumer Staples

Consisting of some of the world's biggest consumer brands, companies in consumer staples are heavily influenced by changing consumer preferences. Although 58% of companies report a decrease in absolute emissions, the sector's overall scope 1 and 2 emissions have increased by 2.9% since 2012. However, the sector accounts for only 3% of total scope 1 and 2 emissions reported by the Global 500.

Energy

With one of the highest overall emissions of all sectors – the sector is responsible for 28.3% of total reported Global 500 scope 1 and 2 emissions – efforts to reduce emissions in the energy sector are essential to the global mitigation of climate change. However, 50% of energy companies have a performance band of C or lower. Since 2009, the overall emissions of the ten biggest emitters in the sector have increased by 53%. The sector also has the highest number of companies without emission reduction targets (24%), which companies justify by concerns that targets would constrain growth in their companies and in the wider economy.

⁶ The sector assessment is based on the following areas of the questionnaire: **emissions performance** - reporting of scopes 1, 2, and 3 emissions data and % operational spend on energy costs, energy use, absolute and/or intensity targets, emission reduction activities, change in emissions from prior year. **Governance** - level of oversight, incentives/rewards, risk management approach. **Verification/stakeholder engagement** - verification/assurance, engagement with policy makers, communication of sustainability information to public. **Strategy** - integrated strategy, identified risks and opportunities, emissions trading.

Financials

The financial sector makes up 24% of the respondents but is the lowest emitting sector in the Global 500: it represents only 0.6% of total reported scope 1 and 2 emissions. While 67% of companies report reductions in their emissions since 2012, there is a general lack of understanding of the full impact of companies' value chains. Indeed, only 6% of financials report the carbon impact of their investments, which would be their main area of scope 3 emissions.

Healthcare

Representing only 0.8% of total reported Global 500 scope 1 and 2 emissions, the healthcare sector has a limited impact on global emissions. Nevertheless, 57% of companies report a decrease in absolute emissions since 2012 (total decrease of 4.9%). Consistent drivers for emissions reductions are energy efficiency activities such as green information technology and building efficiency.

Industrials

Industrial companies will play an important role in the transition to a low carbon economy and 97% of industrial companies report that their products and services help reduce emissions. However, only 22% of companies in the sector report the emissions from the use of sold products, which suggests an incomplete understanding of their full value chains' impacts.

As companies respond to the demand for more efficient products, many companies have made substantial investments into research and development.

Companies are also engaging proactively with policymakers, where regulation plays a central role in the sector's response to climate change. Changing regulation can present significant opportunities for companies, but equally uncertainty surrounding new regulation can pose threats to business.

Information Technology

Overall emissions in the information technology sector have decreased by 21.9% since 2012. However, half of this reduction is due to divestments by Samsung. 89% of information technology companies state that their products help reduce emissions, which is important as the sector's scope 3 emissions are more than four times that of their scope 1 and 2 emissions.

Materials

The materials sector is the third biggest emitting sector, representing 26.2% of total reported scope 1 and 2 emissions. Companies are heavily exposed to regulatory risks such as carbon taxes and cap-and-trade schemes, with 74% of companies reporting regulatory issues as key risks. Mining companies, in particular, are also concerned about losing their licenses to operate and reputation is therefore seen as a significant risk (63% of companies).

Telecommunication Services

Representing 1.1% of total reported scope 1 and 2 emissions, the telecommunication services sector is focusing on avoided emissions for others rather than emissions from own operations. In fact, all companies in the sector state that their products and services help avoid emissions. 91% of companies have emissions reduction targets and the sector's overall scope 1 and 2 emissions decreased by 0.6% compared to 2012.

Utilities

With the highest emissions of all the sectors, representing a third of total reported scope 1 and 2 emissions, utility companies will play a critical role in helping customers and businesses avoid emissions. While overall emissions in the sector have decreased by 10.2% since 2012, this is to some extent due to a change in population of respondents. The sector demonstrates a comparatively mature response to climate change, with all companies having emissions reduction targets.

Utilities are acutely aware of the risks and opportunities from climate change. They therefore engage with policymakers to help inform the setting of climate targets more than any other sector and have set up working groups for special programs. Utilities are also looking at their whole value chain and are helping customers avoid emissions through a wide range of products and services that promote energy efficiency and savings.



[Repsol's] New Energy department's mandate is to position Repsol at the forefront of the market for new energy sources. Our activities in 2nd generation biofuels, micro-algae, in electrification of transportation and wind power will provide among others a strategic advantage in supplying energy in the future.

Repsol



2013 Climate Performance Leadership Index (CPLI)



Sector	Company	Performance band	Disclosure score	Consecutive years in the CPLI
Consumer Discretionary	BMW	A	100	4
	Daimler	A	100	1
	Royal Philips	A	100	1
	Honda	A	99	1
	Nissan	A	99	1
	Volkswagen	A	99	1
	British Sky Broadcasting	A	95	1
	H&M Hennes & Mauritz	A	83	1
Consumer Staples	Nestlé	A	100	2
	Diageo	A	98	2
	L'Oréal	A	93	1
	Anheuser Busch InBev	A	85	1
	Unilever	A	82	2
Energy	Spectra Energy	A	98	1
	BG Group	A	89	1
Financials	BNY Mellon	A	100	1
	Bank of America	A	98	4
	Goldman Sachs	A	98	1
	HSBC	A	97	1
	Firststrand Limited	A	96	1
	Morgan Stanley	A	96	1
	Wells Fargo	A	96	2
	AXA Group	A	94	3
	TD Bank	A	94	1
	Ace	A	93	2
	BNP Paribas	A	93	1
	Barclays	A	92	1
	Swiss Re	A	92	1
	Deutsche Bank	A	91	2
	Munich Re	A	91	1
	National Australia Bank	A	91	4
	Westpac Banking	A	91	4
Assicurazioni Generali	A	87	1	
Healthcare	GlaxoSmithKline	A	98	1
Industrials	Raytheon	A	98	1
	Schneider Electric	A	97	3
	CSX	A	95	1
	Komatsu	A	95	1
	Lockheed Martin	A	91	3
Information Technology	Cisco Systems	A	100	1
	Hewlett-Packard	A	99	1
	Samsung	A	99	1
	SAP	A	98	1
	Adobe Systems	A	97	1
	EMC	A	97	1
	Microsoft	A	96	1
	Infosys	A	92	1
	Tata Consultancy Services	A	89	1
Materials	Ecolab	A	98	1
	Anglo American	A	96	2
	E.I. du Pont de Nemours	A	96	1
Telecommunication Services	Swisscom	A	97	1
	Telenor Group	A	95	1
	BT Group	A	93	1
Utilities	Gas Natural SDG	A	100	2
	Exelon	A	98	2

2013 Climate Disclosure Leadership Index (CDLI)



Sector	Company	Disclosure score	Performance band	Consecutive years in the CDLI
Consumer Discretionary	BMW	100	A	3
	Daimler	100	A	2
	Royal Philips	100	A	3
	General Motors	100	A-	1
	Honda	99	A	2
	Volkswagen	99	A	1
	Home Depot	99	A-	2
	Nissan	99	A	1
	Las Vegas Sands	98	A-	1
	TJX Companies	98	B	2
News Corporation	97	A-	4	
Consumer Staples	Nestlé	100	A	4
	Colgate Palmolive	99	B	1
	Reckitt Benckiser	99	B	1
	Diageo	98	A	2
	Philip Morris International	97	B	1
Energy	Spectra Energy	98	A	2
	Repsol	98	B	2
	Chevron	97	A-	1
	Hess	97	B	5
Financials	BNY Mellon	100	A	1
	Bank of America	98	A	1
	Goldman Sachs Group	98	A	2
	Marsh & McLennan	98	B	1
	Simon Property Group	98	B	1
	HSBC	97	A	1
	HCP	97	A-	1
	Allianz	97	B	3
Healthcare	Bayer	99	A-	6
	GlaxoSmithKline	98	A	1
	Johnson & Johnson	98	A-	1
	United Health Group	98	B	1
	Sanofi	97	A-	1
Industrials	Eaton	100	A-	1
	UPS	99	A-	3
	Raytheon	98	A	1
	Deutsche Post	98	B	4
	Union Pacific	98	B	1
	Schneider Electric	97	A	1
	EADS	97	B	1
Information Technology	Cisco Systems	100	A	5
	Hewlett-Packard	99	A	1
	Samsung	99	A	5
	SAP	98	A	1
	Adobe Systems	97	A	1
	EMC	97	A	1
Materials	BASF	100	A-	6
	Air Products & Chemicals	99	B	3
	Ecolab	98	A	1
	Kumba Iron Ore	98	B	1
	Praxair	98	B	5
	Vale	98	B	1
	POSCO	97	B	2
Telecommunication Services	Swisscom	97	A	1
Utilities	Gas Natural SDG	100	A	2
	Iberdrola	99	B	2
	Exelon	98	A	2
	Endesa	98	B	1
	National Grid	98	B	1
	Centrica	97	B	6

2013 Leadership Criteria

Each year, company responses are analyzed and scored against two parallel scoring schemes: disclosure and performance.

The disclosure score assesses the completeness and quality of a company's response. Its purpose is to provide a summary of the extent to which companies have answered CDP's questions in a structured format. A high disclosure score signals that a company provided comprehensive information about the measurement and management of its carbon footprint, its climate change strategy and risk management processes and outcomes.

The performance score assesses the level of action, as reported by the company, on climate change mitigation, adaptation and transparency. Its intent is to highlight positive climate action as demonstrated by a company's CDP response. A high performance score signals that a company is measuring, verifying and managing its carbon footprint, for example by setting and meeting carbon reduction targets and implementing programs to reduce emissions in both its direct operations and supply chain.

The highest scoring companies for disclosure and/or performance enter the CDLI and/or CPLI. Public scores are available in CDP reports, through Bloomberg Terminals, Google Finance and Deutsche Boerse's website.

What are the CDLI and CPLI criteria?

To enter the CDLI, a company must:

- Make its response public and submit via CDP's Online Response System
- Achieve a score within the top 10% of the total Global 500 population (60 companies in 2013)

To enter the CPLI (Performance Band A), a company must:

- Make its response public and submit via CDP's Online Response System
- Attain a performance score greater than 85
- Score maximum performance points on question 12.1a for greenhouse gas emissions reductions due to emission reduction actions over the past year (4% or above in 2013)
- Disclose gross global scope 1 and scope 2 figures
- Score maximum performance points for verification of scope 1 and scope 2 emissions
- Furthermore, CDP reserves the right to exclude any company from the CPLI if there is anything in its response or other publicly available information that calls into question its suitability for inclusion.

Note: Companies that achieve a performance score high enough to warrant inclusion in the CPLI, but do not meet all of the other CPLI requirements are classed as Performance Band A- but are not included in the CPLI.

How are the CDLI and CPLI used by investors?

Good disclosure and performance scores are used by investors as a proxy of good climate change management or climate change performance of companies.

Investors identify and then engage with companies to encourage them to improve their score. The 'Aiming for A' initiative which was initiated by CCLA Investment Management is driven by a coalition of UK asset owners and mutual fund managers. They are asking 10 major UK-listed utilities and extractives companies to aim for inclusion in the CPLI. This may involve filing supportive shareholder resolutions for Annual General Meetings occurring after September 2013.

Investors are also using CDP scores for creation of financial products. For example, Nedbank in South Africa developed the Nedbank Green Index. Disclosure scores are used for selecting stocks and performance scores for assigning weight.

For further information on the CDLI and the CPLI and how scores are determined, please visit

www.cdp.net/guidance

CDLI and CPLI financial returns against overall Global 500

Figure 9: CPLI [2010 - 2013] returns against overall Global 500

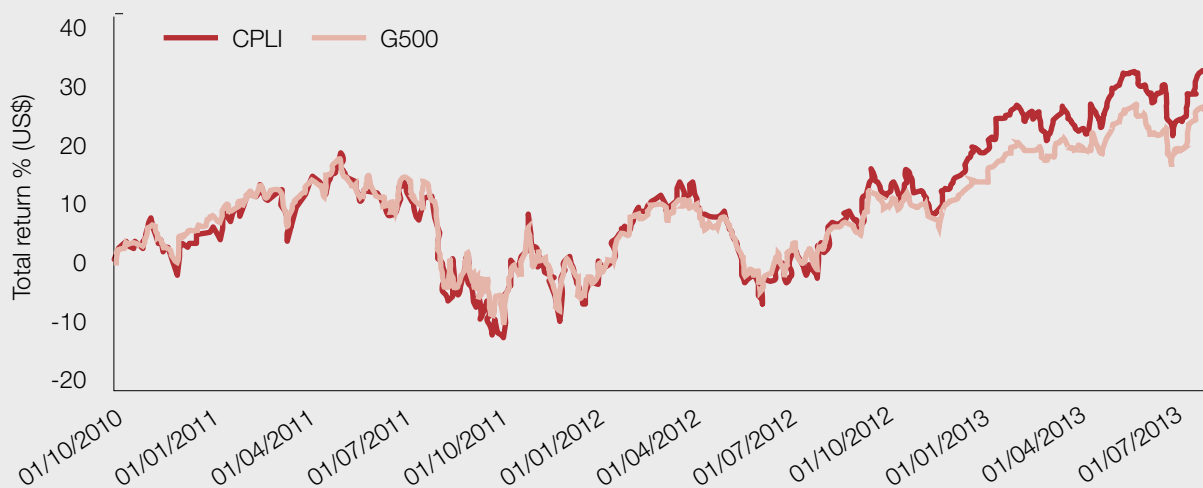
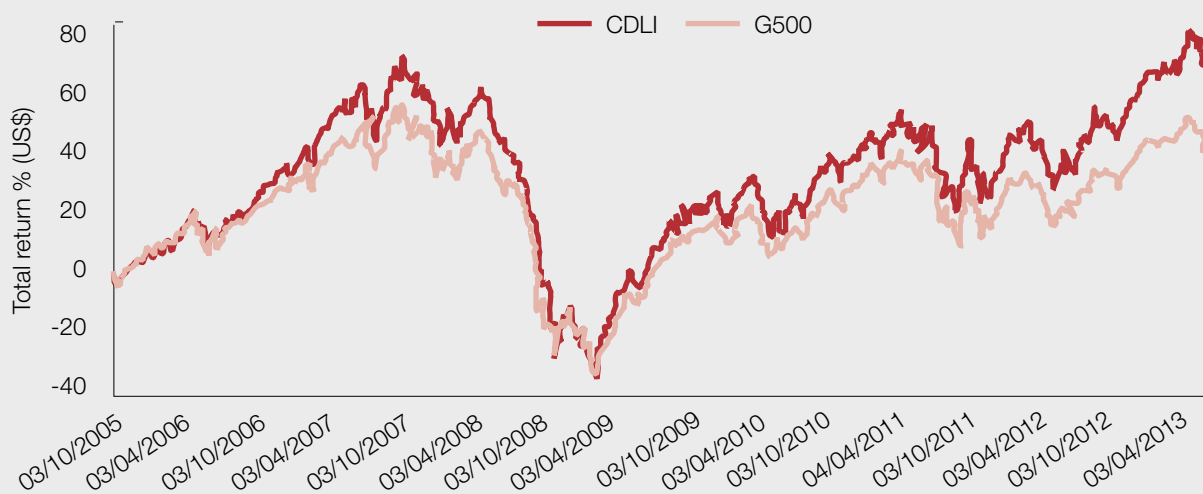


Figure 10: CDLI [2005 - 2013] returns against overall Global 500



Annual analysis of the companies that have achieved leadership positions on either the CPLI or the CDLI in the past suggests that companies that achieve leadership positions in climate change generate superior stock performance (see Figures 9 & 10). Since 2005, CDLI companies delivered total returns of 82.8%, outperforming the Global 500 (49.6%) by more than two thirds. Moreover, CPLI companies generated average total returns of 31.9% since 2010, outperforming the Global 500 (24.8%) by more than a quarter. The methodology for this analysis has been changed from previous years, however the superior financial performance of the leaders still shows through especially in the most recent years⁷.

While equity market performance is influenced by a broad range of quantitative factors including country, sector and financial performance, as well as qualitative considerations such as company management, governance and risk management. Nonetheless, this analysis suggests a correlation, although not a causality, between financial performance and good climate change performance and disclosure.

⁷ Total Return includes interest, capital gains, dividends and distributions realized over a given period of time. Sources: Bloomberg and CDP. Note: Results presented should not and cannot be viewed as an indicator of future performance or as investment advice. Performance of CDLI and CPLI companies is calculated using drifting weights, on an equally-weighted basis relative to the FTSE Global Equity Index Series and rebalanced on the first business day in October each year. Therefore, the 2013 CDLI & CPLI companies are not included in this analysis. For this report we weighted the companies based on the share price on the first business day in October each year, compared to last years report, where we used the one share per company method. Please refer to the important notices on the contents page of this report regarding the use of CDP data in other publications.

Performance and disclosure across geographies:

Figure 11: Percentage of companies in the CPLI by country

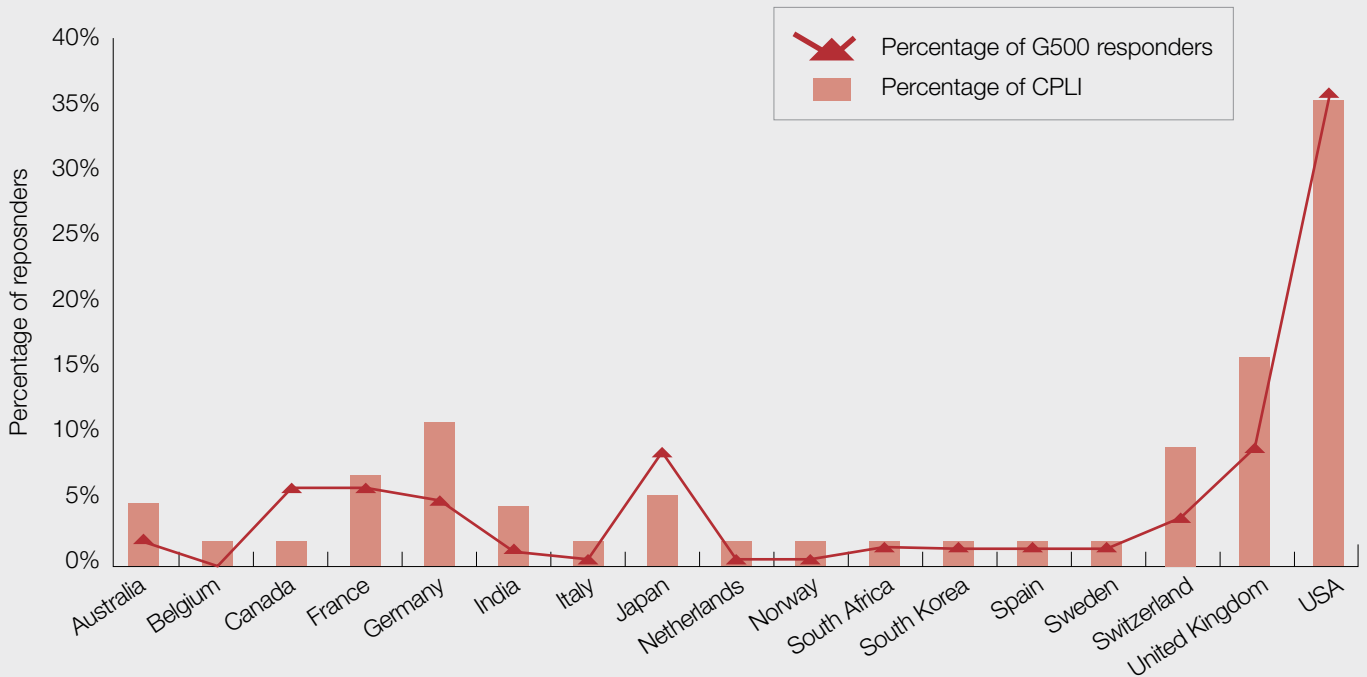
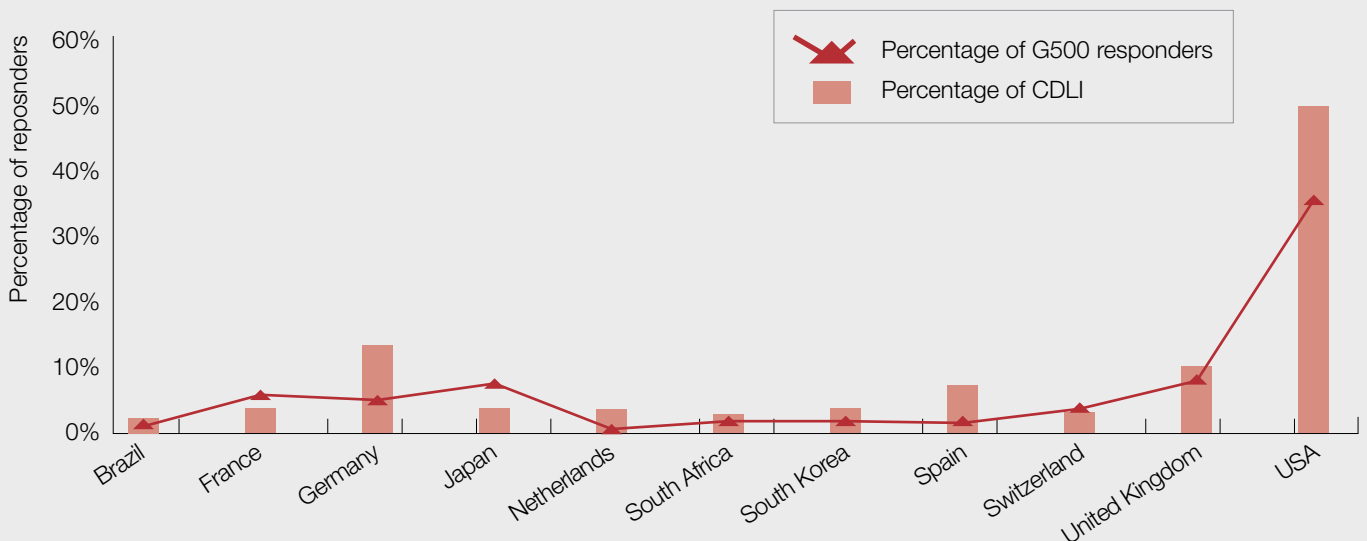


Figure 12: Percentage of companies in the CDLI by country



The UK, US and Germany are the countries with the highest representation in the CPLI (Figure 11), with the US and UK more than doubling the percentage represented in the CPLI, compared with last year. Relative to the geographic composition of the Global 500, Germany, the UK and Switzerland show over-proportionate representation in the CPLI this year.

India has a company in the performance leadership index for the first time. Meanwhile, companies from South Korea, Norway and Sweden have entered the CPLI again after at least a year out.

To provide insights into completeness of disclosure, Figure 12 shows that Spain has the highest proportion of companies in the CDLI relative to its representation in the Global 500.



Governments, investors, customers and communities make different, often contradictory, demands of business. Current business models are ill-equipped to deal with these contradictions.

In both developed and emerging economies, the demand for growth is increasingly urgent. Growth is vital to lift people out of poverty and provide jobs and stability for restless populations. Delivering this in a carbon constrained, but paradoxically energy abundant world, is a fundamental challenge. So far, there are few signs that either companies or countries have been able to decouple economic growth from carbon emissions growth.

Governments, investors, customers and communities make different, often contradictory, demands of business. One is to provide affordable, reliable, profitable and low carbon energy and transportation while minimizing impacts on local communities and the environment. Current business models are ill-equipped to deal with these contradictions or make the difficult trade-offs needed. These challenges are reflected in the responses that the world's largest companies have made to CDP, which describe different approaches to managing climate risks and tackling emissions.

Our analysis of Global 500 companies this year shows that they are increasingly transparent and sophisticated about their approach to climate change, are more likely to verify their emissions, and are looking beyond the boundary of their own operations. Companies are reporting their emissions from their supply chain and the use of their products, although some significant gaps remain. These changes will undoubtedly advance better decision-making.

In addition to carbon, companies are called to account for their broader environmental, social, economic and fiscal impacts. While companies are moving towards wider assessment of their impacts and improving data quality, there has been no systematic approach to

compare different types of impact to inform decision-making. At PwC, we've been working with our clients to develop a more comprehensive approach which we call Total Impact Measurement and Management (TIMM).

TIMM gives boards better insight into the social, fiscal, environmental and economic impacts of their activities. Taking this approach can also help to support a business's license to operate. But the real benefit is that it gives management the ability to compare strategies and investment choices, using quantified data, monitor the total impact of each decision and choice they make, and communicate this to their stakeholders. Being able to measure, understand and compare the trade-offs between different options means decisions can be made with more complete knowledge of the overall impact they will have and a better understanding of which stakeholders will be effected by which decisions.

The first part of the journey down the low carbon pathway is likely to be littered with awkward compromises between growth, the environment and communities. Looking at the total impact makes sound business sense. By doing so, TIMM can help inform better decision-making needed to deliver the transformation necessary to meet the demands of a growing population in a carbon constrained world.

Jonathan Grant

Jonathan Grant
Director, PwC

Consumer Discretionary

RESPONSE RATE

77%

(46 OF 60)

KEY INDUSTRIES WITHIN THE SECTOR:



Please see page 48 for a list of non-responders in consumer discretionary.

89,319,469

 tons CO₂e

Total scope 1 + 2 emissions 2013

-13.6%

Decrease in scope 1 & 2 emissions since 2012



2.5%

 of total G500 emissions

83/B

Average disclosure score/performance band



Sales from our energy efficient Green Products totaled to €11.25 billion in 2012, representing 45.4% of total sales. We estimate that the demand for energy efficient products will increase allowing Royal Philips to increase the share of Green Products to 50% by 2015.

Royal Philips



emissions of the five biggest emitters in 2013 have not changed significantly since 2009.

The three highest scoring companies in consumer discretionary by disclosure and performance are all part of the automobile industry: BMW, Daimler and GM.

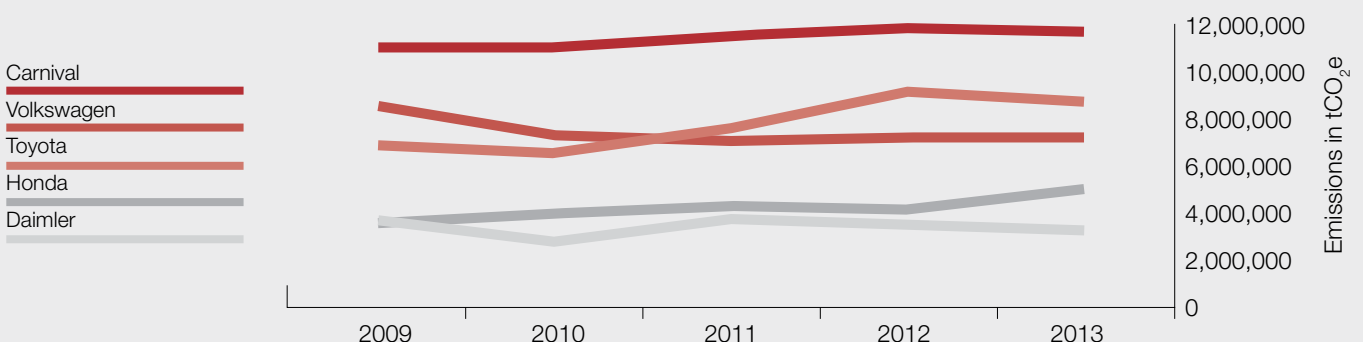
Reported opportunities are related to consumer behavior (61%) and reputation (39%). Regulation of product efficiency (such as for vehicles) is also important (noted by 39% of companies). A majority of the companies in consumer discretionary (78%) mentions at least one of these issues as a business opportunity.

Leading companies typically have well established sustainability programs and assess their products' footprints throughout the lifecycle. Companies often facilitate reductions for customers in addition to focusing on their own carbon footprint. For example, British Sky Broadcasting has introduced new products such as set top boxes which automatically go into standby – these can save approximately 205,000 metric tons CO₂e each year. However, put in context, this is only equivalent to 12 hours of emissions by ExxonMobil.

Consumer discretionary companies are particularly affected by risks surrounding consumer behavior (46%), fuel and energy taxes (41%) as well as rainfall extremes and droughts (41%).

The consumer discretionary sector makes up 12% of overall respondents and represents 2.5% of total Global 500 emissions. 41% of companies report a drop in absolute emissions since 2012 and, although a majority of companies in the sector has reported absolute emissions reduction targets as well as a decrease in emissions due to emission reduction activities,

Figure CD1. Historic scope 1 + 2 emissions performance of current largest emitters in consumer discretionary



Currently, few companies assess the full impact of their value chains: only 28% of companies in consumer discretionary have accounted for emissions from the use of their products, which is likely to be one of the most carbon-intensive aspects of the sector's value chain. This suggests that, although 78% of companies in consumer discretionary do engage with suppliers on climate-related activities, the current reporting of the indirect value chain emissions in consumer discretionary does not reflect the companies' overall carbon impact.

Figure CD2. Metric tons CO₂e emitted per unit of revenue (US\$) of the 10 largest companies by revenue in consumer discretionary (scope 1 & 2 emissions)⁸

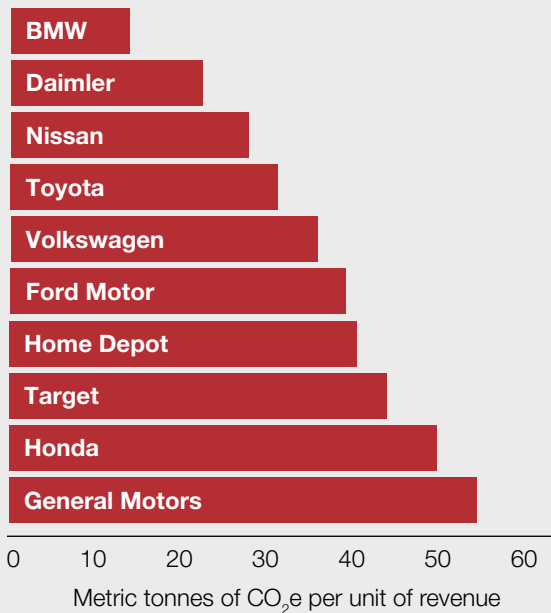


Figure CD3. Total reported combined scope 1 and 2 emissions compared to total reported scope 3 emissions by sector: scope 3 emissions in consumer discretionary are 19 times higher than the sector's combined scope 1 and 2 emissions

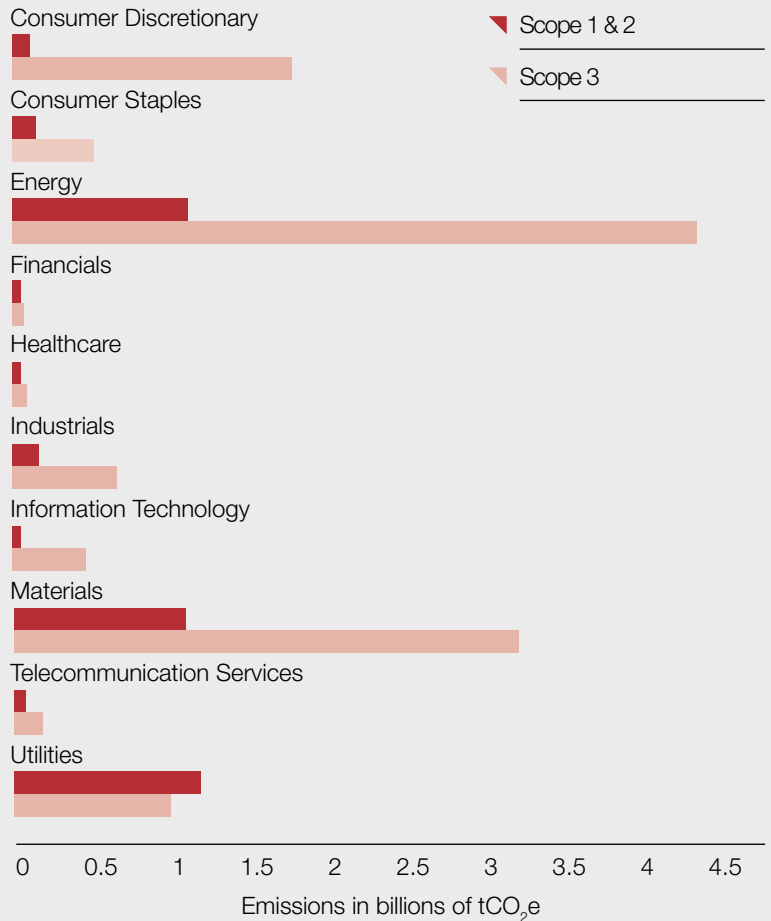


Figure CD4. Most commonly reported risks by companies in consumer discretionary

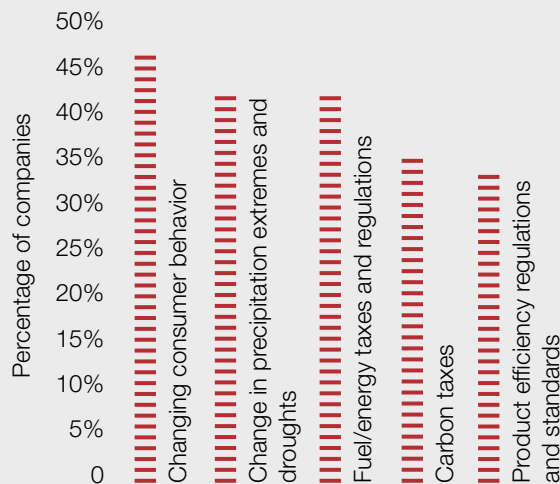
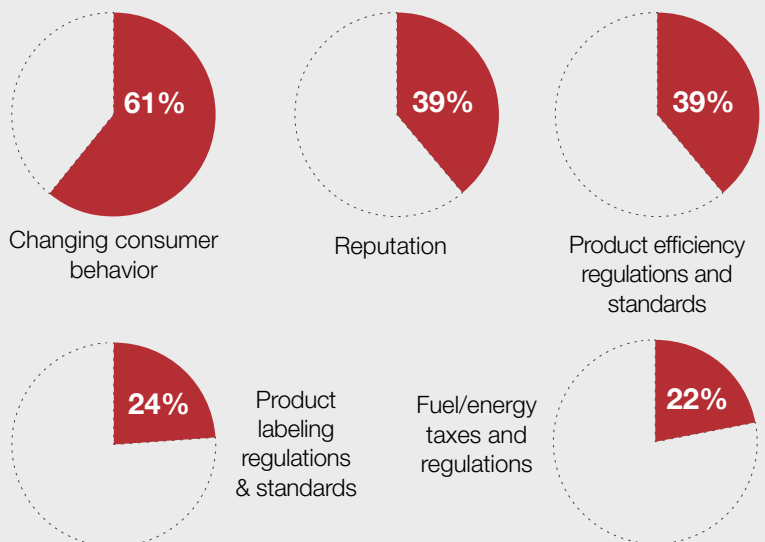


Figure CD5. Most commonly reported opportunities by companies in consumer discretionary



⁸ Global 500 US\$ revenue data sourced from Bloomberg for financial year 2012. This applies to all ten sector revenue intensity charts in this report.

Consumer Staples



While 58% of companies report a decrease in absolute scope 1 and 2 emissions, the sector's total emissions have increased by 2.9%. The analysis shows that there has been little change in absolute emissions in the sector since 2009.

A number of climate change-related risks and opportunities in consumer staples are related to companies' supply chain's exposure to physical impacts of climate change as well as changes in regulation surrounding fuel and energy.

In particular, companies report the changing regulation surrounding biofuels as a reason for increased costs. For instance, PepsiCo notes that requirement to increase the volume of ethanol to 13.8 billion gallons in the U.S. gasoline supply in 2013 will increase the price of corn and sugar which make up a significant portion of the company's primary raw materials. Similarly, Unilever reports that the support for biofuels is leading to increased costs of key agricultural raw materials such as oils and fats in global commodity markets. The impact on the key raw materials in the sector suggests that the trade-off between biofuels production and global food supply is yet to be resolved, despite increasing focus on second generation biofuels.

Companies are also affected by exposure of their supply chains to physical impacts of climate change, with 58% of companies reporting extreme weather related risks influencing the cost and availability of raw materials. For example, Colgate Palmolive states that recent droughts in the U.S. and Russia have caused the cost of agricultural commodities such as corn, wheat and cotton to fluctuate. Similarly, Diageo reports disruptions due to lack of water in Ghana and Kenya as well as flooding in Ireland and Australia as having a significant impact on its costs.

Consumer behavior, the risk mentioned most frequently, is also cited frequently as an opportunity (58%). The risk reported by companies is that consumers may view products as less climate-friendly than others or view a whole industry as a poor carbon performer, which would drive them away from products. At the same time, many companies consider themselves well positioned and see commercial opportunities in anticipating changes in consumer behavior and the ability to enhance their reputation.

The sector comprises many of the world's most well known consumer brands. As such, they are heavily influenced by changing consumer preferences. In fact, 53% of companies in the sector consider change in consumer behavior in response to climate change a key risk. The inability to address climate change issues is seen as a reputational risk by 51% of companies. At the same time, 47% of companies mention fuel and energy prices and 53% change in extreme weather. This illustrates the impact of regulation and physical risks on consumer staples companies.

Figure CS1. Historic scope 1 + 2 emissions performance of current largest emitters in consumer staples

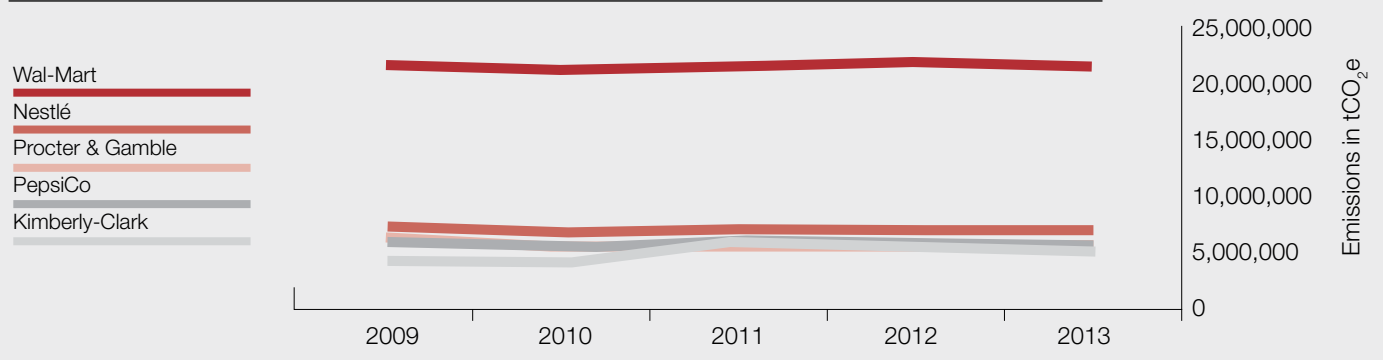
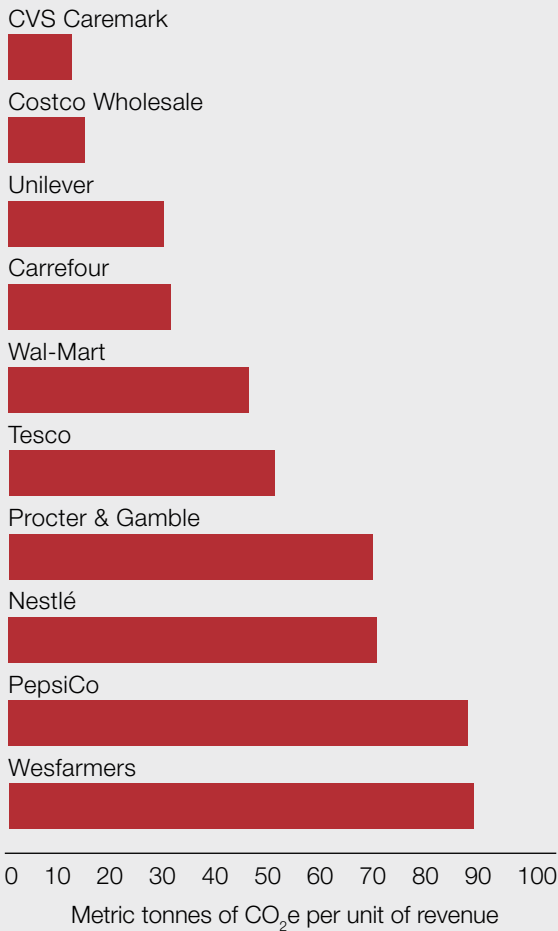


Figure CS2. Metric tons CO₂e per unit of revenue (US\$) for 10 largest companies by revenue in consumer staples (scope 1 & 2 emissions)



Emissions from transportation and logistics are the most commonly reported scope 3 categories – with 49% and 42% reporting upstream and downstream transport emissions respectively. Consumer staples companies also note the impact of rising fuel prices on operational costs, with 51% of companies mentioning fuel and energy regulations as a key risk.



Another target we have is to help our customers reduce their own carbon footprints by 50% by 2020. Our customers' carbon footprint is around 100 times greater than our direct carbon footprint. There is therefore a real opportunity to tackle climate change by helping our customers to make small changes that together can make a big difference.

Tesco



Figure CS3. Most commonly reported risks by companies in consumer staples

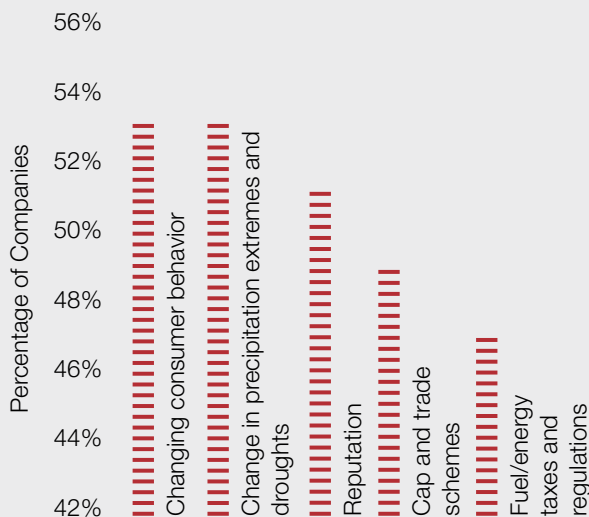
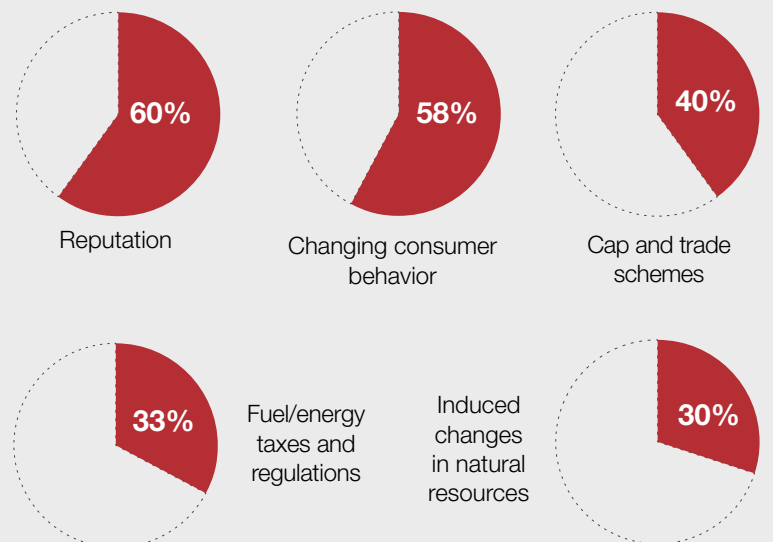


Figure CS4. Most commonly reported opportunities by companies in consumer staples



Energy

RESPONSE RATE

69%

(38 OF 55)

KEY INDUSTRIES WITHIN THE SECTOR:

Energy equipment & services (3 of 5);
 Oil, gas & consumable fuels (35 of 50);

Please see page 48 for a list of non-responders in energy.

1,011,426,516 tons CO₂e
 Total scope 1 + 2 emissions 2013

-2.1% ▼
 Decrease in scope 1 & 2 emissions since 2012

28.3%
 of total G500 emissions

78/B Average disclosure score/performance band

biggest emitters in the sector have increased by 53%. At the same time, the sector has the highest proportion of companies without emission targets (24%).

In addition to the significant impact on the total Global 500 scope 1 and 2 emissions, the energy sector's reported scope 3 emissions are four times higher than its scope 1 and 2 emissions. 98% of these emissions are emitted through the use of sold products.

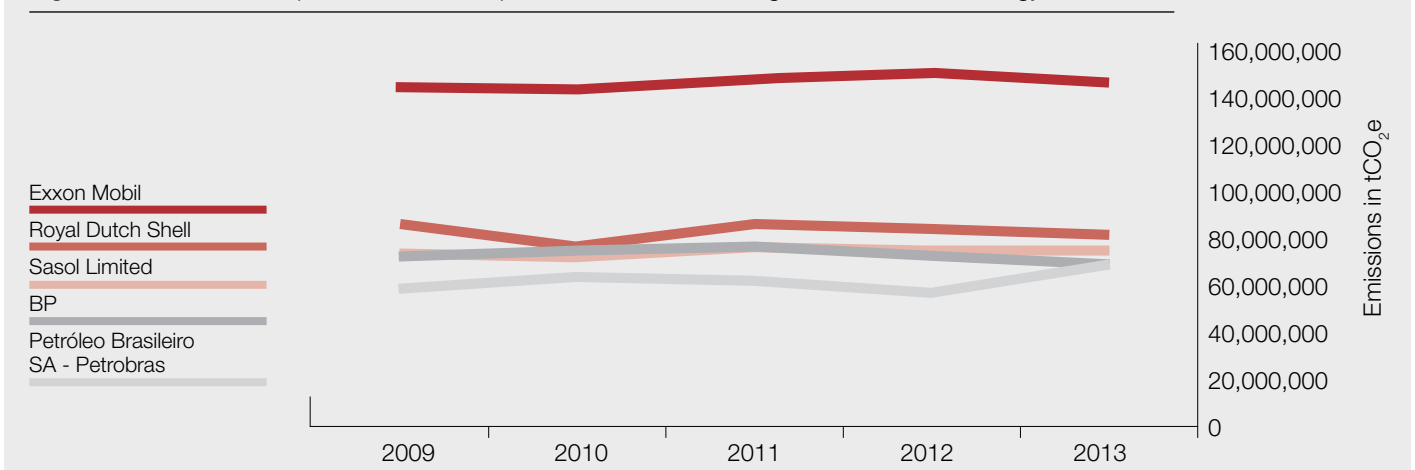
Energy companies state that regulation is a major risk: 66% of companies report cap and trade schemes and 61% of companies report carbon taxes as risks. BG Group, for example, states that the *[initial] rejection of the backloading proposal for EU ETS has led to more uncertainty in pricing.* Other issues mentioned include the regulation of the sulfur content in the fuel used in shipping, Australian Clean Energy Futures Act, AB32 in California as well as the carbon leakage in the EU ETS.

At the same time, energy companies see opportunities in changing regulation, but also in changing consumer behavior: 50% of companies mention changing consumer behavior, 45% international agreements and 45% cap and trade schemes as a key opportunity. Spectra Energy states that US transmission may experience an increased demand for natural gas transmission and storage operations resulting from cap and trade schemes. Chevron states that the EU, U.S. and Australia have already adopted regulation for developing Carbon Capture and Storage projects. It has begun work to make Gorgon in Australia the world's biggest carbon storage facility and thereby reduce emissions from one of the world's largest natural gas projects.

Companies such as Occidental Petroleum Corporation, Noble Energy or BP give similar explanations for the lack of company-wide absolute emissions reduction targets: business is constantly evolving and expanding and emission reduction targets will constrain growth. Instead, the focus is on energy efficiency projects throughout their business activities. Companies prefer

Efforts to reduce emissions in the energy sector are essential to the mitigation of climate change as the sector is one of the highest emitting sectors. However, 50% of energy companies have a performance band of C or lower. Since 2009, the total scope 1 and 2 emissions of the ten

Figure EN1. Historic scope 1 + 2 emissions performance of current largest emitters in the energy sector



to use efficiency targets at an operational or project level, stating that overall emissions targets are not practical or useful in driving emissions reductions at the corporate level.

Therefore, reducing emissions from an energy company's own operations may require more significant and drastic changes to business as usual. In addition, the energy sector remains the only sector in the Global 500 sample, where Board-level monetary incentives did not lead to emissions reductions due to emission reduction activities.

Figure EN2. Scope 3 emissions in the energy sector are four times higher than the combined scope 1 and 2 emissions. 98% of reported scope 3 emissions are from the use of sold products.

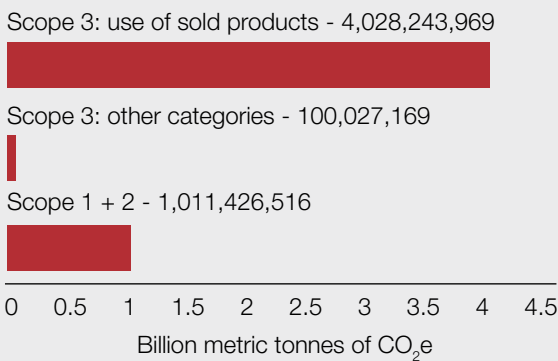


Figure EN3. Metric tons CO₂ per unit of revenue (US\$) of the 10 largest companies by revenue in the energy sector (scope 1 & 2 emissions)

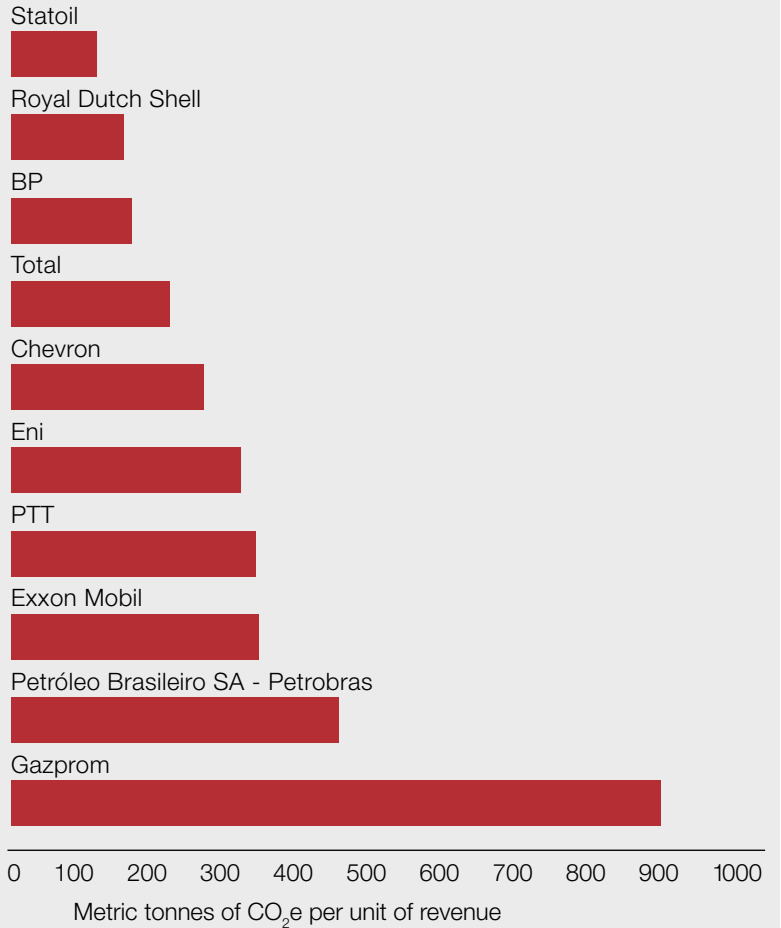


Figure EN4. Most commonly reported risks by energy companies

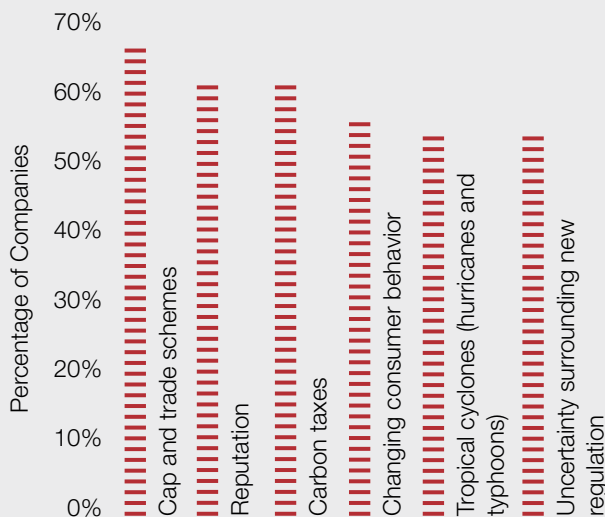
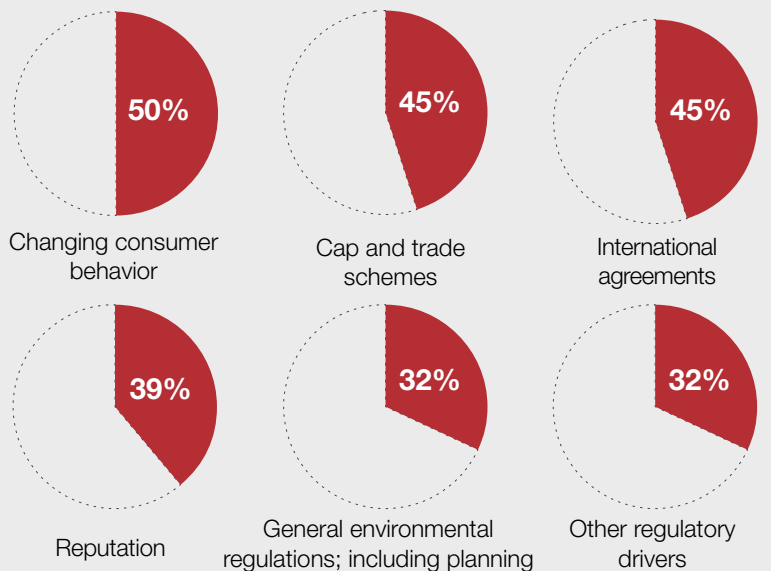


Figure EN5. Most commonly reported opportunities by energy companies



Financials

RESPONSE RATE

75%

(94 OF 125)

KEY INDUSTRIES WITHIN THE SECTOR:

Capital markets (9 of 9); **Commercial banks** (46 of 61);
Consumer finance (4 of 5); **Diversified financial services** (8 of 8);
Insurance (20 of 26); **Real Estate Investment Trusts (REITs)** (5 of 8);
Real estate management & development (2 of 7);
Thrifts & mortgage finance (0 of 1);

Please see page 48 for a list of non-responders in financials.

1,825,823 tons CO₂e
 Total scope 1 + 2 emissions 2013



+4.2% ▲
 Increase in scope 1 & 2 emissions since 2012

0.6%
 of total G500 emissions

79/B Average disclosure score/performance band

with trade associations and 33% fund research organizations to obtain information to feed into risk reports. Allianz SE, for example, states: “the WWF-Allianz study *Tipping Points* is one good example of how Allianz is investing in a better understanding of the potential risks of climate change by analysing concrete insurance portfolios in specific locations.”

The most reported risk and opportunity in the financial sector is reputation, with 54% of companies reporting it as a key risk and similarly 55% as a key opportunity. For example, Deutsche Bank reports that demonstrating responsible investment practices and helping finance the transition to a low carbon economy is a way for [the company] to help restore trust with society. Weather extremes are reported by 40% of financials which can have an effect on the companies’ own business as well as their clients’. Flooding of assets (commercial or offices) can influence the types of investments being made, for example the cost of insurance. Recent storm events, such as Superstorm Sandy, had significant implications for insurance companies and are something that is increasingly being factored into pricing strategies.

For many companies, climate change is primarily seen as an opportunity in terms of sales, e.g. increased demand for insurance of physical assets and for financing to upgrade assets. However, the materiality of the impacts of these changes is often considered minimal. 20% of the companies who respond that they have not identified any risks/opportunities with climate change state that they are not directly impacted by the effects of climate change due to the nature of their business.

Scope 3 emissions should be significant for financial companies relative to their scope 1 and 2 emissions. Business travel, employee commuting and waste generation are the three most commonly disclosed relevant scope 3 categories in financials. Most scope 3 emissions would be expected to come from investments, however, only 6% of responding companies report emissions in this category. This suggests that financials are yet to account fully for the impact of their value chains, but will require a standardized widely-accepted approach for calculating emissions from investments.

The financial sector makes up 24% of the respondents and is the lowest emitting sector in the Global 500: it represents only 0.6% of total reported scope 1 and 2 emissions. While 67% of companies have reduced their scope 1 and 2 emissions since 2012, only 6% of financials report the carbon impact of their investments. This is a significant gap in the measurement of the sector’s overall carbon impact.

Within the sector, there is a strong drive to understand the risks and opportunities from climate change. 56% of companies work in partnerships

Figure F11. Historic scope 1 + 2 emissions performance of current largest emitters in financial companies

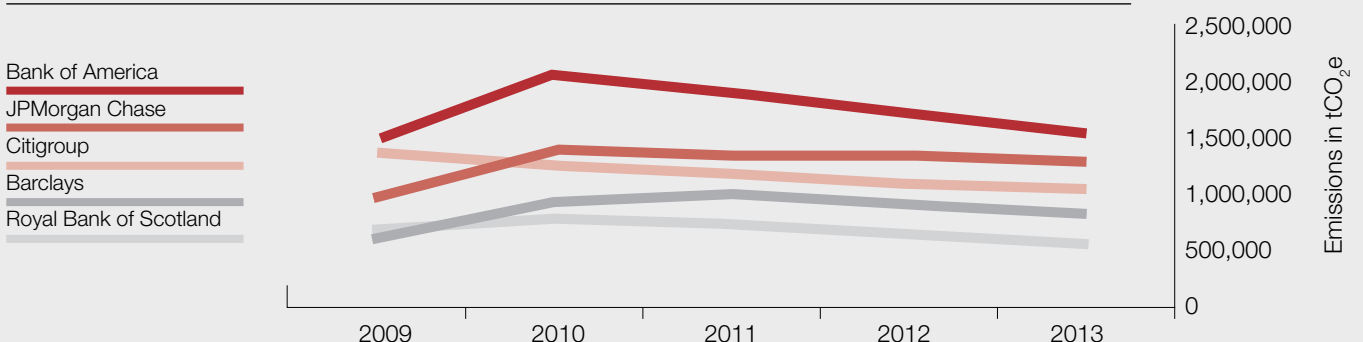


Figure F12. Only 6% of companies in financials are reporting emissions from investments: this is where the majority of their scope 3 emissions should be

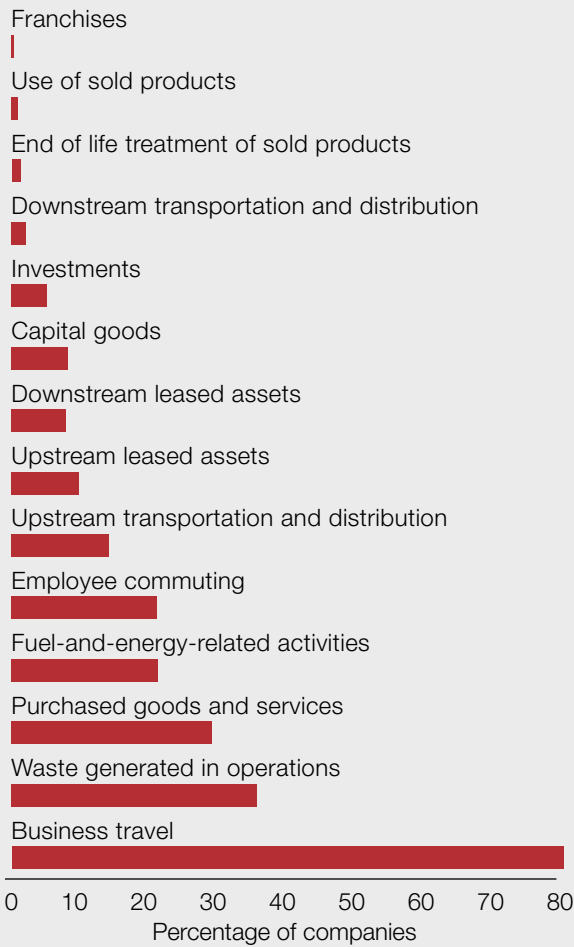


Figure F13. Metric tons CO₂ per unit of revenue (US\$) of the 10 largest companies by revenue in financials (scope 1 & 2 emissions)

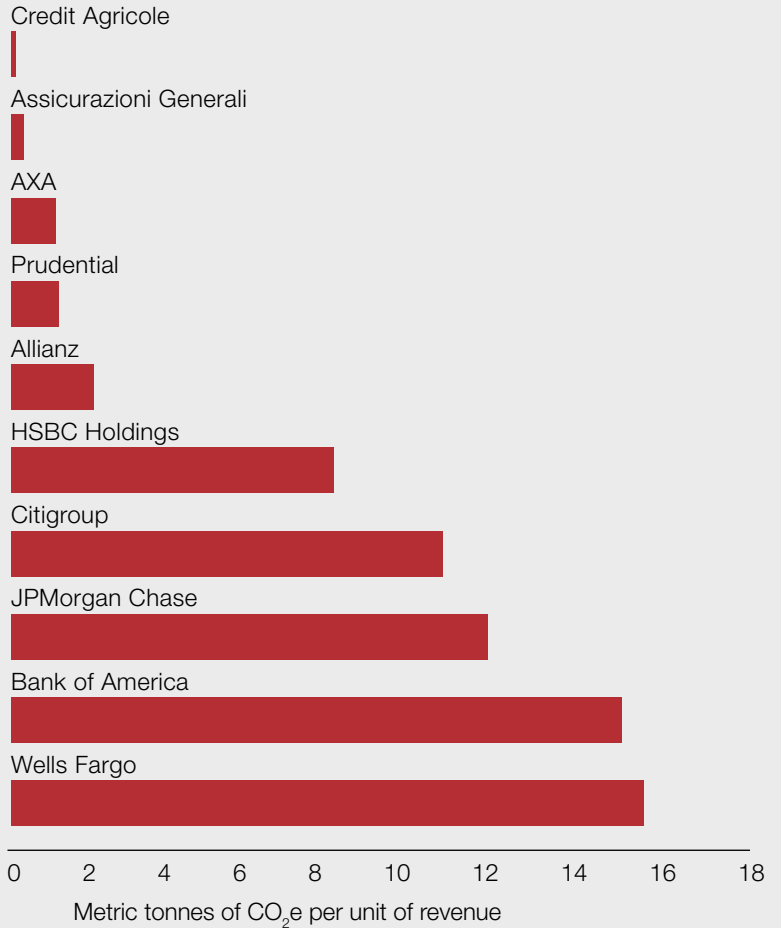


Figure F14. Most commonly reported risks by financial companies

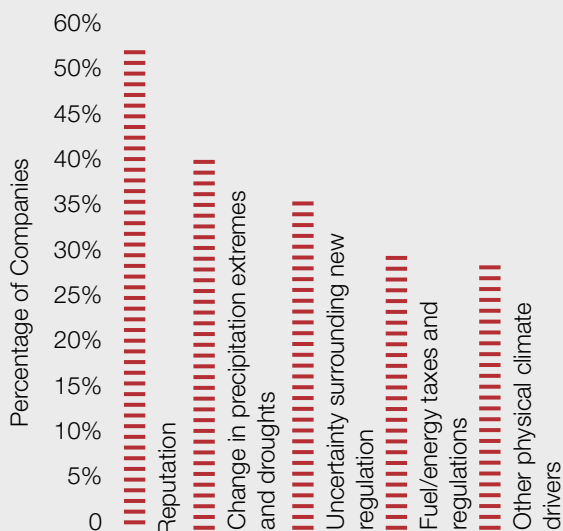
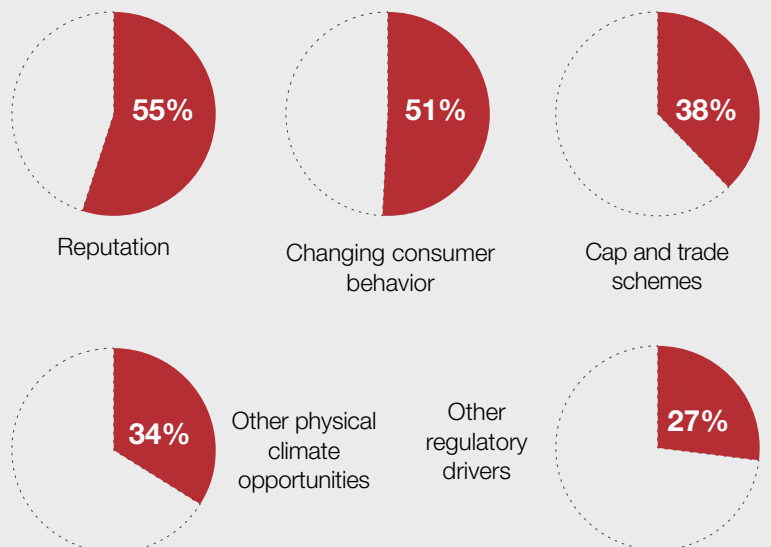
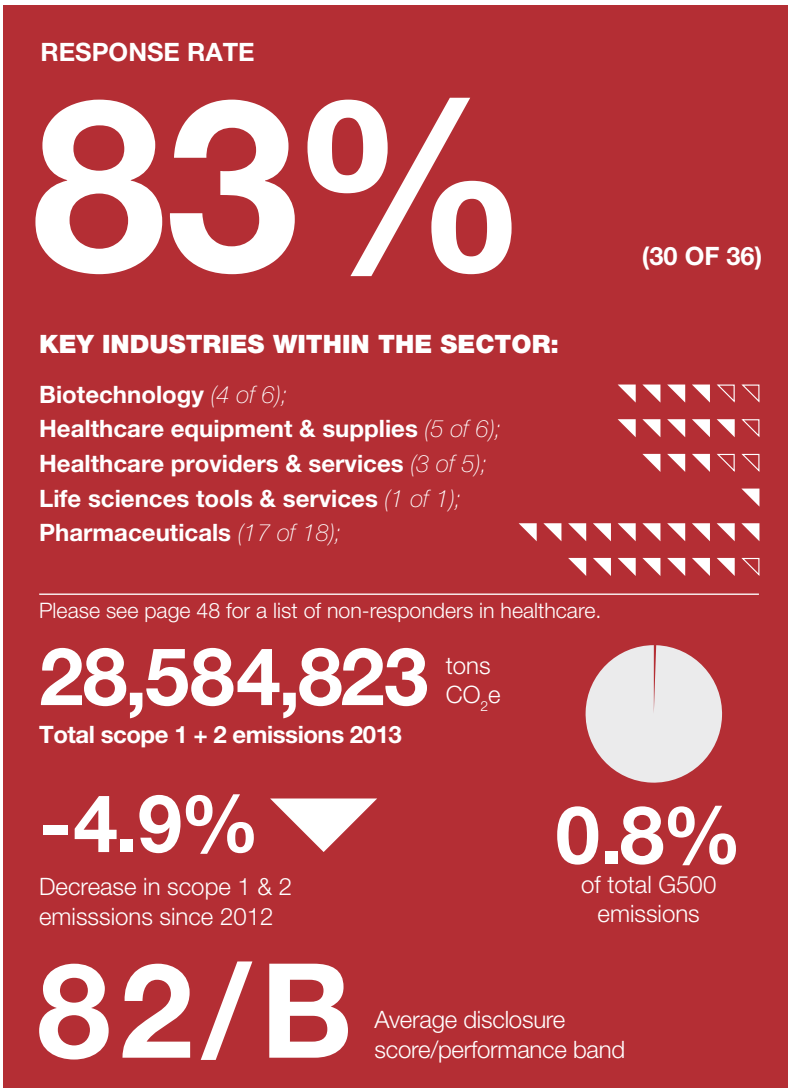


Figure F15. Most commonly reported opportunities by financial companies



Healthcare



The healthcare sector makes up 8% of respondents and is the second lowest emitting sector representing only 0.8% of total reported scope 1 and 2 emissions.

The risks reported typically appear more tangible and quantifiable than the climate-related business opportunities. Roughly half of the companies mention cap and trade schemes (57%) and weather extremes (50%) as key risks, whereas the most often reported opportunities are reputation and changing consumer behavior. Meanwhile, some of the highest scoring healthcare

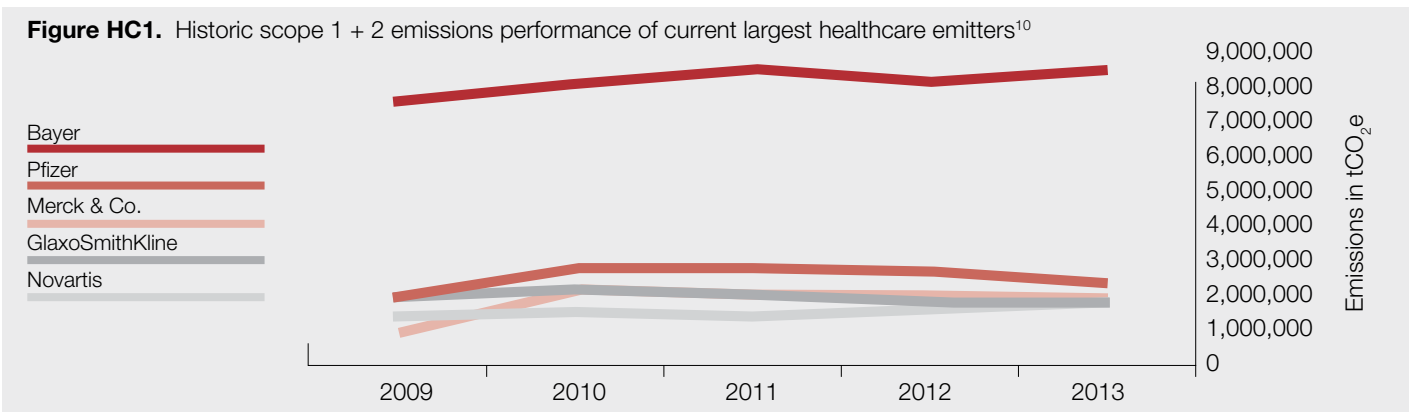
In 2012 Bayer's total energy consumption was reduced by approx. 2% compared to 2011 despite an increase in manufactured sales volume. Therefore; a decoupling of the production from the energy demand could be realized. One important aspect for this decoupling was the implementation of numerous energy efficiency measures during the reporting year.

Bayer

companies (e.g. Sanofi) state that they have not identified any climate change risks that have the potential to change their business substantially over the next years.

However, physical changes may still have an impact on the healthcare sector. For example, changes in mean average temperature may lead to changes in the location of diseases which can drive business growth in emerging economies. Bayer, for example, states that the increase in temperature as a result of global climate change could promote the reproduction and spread of mosquitoes. This could result in another 40 to 60 million people being exposed to the risk of vector borne diseases like malaria and therefore the demand of products could rise in affected regions.

While climate change is having a limited impact on healthcare companies' business strategies, they are still investing in emissions reductions. 57% of them report a decrease in emissions compared to 2012. A consistent driver for this decrease is energy reduction activities, e.g. green IT and building efficiency. Increases in emissions are typically the result of acquisitions and change in output.



Manufacturing healthcare companies are starting to invest more in energy efficient production techniques to reduce their own emissions. Companies' products can significantly help users reduce their emissions. For example, by developing a new type of inhaler, GlaxoSmithKline has reduced consumers' emissions by 2 million metric tons CO₂e/year which is equivalent to approximately 10% of the total emissions from the financials sector or four days of emissions from Arcelor Mittal in 2012.

Figure HC2. Healthcare has the second highest percentage of companies reporting absolute targets

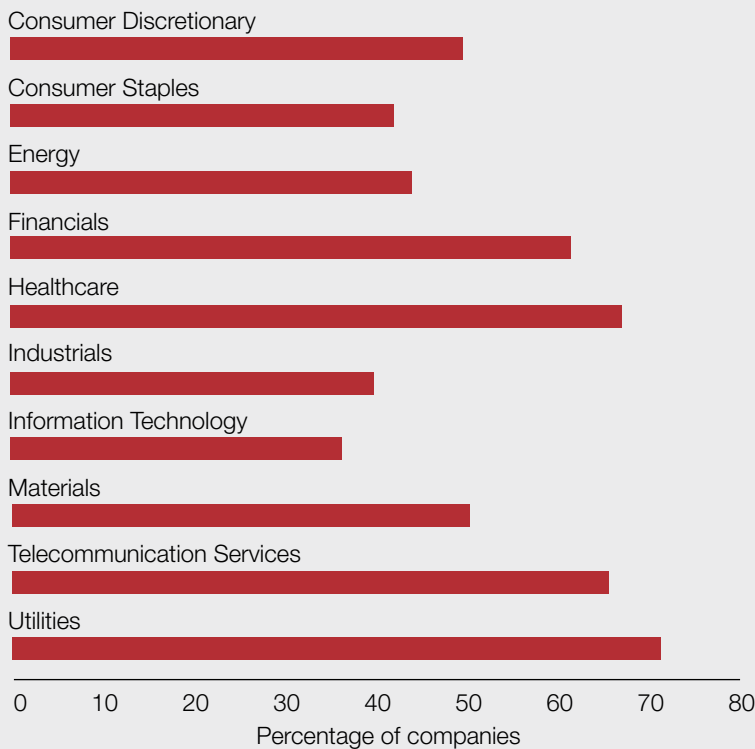


Figure HC3. Metric tons CO₂e per unit of revenue (US\$) of the 10 largest companies by revenue in healthcare (scope 1 & 2 emissions)

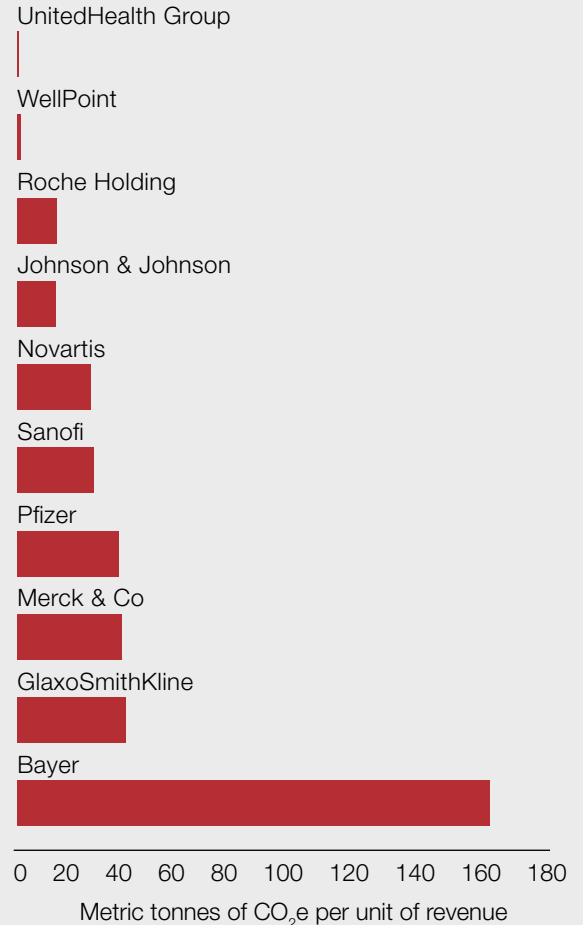


Figure HC4. Most commonly reported risks by healthcare companies

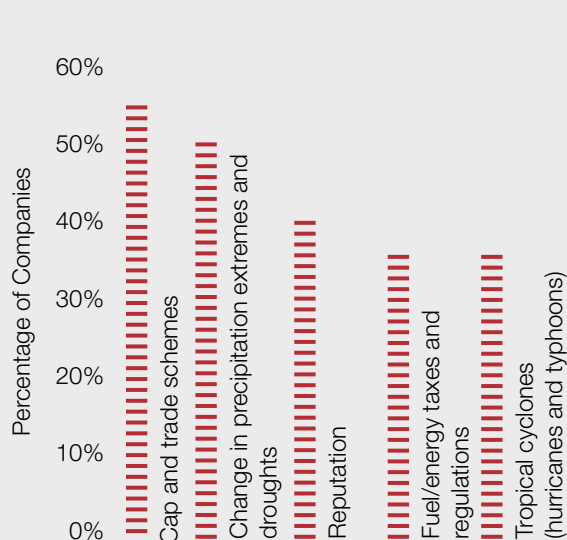
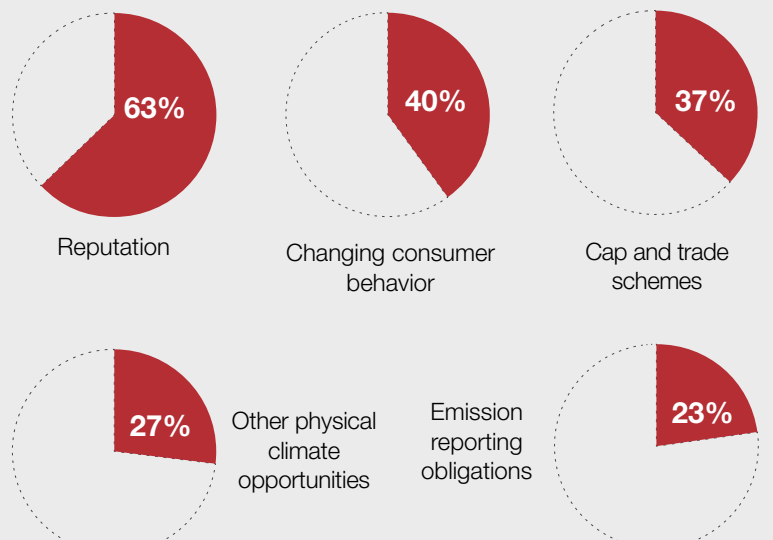
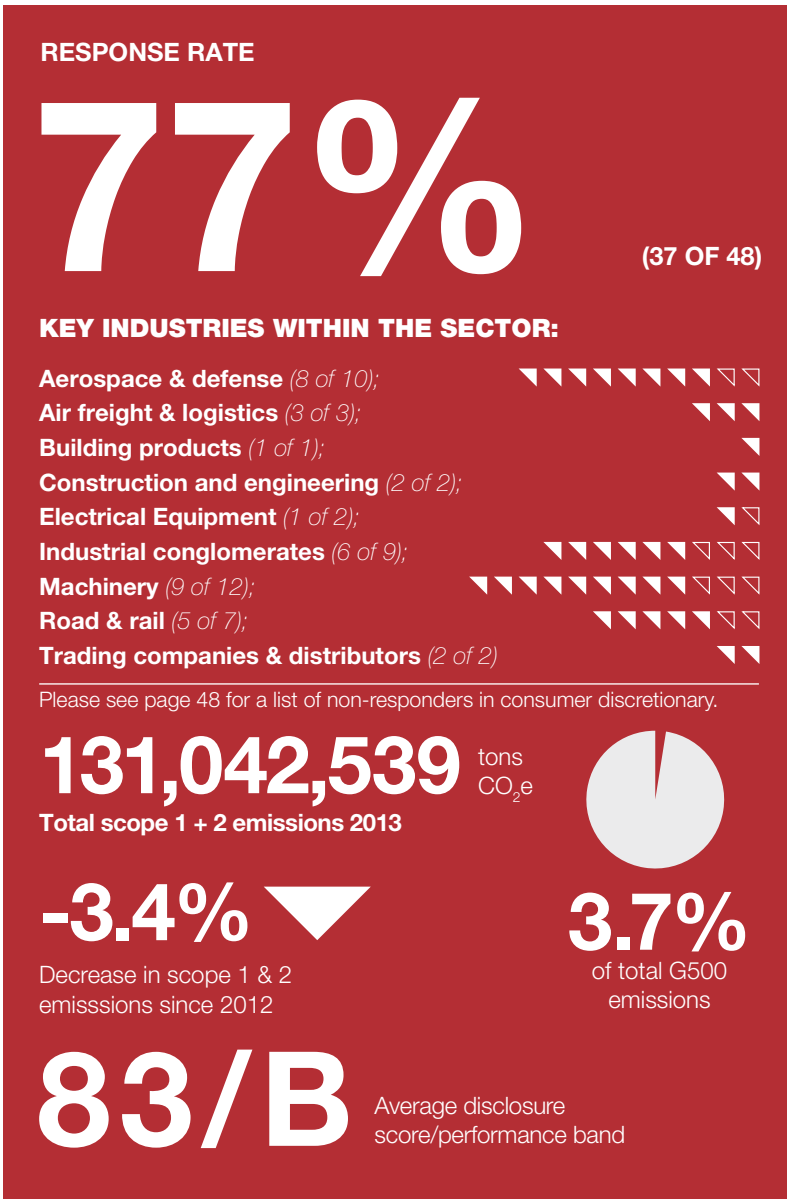


Figure HC5. Most commonly reported opportunities by healthcare companies



10 Some companies may not have disclosed data publicly over the 5 year period.

Industrials



Industrial companies will play an important role in the transition to a low carbon economy: 97% of companies report that their products and services enable emissions reduction to third parties. For example, Hitachi has set a target to achieve an annual reduction of 100 million metric tons CO₂e through products and services by 2025, roughly equivalent to the annual emissions of a single large cement company. In many cases, more efficient and environmentally sound products are linked to more stringent regulation. 86% of industrials report regulation as an opportunity which could lead to increase in demand.

To respond to the demand for more efficient products, many companies have made substantial investments into R&D. Schneider Electric, for example, spent 4.4% of its revenue on R&D in 2012 (over €1 billion) while Rolls-Royce report £919 million of investments on R&D. Two thirds of Rolls-Royce's expenditure focused on improving the environmental performance of products and in particular on reducing emissions.

Although changing regulation is a key opportunity for the industrial sector, uncertainty surrounding new regulation simultaneously poses a threat to companies (32% of companies). 38% of them consider regulation a key risk. Carbon taxes, cap and trade schemes as well as fuel and energy regulation are the main risks reported by the companies. Industrials are likely to be impacted by cap and trade schemes and other carbon regulation due to high fuel and energy consumption rates.

At the same time, 19% of companies do not consider the potential impacts of climate-related regulation to be significant. For example, Las Vegas Sands Corporation has conducted an assessment of potential impacts of cap and trade schemes in the next 3-5 years, and concluded that the enforcement of cap and trade schemes remains uncertain and the potential impact is minor.

Due to the central role of regulation in the sectors' response to climate change and the influence the sector could have on climate change mitigation, companies are proactively engaging with policy makers, with all companies in the sector supporting climate policy and none of the companies stating that their position on climate change is inconsistent with the trade associations

The industrials sector is the fourth highest emitting sector. Companies are making large investments in research and development (R&D) as well as energy-efficiency projects, suggesting climate change is central in these companies' strategies. Industrials are both reducing their own carbon footprint as well as enabling emissions reductions throughout their value chain.

Figure IN1. Historic scope 1 + 2 emissions performance of current largest industrial emitters

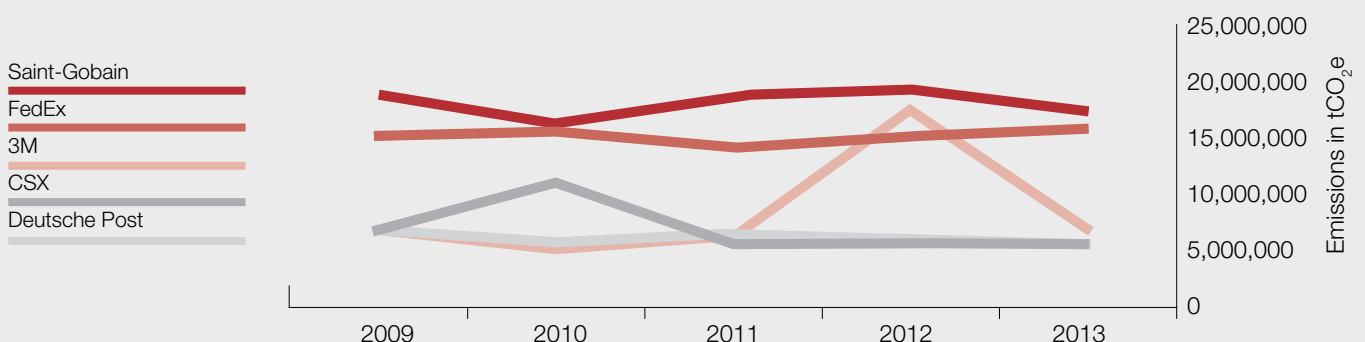
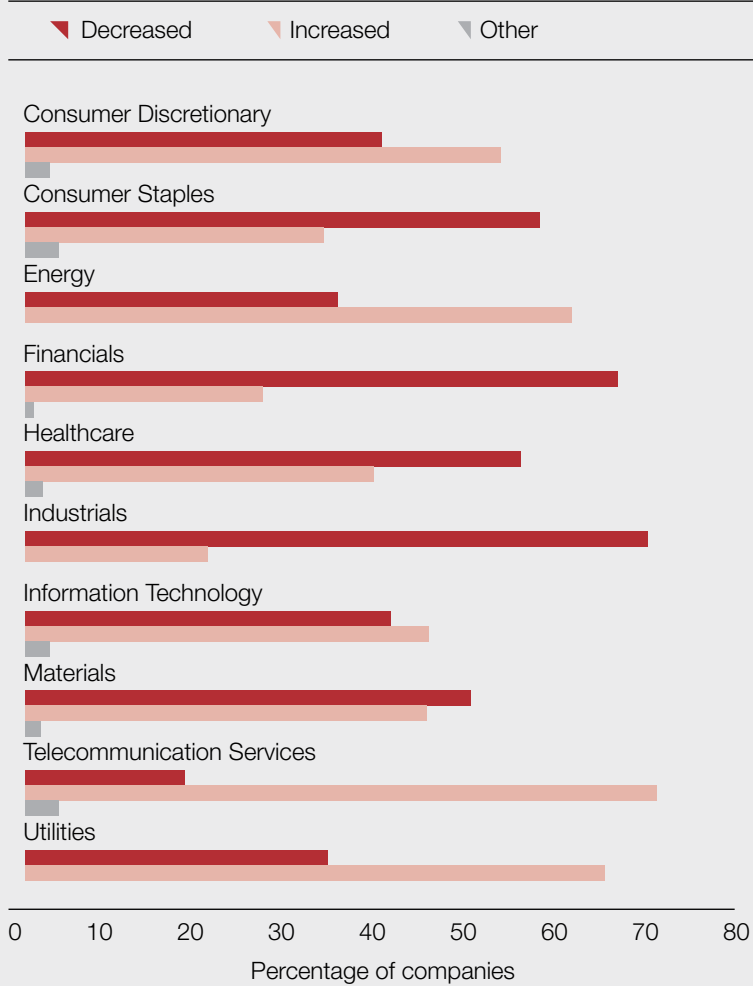


Figure IN2. Percentage of companies reporting a decrease from 2012 in total scope 1 and 2 emissions



they engage with. Whether it is upcoming climate policy driving the deployment of green technologies (Siemens), increases in fuel prices shifting customers to rail transportation (CSX) or the compliance with new product standards (Schneider Electric), regulatory changes are a key driver for new business opportunities in industrials.

Figure IN3. Metric tons CO₂e per unit of revenue (US\$) of the 10 largest companies by revenue in industrials (scope 1 & 2 emissions)

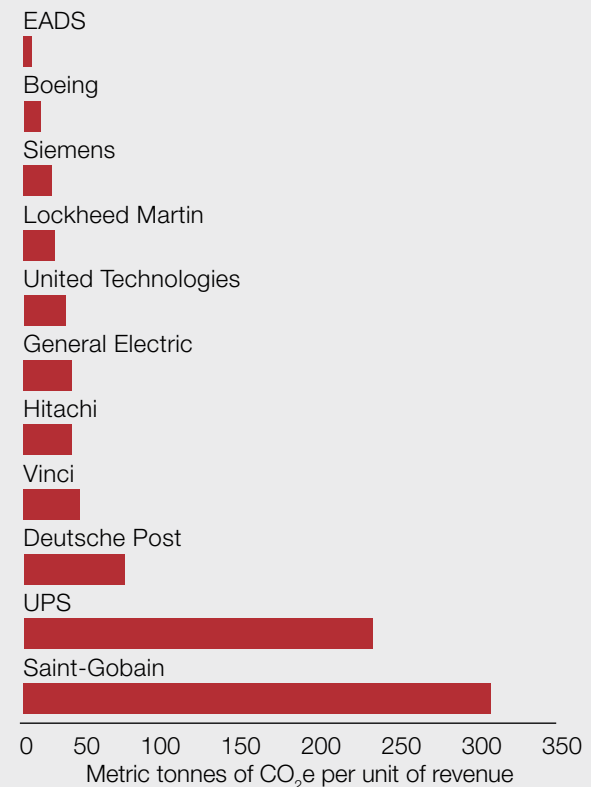


Figure IN4. Most commonly reported risks by industrial companies

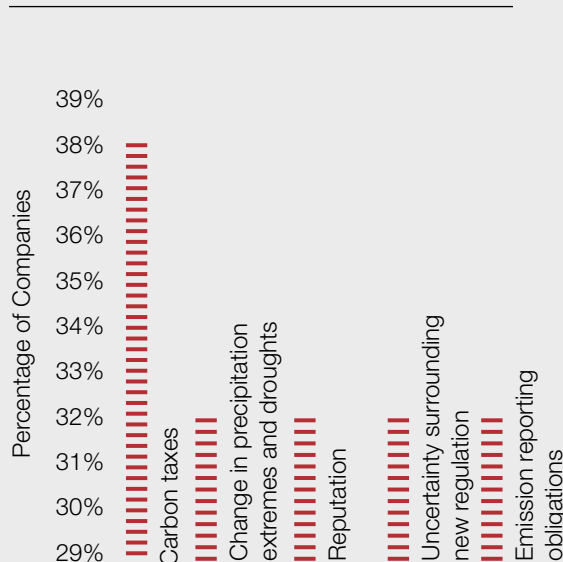
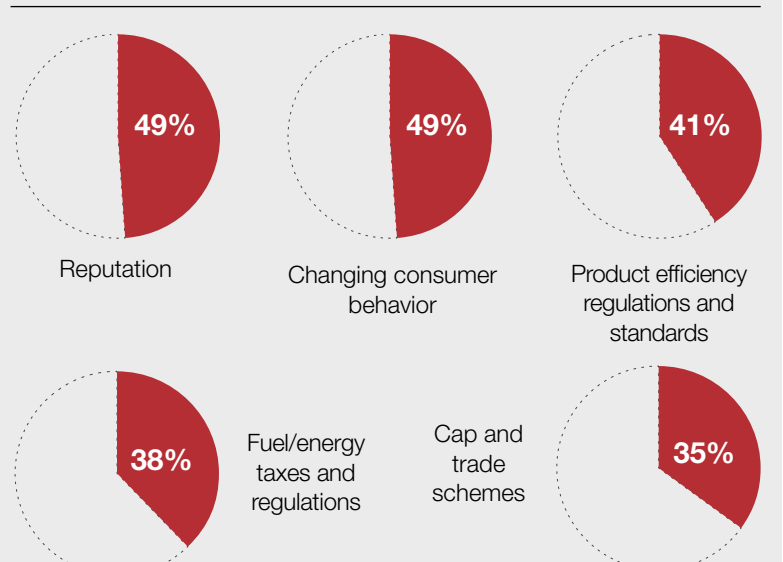
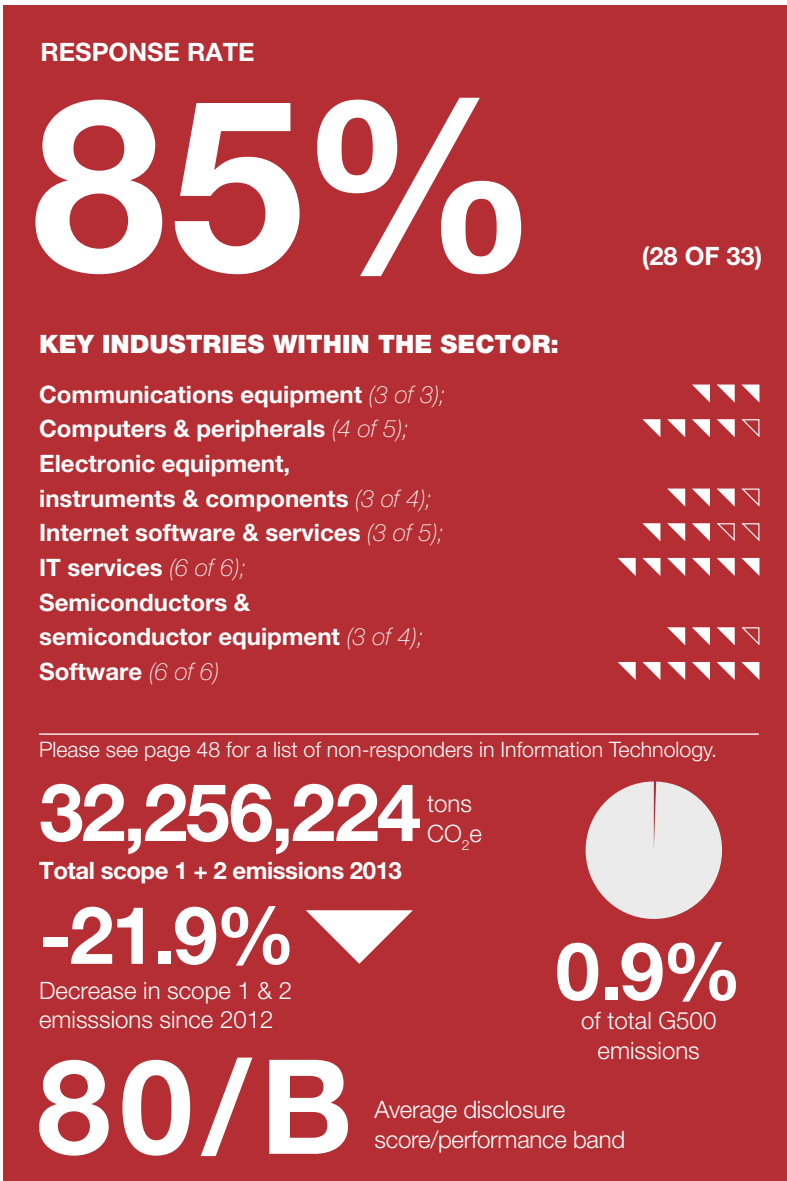


Figure IN5. Most commonly reported opportunities by industrial companies



Information Technology



IT companies reduced their scope 1 and 2 emissions significantly in 2012 (by 21.9%). However, almost half of this decrease was solely due to Samsung's divestment of its LCD business division which contributed to a 4 million tCO₂e decrease in its emissions.

Customers' expectations of environmentally-friendly products and corporate responsibility are driving good practice. IT companies believe that there are significant reputational benefits from taking strong climate change actions (39% highlight reputational opportunities and 50% highlight reputational risks).

The IT sector is striving to help consumers make choices which are less resource or carbon intensive. For instance, SAP's product footprint (including upstream and downstream emissions) is 28 times the size of its scope 1 and 2 emissions. The majority of the IT sector's effect on mitigating climate change will be through the delivery of less carbon intensive products. However, only 36% of companies report emissions data for use of sold products and processing of sold products. A number of IT companies report a drive to decouple growth from emissions and success in developing ranges of efficiency projects, from energy-saving improvements in their data centers and office to more fuel-efficient corporate cars.

Risks from climate change are relatively limited compared to other sectors. Regulatory risks are not expected to have a major impact on the sector as the sector's scope 1 and 2 emissions are comparatively small. However, 71% of IT companies report that physical risks could be significant – through disruption of supply chains and manufacturing processes. Leaders are responding by measuring the impact of their supply chain on the environment and assessing the resilience of their supply chains to physical risks.

The main opportunities reported are primarily around product development (43% of respondents report opportunities that could lead to new products and services). These are both due to consumer demand (environmentally conscious customers, reputation) and the development of new products in order to improve business continuity in case of physical natural disasters.

Information technology (IT) companies report that they offer products that assist third parties in avoiding emissions (89% of respondents, compared with the Global 500 average of 74%). Solutions include cloud services, outsourcing, systems implementations and software solutions.

Figure IT1. Historic scope 1 + 2 emissions performance of current largest information technology emitters

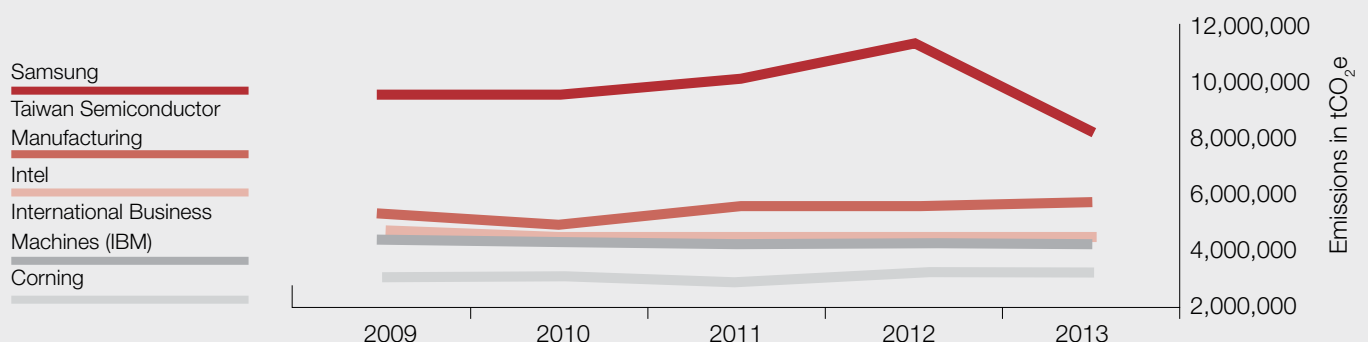
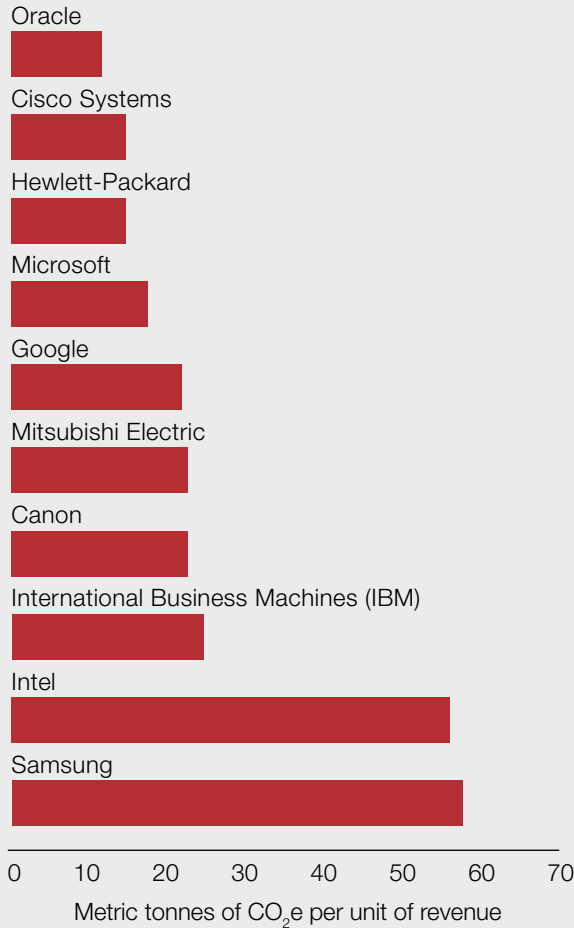


Figure IT2. Metric tons CO₂e per unit of revenue (US\$) of the 10 largest companies by revenue in information technology (scope 1 & 2 emissions).



SAP anticipates that increasing regulation at the global level, including potential UNFCCC successor agreements to the Kyoto Protocol, will significantly increase the need for business process and reporting automation. [...] SAP anticipates that during the negotiation phase leading up to 2015, we are likely to see an increase in sector based initiatives to agree voluntary CO₂ reduction commitments as industry makes a proactive attempt to shape the smartest regulation possible.

SAP



Figure IT3. Most commonly reported risks by information technology companies

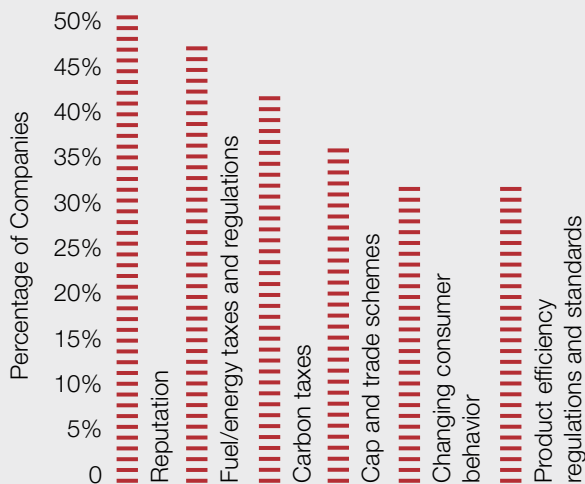
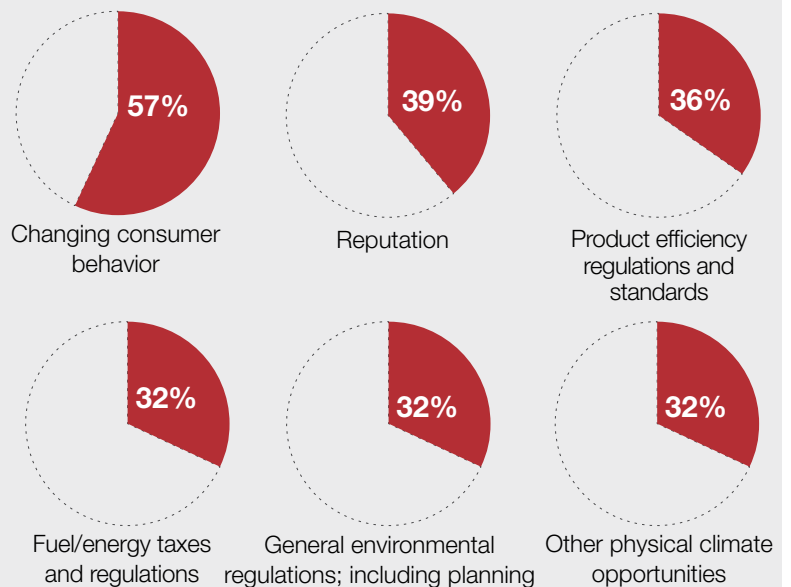
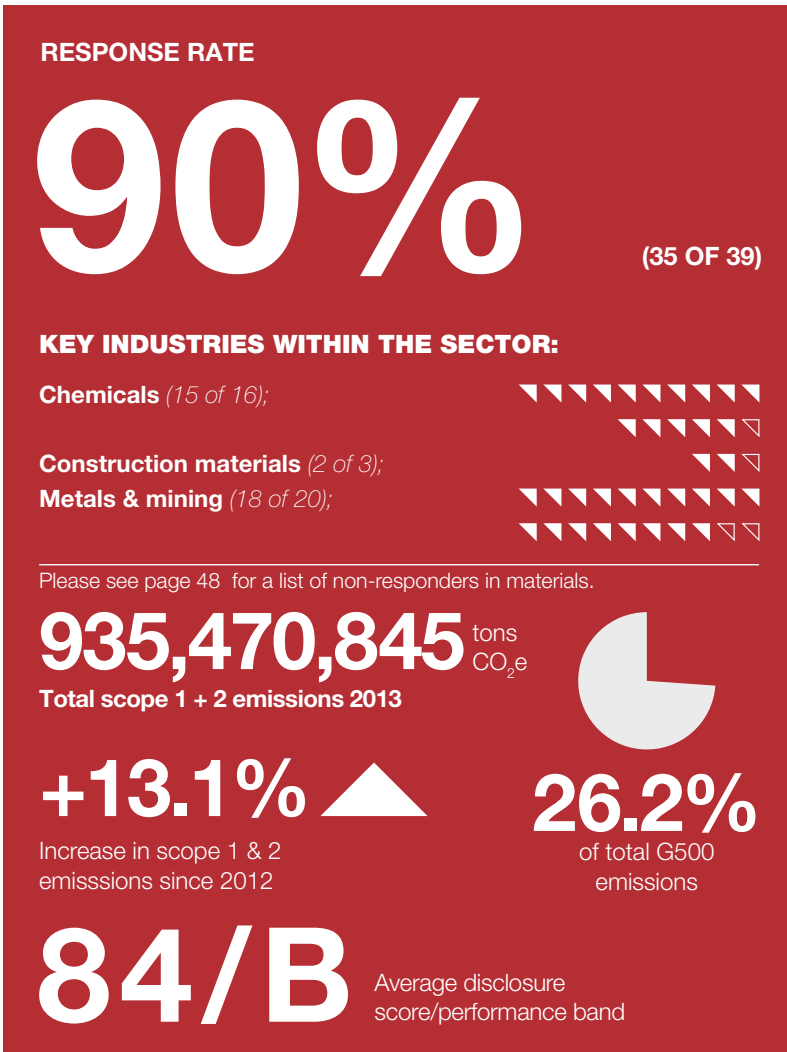


Figure IT4. Most commonly reported opportunities by information technology companies



Materials



operations and companies report a careful monitoring of changes in legislation. Mining companies, in particular, are also concerned about losing their license to operate and reputation is therefore seen as a significant risk (63% of companies).

Reducing their overall emissions can therefore significantly reduce liabilities to carbon taxes. As such, a majority (89%) of companies offer monetary incentives for energy efficiency and emission reductions. BHP Billiton's annual remuneration review takes into account performance against carbon targets. At Kumba Iron Ore, 25% of the CEO's performance targets are weighted towards key performance indicators including energy and water saving targets.

Among leading companies, there is therefore a trend towards renewable power generation in order to reduce the fuel costs. 92% of companies disclosed an emissions reduction target, although there is a tendency towards shorter term targets (more than half do not have targets with timeframes beyond 2012). This might reflect the uncertainty around long term regulation.

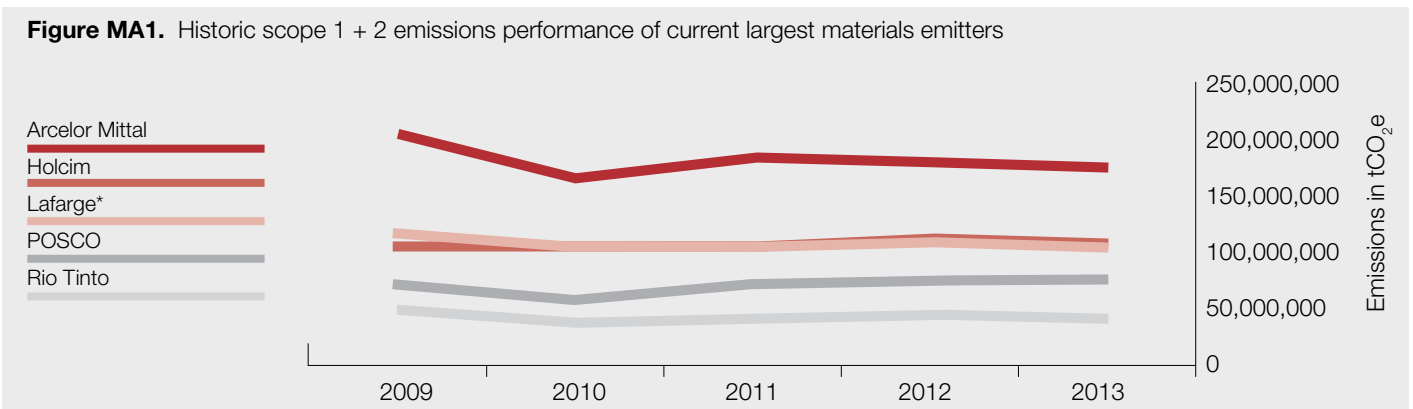
Companies also have high research and development budgets for green and low carbon products. For example, Arcelor Mittal notes that its commitment to a collaborative French research program on low impact steelmaking is US\$16.7 million out of a total US\$41.2 million budget. Government support also helps the development of new technologies. BASF reports German Government sponsored projects for innovating in the field of e-mobility. However, on the whole, emissions decreases by companies are relatively insignificant and some increases in this sector are substantial (e.g. a 450% increase for First Quantum Minerals Limited). This is because companies' operations are frequently carbon intensive and they are finding it difficult to decouple financial growth from emissions growth.

The materials sector is the third highest emitting sector. 74% of companies report being highly exposed to regulatory risks, such as carbon taxes, given their high emissions and the global nature of the majority of their businesses.

Anglo American, for example, estimates that the carbon cost of its Metallurgical Coal business in Australia could range between US\$7 million in 2012 and US\$69 million by 2016. BASF states that roughly 50% of its global emissions are covered by the EU ETS, which it sees as its main regulatory risk. In addition, the current uncertainty around international, legally-binding, regulation can be a barrier to entry for companies with global

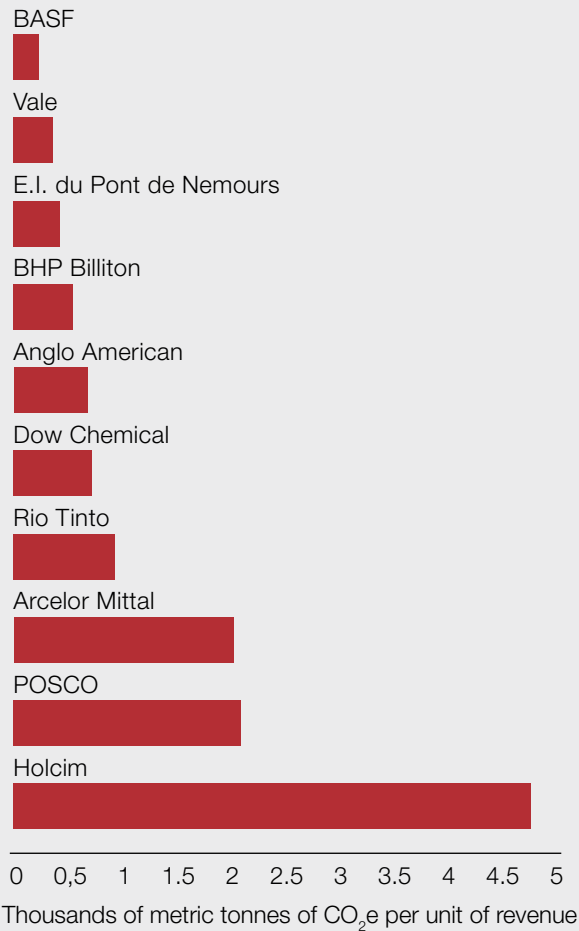
36% of companies engage with trade associations and 22% of companies fund research organizations, although companies' motivations for doing so vary. A majority of companies emphasize positive engagement on climate change but often lobby in order to protect their business interests, for example by minimizing

Figure MA1. Historic scope 1 + 2 emissions performance of current largest materials emitters



*Lafarge was not included in the G500 in 2012.

Figure MA2. Metric tons CO₂e per unit of revenue (US\$) of the 10 largest companies by revenue in materials (scope 1 & 2 emissions)



Anglo American Platinum has a number of projects in differing stages of development that could be taken forward as CDM projects. These include electric drilling, solar water heating, various compressor efficiency and pumping projects and the installation of a thermal co-generation heat recovery process on a high-pressure cooling system.

Anglo American



reporting or protecting competitiveness. Overall, the materials sector is still supportive of climate policy, with 71% of companies supporting climate legislation. While motivations might vary, a level international playing field for an emissions-intensive sector might be the common denominator that will drive change in materials companies.

Figure MA3. Most commonly reported risks by material companies

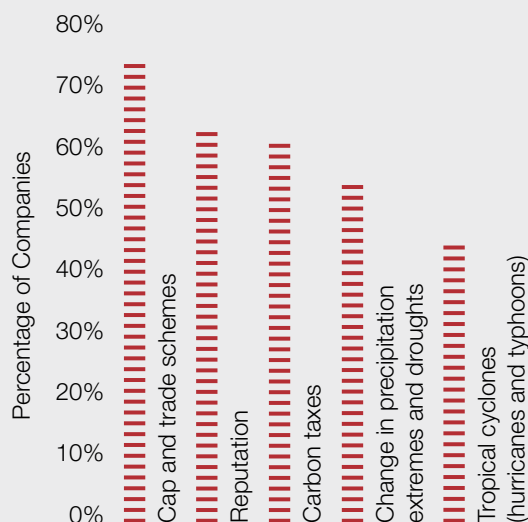
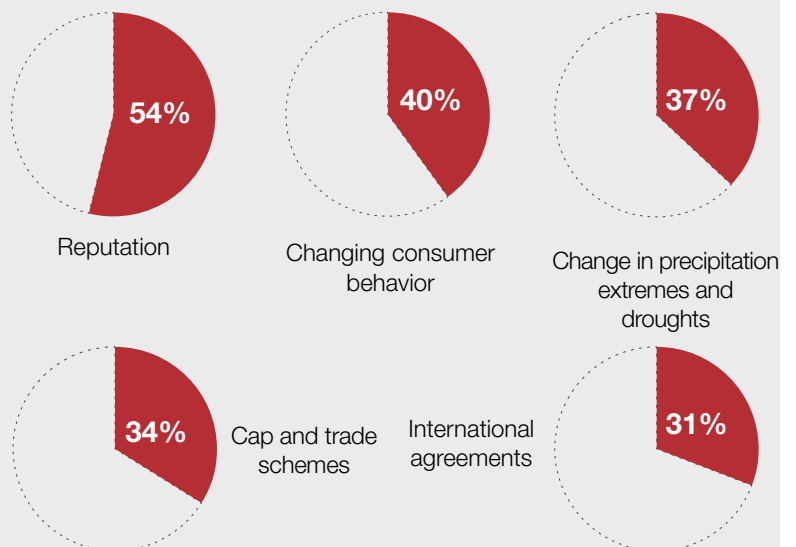


Figure MA4. Most commonly reported opportunities by material companies



Telecommunication Services

RESPONSE RATE

66%

(21 OF 32)

KEY INDUSTRIES WITHIN THE SECTOR:

Diversified

telecommunication services (16 of 20);



Wireless

telecommunication services (5 of 12);



Please see page 48 for a list of non-responders in telecommunication services.

38,880,590

 tons CO₂e
Total scope 1 + 2 emissions 2013


-0.6%

Decrease in scope 1 & 2 emissions since 2012

1.1%

of total G500 emissions

81/B

Average disclosure score/performance band



Opportunities exist for our customers to reduce their carbon emissions through the use of our products and services. Telstra is quantifying the impacts and benefits of ICT to manage and reduce carbon emissions for both its own operations and for its customers.

Telstra Corporation



BT Group has a Director of Carbon & Energy, whose personal annual pay and bonus is linked to energy and carbon reduction targets.

While the majority (91%) of companies have emissions reduction targets, 70% of companies also reported an increase in emissions. Telecommunication services companies justify this by explaining that this increase in their own emissions will be compensated by the overall decreases resulting from the use of their products, and suggesting that overall global emissions are lower than they would be in a business as usual scenario.

Telecommunication services companies report a wide range of risks and opportunities: reputation is the most frequently reported risk in the sector (76% of companies). However, regulatory issues such as carbon taxes, fuel and energy pricing as well as emissions reporting obligations are also frequently reported. Deutsche Telekom states that, since the emissions of ICT companies are comparable to the emissions from aviation, an involvement of the sector in the EU ETS might be a possibility in the future.

Carbon taxes are both a risk and an opportunity: a risk due to their own emissions but an opportunity due to a growth in other companies' use of telecommunication companies' products in order to reduce their own emissions.

By helping others avoid emissions, most telecommunication service companies see themselves as "part of the solution to climate change" (TeliaSonera). Every telecommunications company stated that their products help to avoid emissions, giving examples of green solutions such as cloud computing, video conferencing, smart building management and smart electrical grids.

Virtually all telecommunication services companies refer to the GeSI SMARTer2020 report which suggests that increased use of ICT could reduce global emissions by 16.5% by 2020. This would be equivalent to US\$1.9 trillion in energy and fuel savings. Companies are innovating to meet this potential:

Figure TC1. Historic scope 1 + 2 emissions performance of current largest telecommunications services emitters

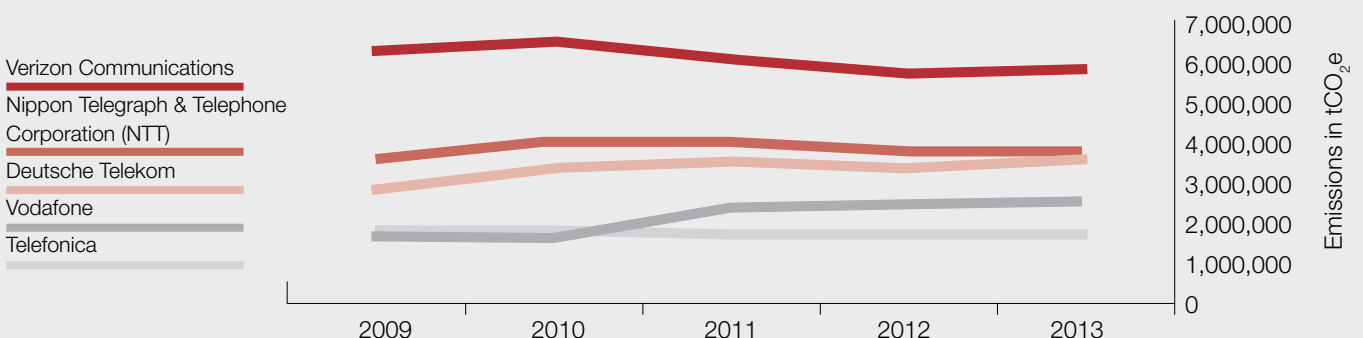
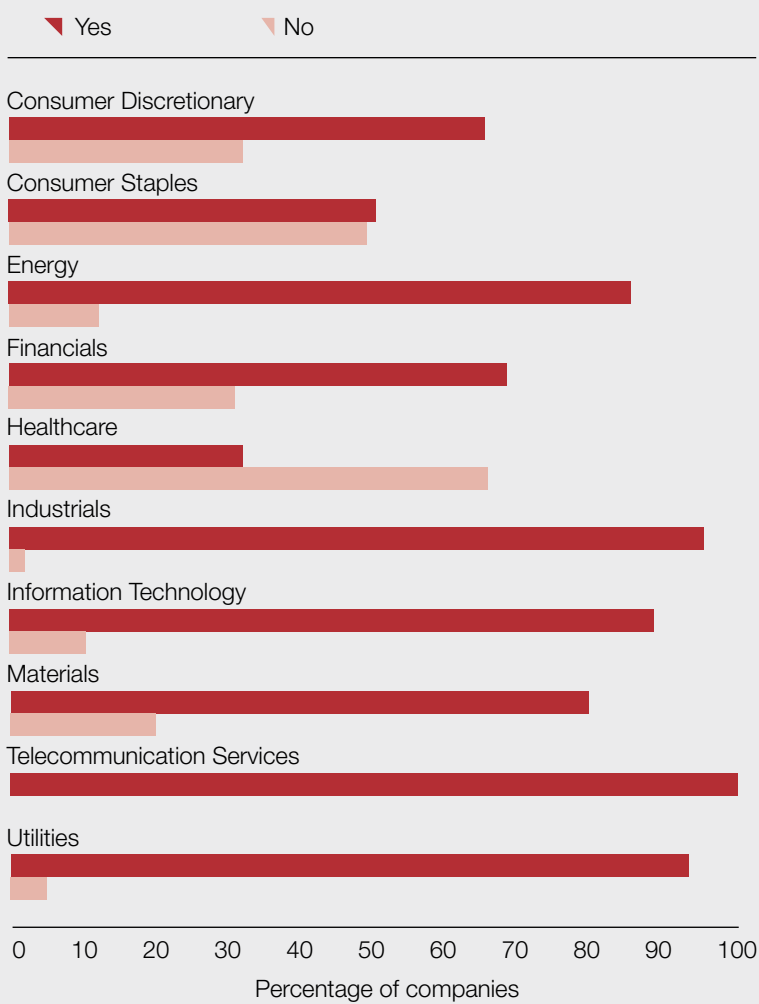


Figure TC2. 100% of telecommunication services companies report that their products or services avoid others' emissions



Similarly, extreme weather events also present telecommunication companies with both risks and opportunities too: natural disasters might provide an additional requirement for governments to be prepared to help populations communicate during extreme weather events. On the other hand, France Telecom notes that physical risks to infrastructure could increase operational costs by 9% by 2020.

Figure TC3. Metric tons CO₂e per unit of revenue (US\$) of the 10 largest companies by revenue in telecommunication services (scope 1 & 2 emissions)

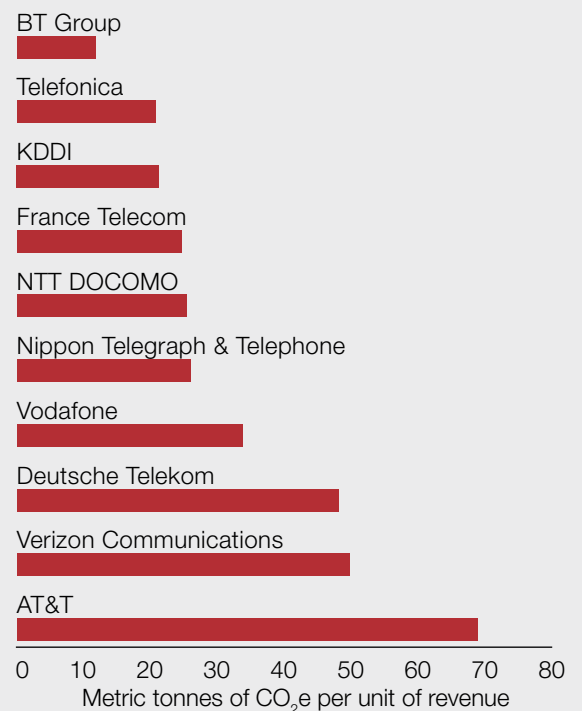


Figure TC4. Most commonly reported risks by telecommunication services companies

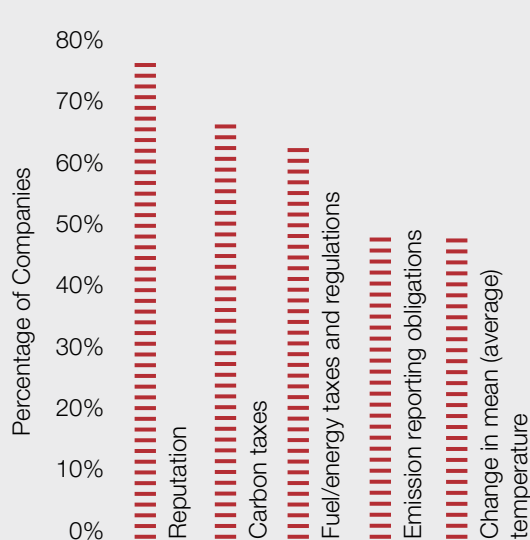
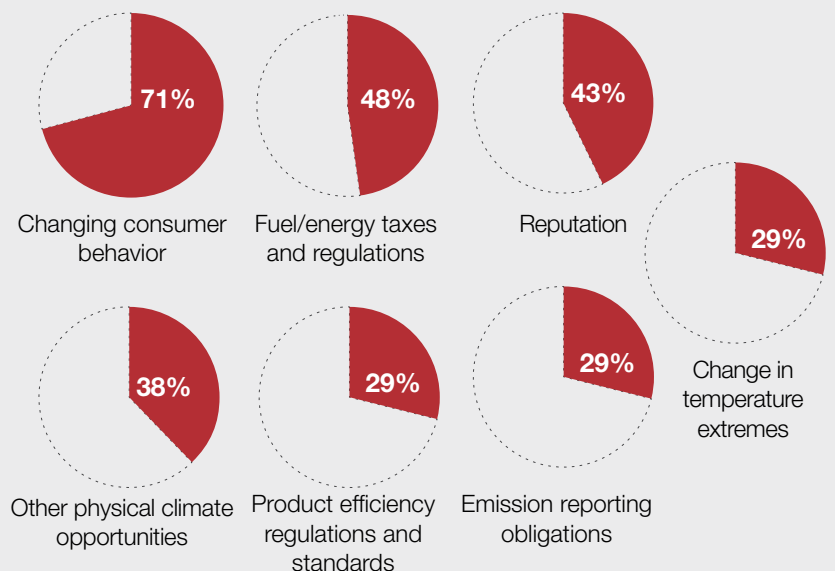
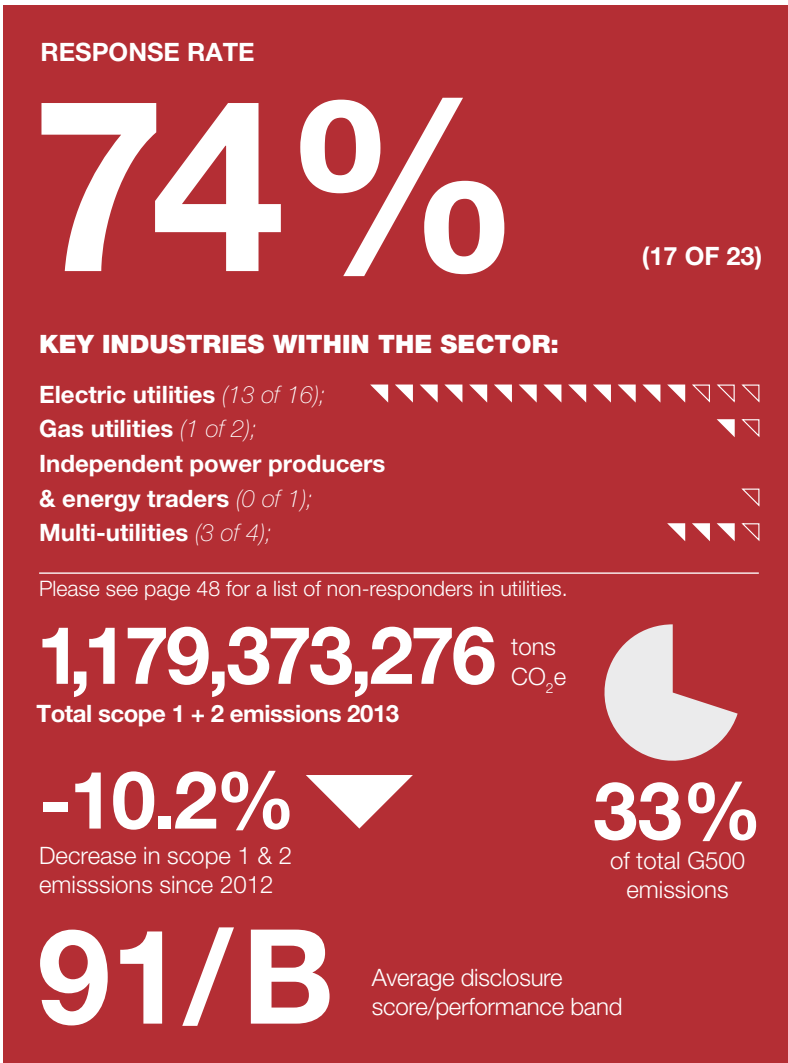


Figure TC5. Most commonly reported opportunities by telecommunication services companies



Utilities



by 4.1% due to a higher consumption of fossil fuels. Companies note that energy efficiency programs (CERT & CESP) and employee engagement programs are critical to limiting emissions growth. Some also reported a change of their energy mix towards more renewable energy and the allocation of large budgets to low carbon product development.

The sector demonstrates a comparatively sophisticated response to climate change, with all companies having emissions reduction targets and (41%) of companies having long term targets beyond 2020. Most (76%) of these are intensity targets, which reflects the industry's difficulty in decoupling emissions from growth. To address this, companies not only focus on energy consumption to reduce emissions and increase energy efficiency but also, for example, water efficiency (e.g. for cooling).

Utility companies are acutely aware of the risks and opportunities from climate change. Risks to the sector include uncertainty surrounding regulation (76% of companies) as well as cap and trade schemes (71% of companies). Centrica, for example, states that the company is exposed to significant regulatory risk because, in highly regulated markets, external policy decisions or changes to regulatory regimes or industry procedures could fundamentally affect its commercial operations. RWE states that international agreements, such as an extension of the Kyoto Protocol, would help to keep a level playing field for all market participants. Furthermore, seasonal changes in precipitation and temperature, which could affect seasonal demand, are also highlighted as a significant risk.

The main opportunities reported by utilities involve reputation, changing customer behavior and regulatory opportunities surrounding international agreements. For example, E.ON states that its strategic focus on cleaner energy will strengthen its brand image and credibility among its key stakeholders. Furthermore, it estimates that 60% of its top shareholders have advanced requirements in terms of environmental, social and governance issues.

Despite being the highest emitting sector utilities are investing in low carbon generation and providing products or services that promote energy efficiency and savings among their customers. Given their size, small improvements in energy efficiency by utilities can have a large impact on overall emissions.

Total scope 1 and 2 emissions have decreased by 1.3 million metric tons CO₂e in absolute terms, mostly due to changes in the Global 500 population. However, two thirds of utility companies have increased their emissions since last year. For example, Enel's emissions have increased

Figure UT1. Historic scope 1 + 2 emissions performance of current largest information technology emitters

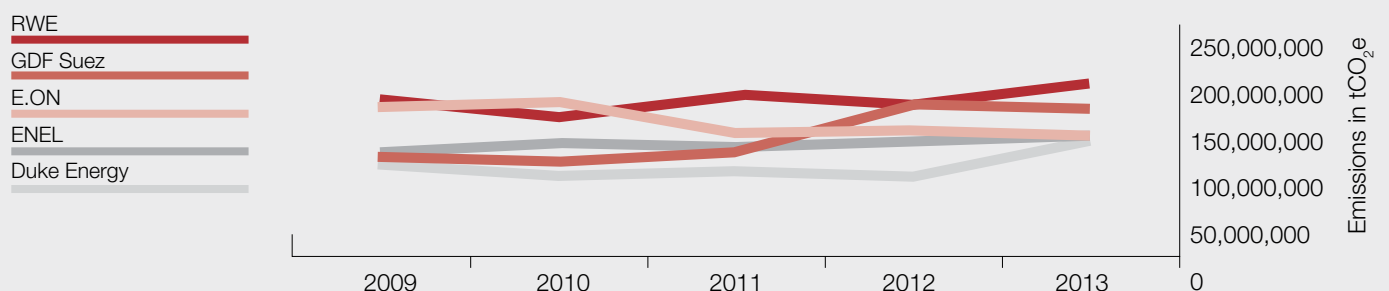
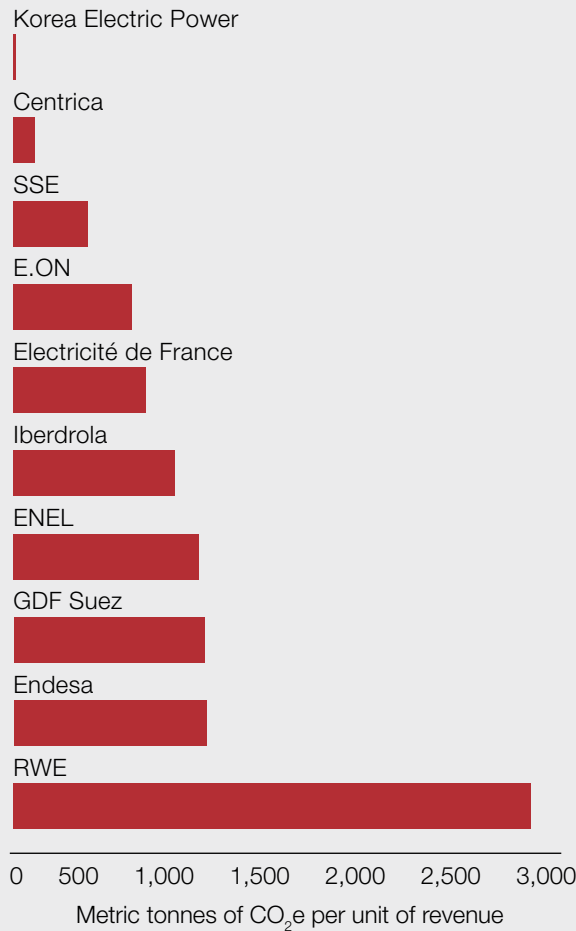


Figure UT2. Metric tons CO₂e per unit of revenue (US\$) of the 10 largest companies by revenue in utilities (scope 1 & 2 emissions)



RWE as other electric utilities are expected to deliver their contribution to reduce CO₂ emissions. The way we contribute to the common goal to reduce CO₂ emissions influences our reputation significantly.

RWE



Utilities engage with policymakers more than any other sector. They have set up working groups for special programs (e.g. Green Deal & Energy Company Obligation in the UK, 'Roadmap to 2050' in the EU or support of international treaties) which aim to inform the setting of climate targets. 76% of companies fund research organizations, 94% engage with trade associations and all report direct engagement with governments. 88% of companies state that their approach to climate change is consistent with the position of trade associations.

Finally, utility companies are looking at their whole value chain and are helping customers avoid emissions through a wide range of products and services that promote energy efficiency and savings. These include supplying steam to industrial customers at cogeneration facilities, generating renewable electricity or delivering Renewable Energy Certificates.

Figure UT3. Most commonly reported risks by information technology companies

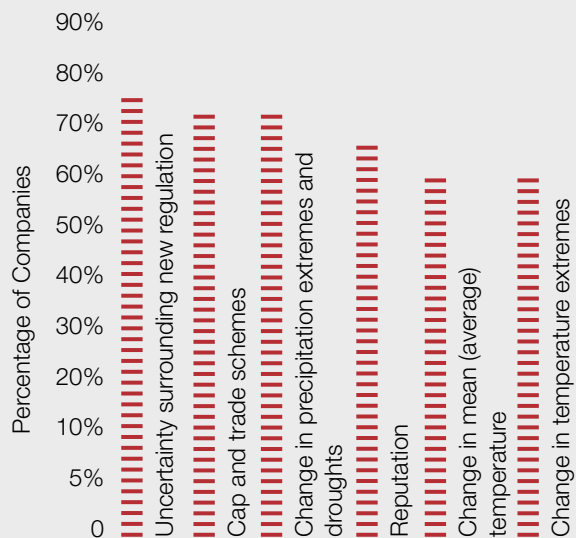
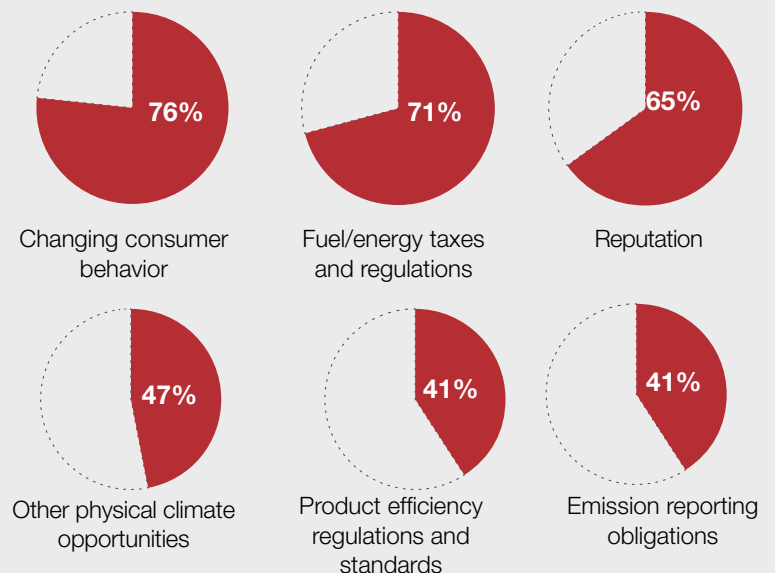


Figure UT4. Most commonly reported opportunities by information technology companies

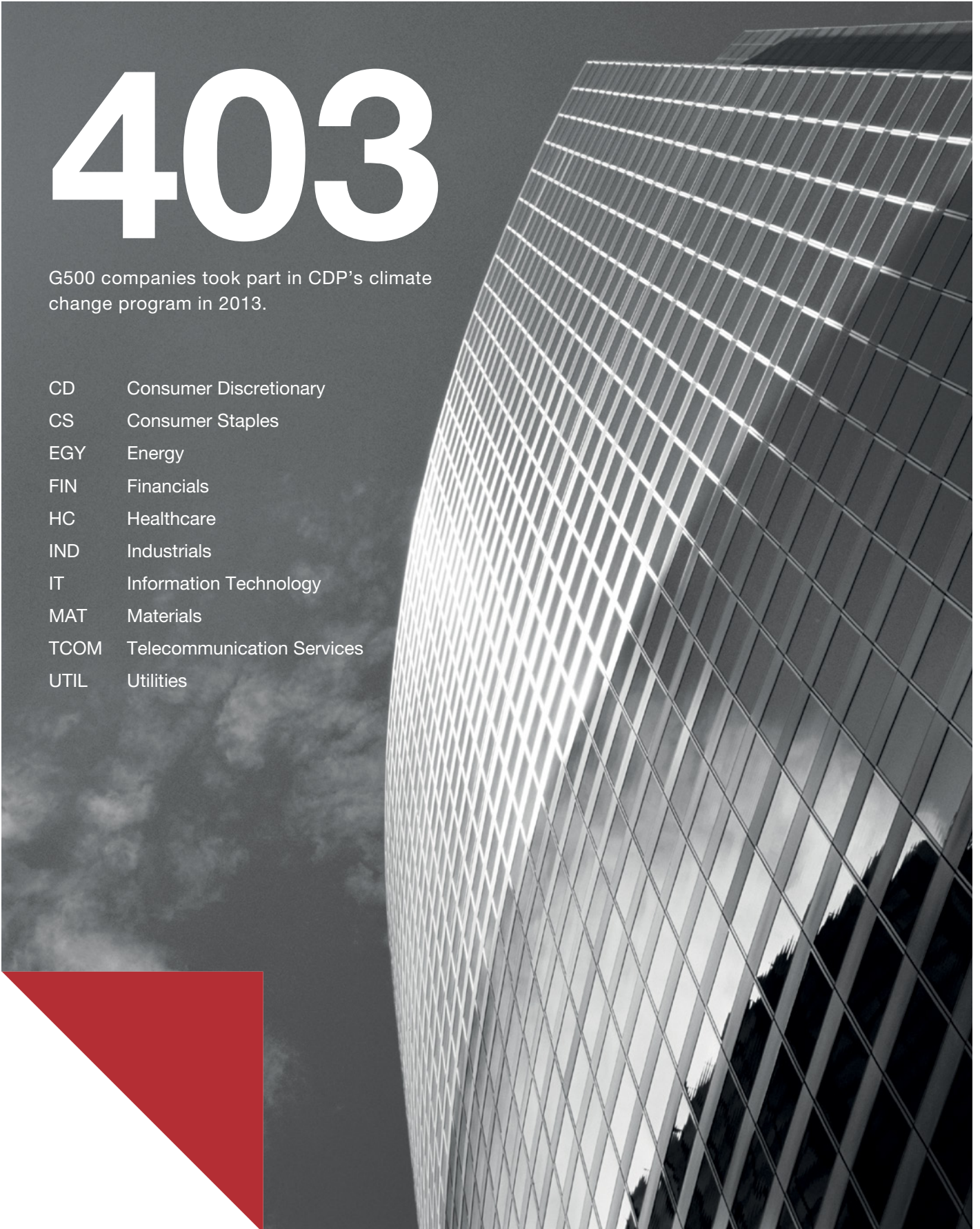


Key Disclosure Statistics

403

G500 companies took part in CDP's climate change program in 2013.

CD	Consumer Discretionary
CS	Consumer Staples
EGY	Energy
FIN	Financials
HC	Healthcare
IND	Industrials
IT	Information Technology
MAT	Materials
TCOM	Telecommunication Services
UTIL	Utilities



Key disclosure statistics

Figure KS1 is based on the sample of 403 companies. This includes companies that reference a holding company's response. Analysis in the remainder of this report is based on 389 responses received by 1st July 2013 and does not include companies that reference a holding company's response.

The number of companies disclosing scope 1 or 2 emissions includes those that have disclosed their emissions as zero.

Scope 2 figures for 2013 are not directly comparable with 2012 as companies can now incorporate the specific emissions factors associated with renewable energy purchases where supported by appropriate tracking instruments.

Climate Change Reporting Framework

The Climate Disclosure Standards Board (CDSB), a special project of CDP, is an international organization committed to the integration of climate change-related information into mainstream corporate reporting.

CDSB's internationally accepted Climate Change Reporting Framework is designed for use by companies in making disclosures in, or linked to, their mainstream financial reports about the risks and opportunities that climate change presents to their strategy, financial performance and condition.

Designed in-line with the objectives of financial reporting and rules on non-financial reporting, the Climate Change Reporting Framework offers a leading example of how to apply the principles of integrated reporting with respect to reporting on climate change. Learn more about CDSB's work and download the Framework from their website www.cdsb.net.

Figure KS1: Year-on-year number of companies responding to CDP publicly and privately

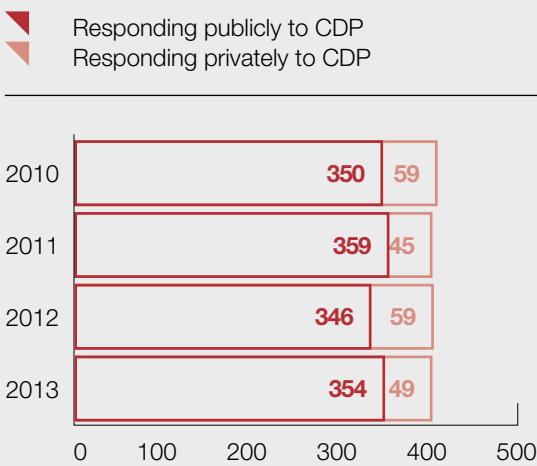


Figure KS3: Year on year number of companies disclosing scope 1 or scope 2 GHG emissions

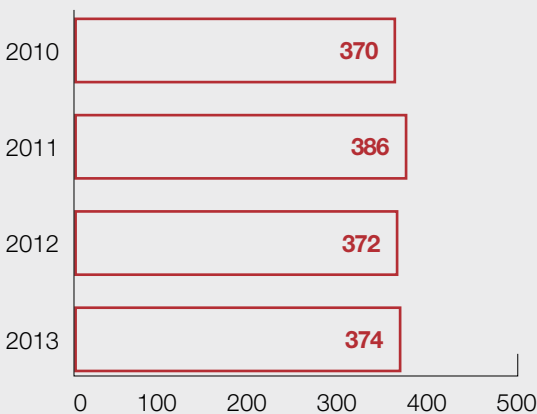


Figure KS2: Percentage response rate by sector

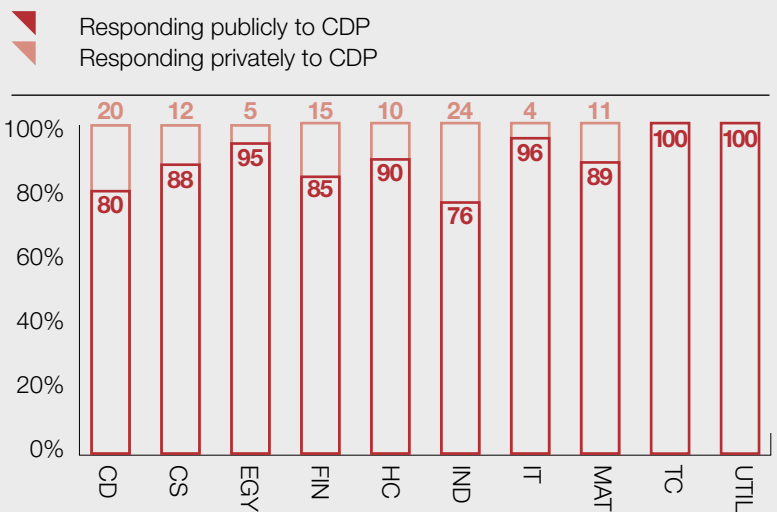
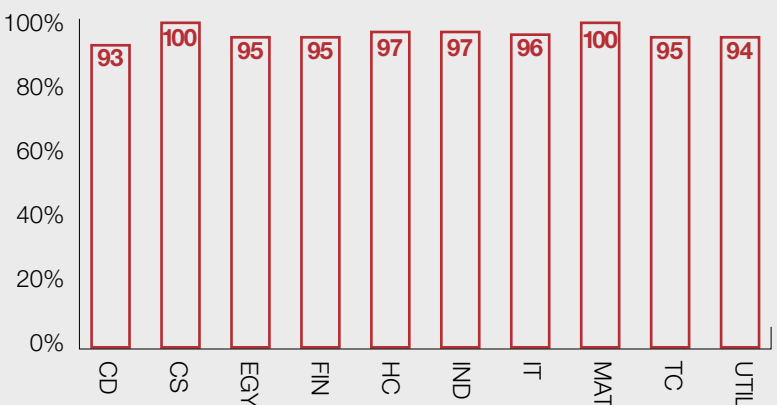


Figure KS4: Percentage of responding companies in each sector disclosing scope 1 or scope 2 GHG emissions



Key Emissions Statistics

Total scope 1 and 2 emissions have dropped by 72 million metric tons CO₂e since 2012, although this is partly due to a change in reporting sample and a drop in the number of respondents from the heaviest emitting sectors (energy, materials, utilities).

Due to a change in the approach for scope 2 accounting, scope 2 figures for 2013 are not comparable with 2012 as companies can now incorporate the specific emissions factors associated with renewable energy purchases where supported by appropriate tracking instruments.

Only companies reporting scope 3 emissions using the Greenhouse Gas Protocol Corporate Value Chain (scope 3) Accounting and Reporting Standard named categories have been included below. In addition, only those categories for which emissions figures that are greater than zero and identified as relevant have been included.

CDP has been working to encourage greater levels of third party verification/assurance of data in response to demands for higher levels of data quality. The term "reported and approved" refers to the fact that the number of companies with verification is based on the scoring of the verification statements attached to their response. Where companies report verification/assurance of more than one scope, they are counted only once in the statistic provided below.

Figure KS5: Total scope 1 emissions reported by responding G500 companies

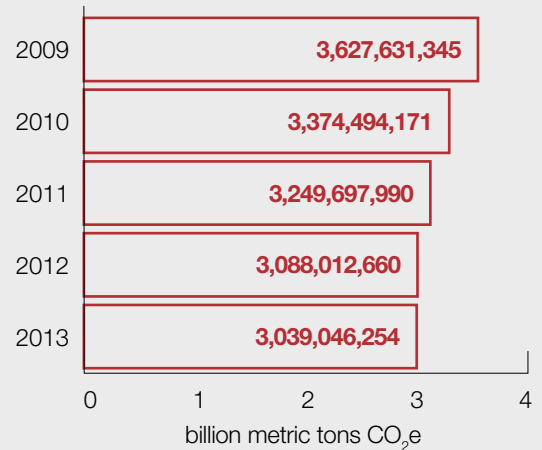


Figure KS6: Total scope 2 emissions reported by responding G500 companies

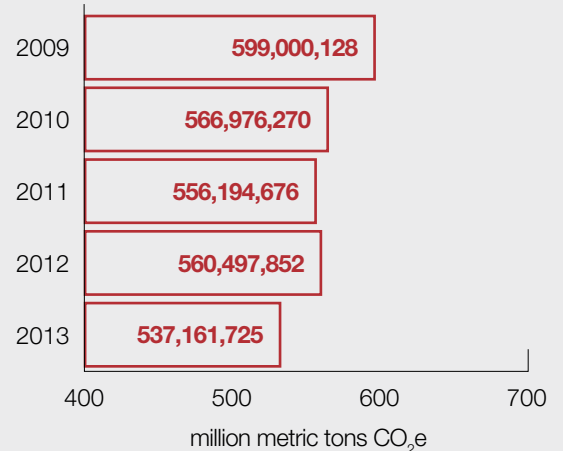


Figure KS7: Total scope 1 emissions reported by responding G500 companies (billion metric tons CO₂e)

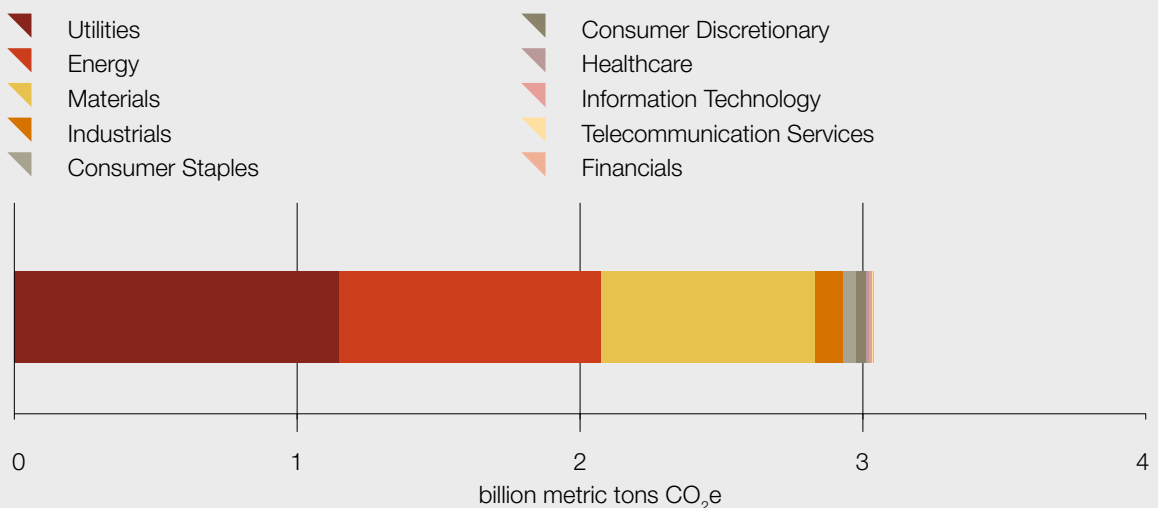


Figure KS8: Total scope 2 emissions reported by responding G500 companies (million metric tons CO₂e)

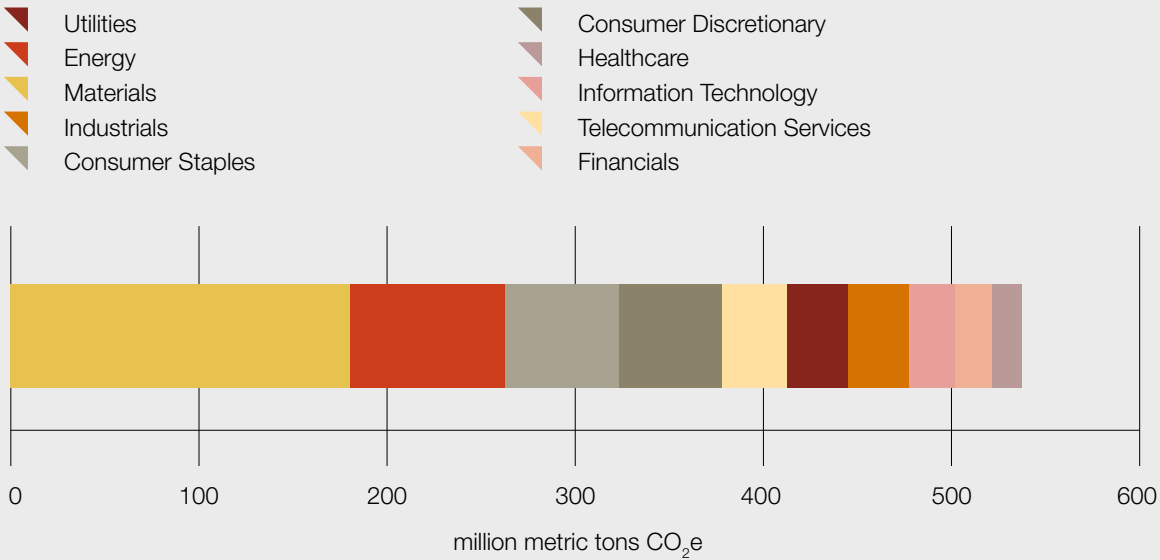


Figure KS9: Number of companies reporting 'relevant and calculated' scope 3 categories ¹²

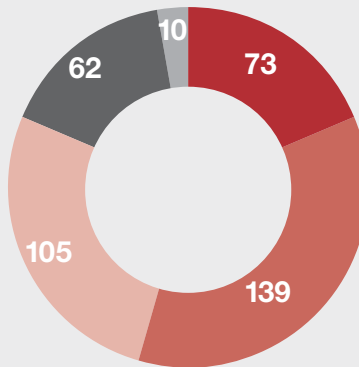
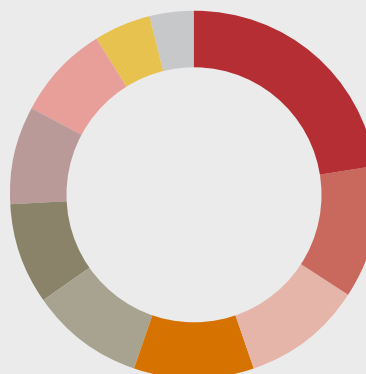
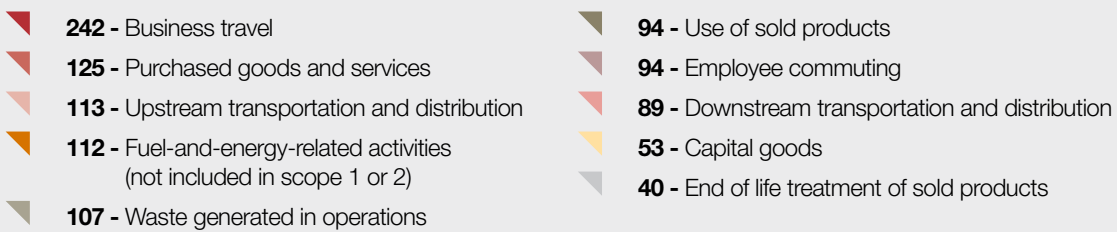


Figure KS10: 10 most commonly reported scope 3 categories (with emissions data)



¹² Analysis covers scope 3 emissions categories that have been calculated and are considered relevant by the responding companies, indicated by the "relevant, calculated" option in question 14.1 of the questionnaire.

Key Emissions Statistics *continued*

Figure KS11: Verification/assurance of emissions complete or underway and full points awarded

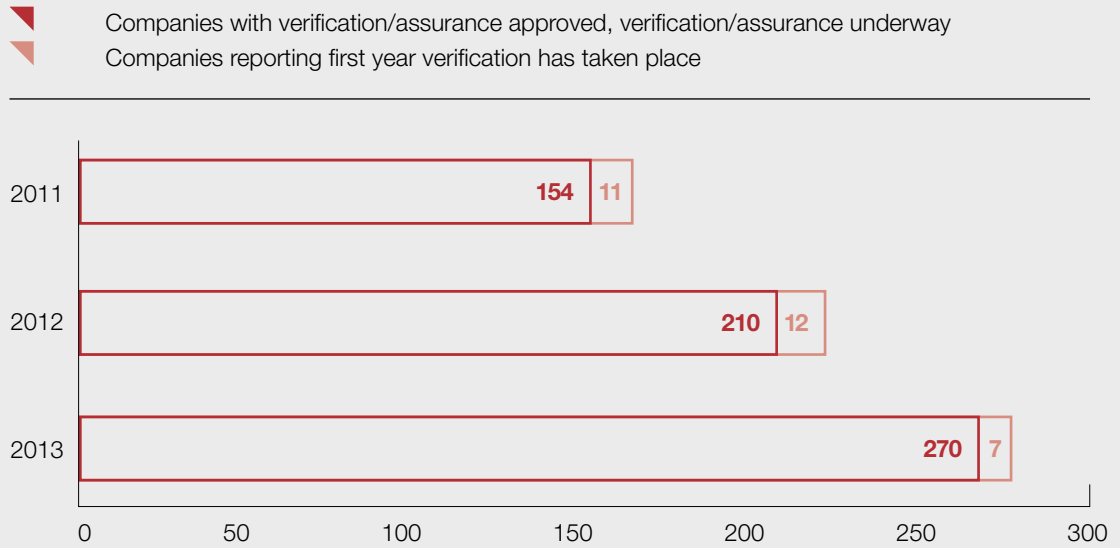


Figure KS12: Percentage of companies with verification/assurance per sector



CD Consumer Discretionary

CS Consumer Staples

EGY Energy

FIN Financials

HC Healthcare

IND Industrials

IT Information Technology

MAT Materials

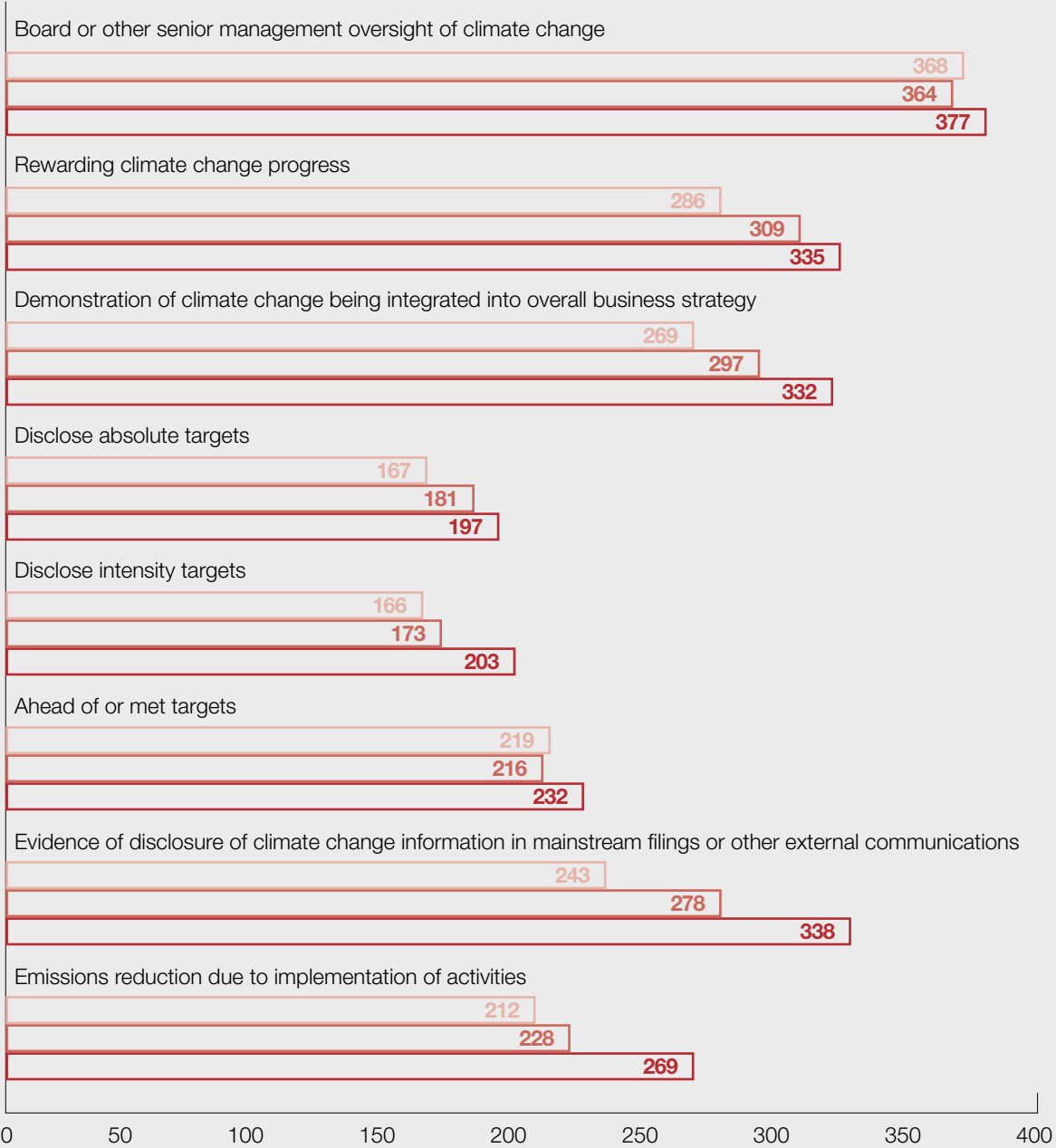
TCOM Telecommunication Services

UTIL Utilities

Key Best Practice Statistics

Figure KS13: Key performance statistics

▾ 2011
▾ 2012
▾ 2013



Companies disclosing absolute or intensity targets have been included in this section only where they have been fully described, providing base year, target year, percentage reduction and for intensity targets, target metric.

Companies may report multiple emissions reductions due to implementation of activities, targets and reward incentives. In all of these cases, companies are counted only once in the statistics presented above, with the exception of the statistics on absolute and intensity targets where companies that have both types of target will be counted once in each type.

Key Best Practice Statistics *continued*

Figure KS14: Percentage of responding companies with board or other senior management oversight by sector

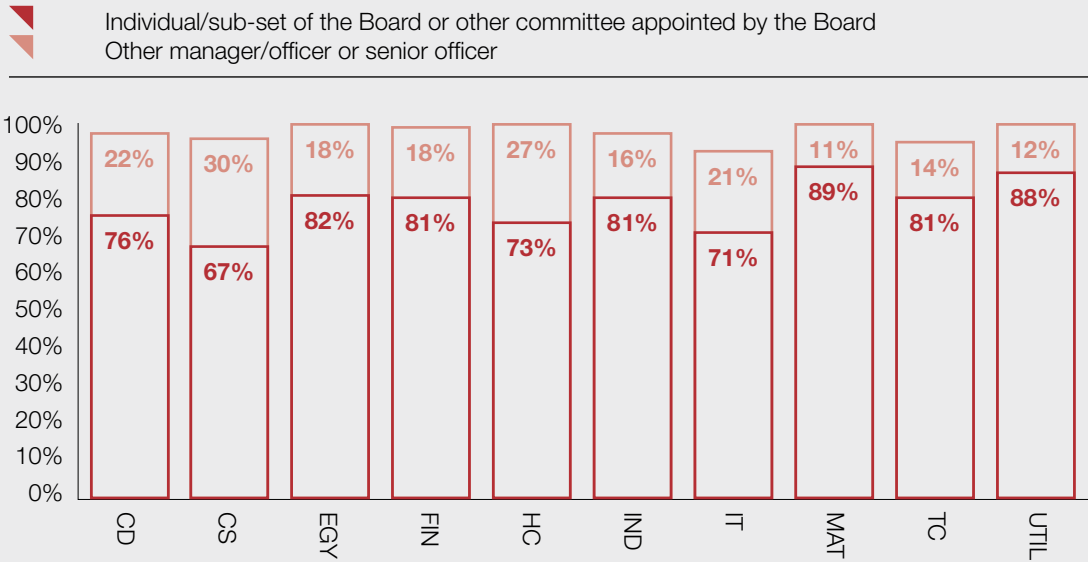


Figure KS15: Percentage of responding companies rewarding climate change progress by sector

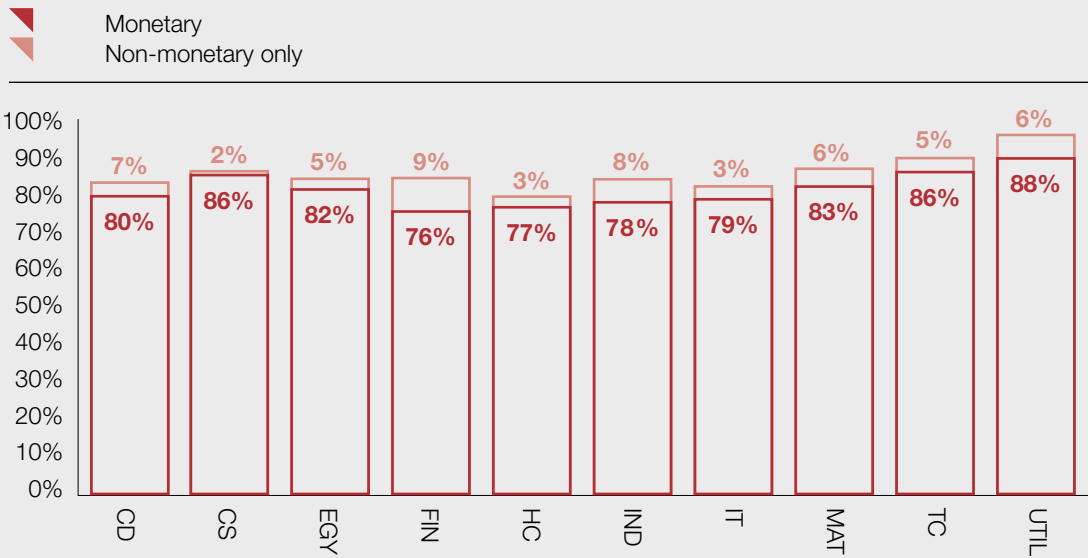


Figure KS16: Percentage of responding companies demonstrating climate change being integrated into overall business strategy



Figure KS17: Percentage of responding companies disclosing absolute targets by sector

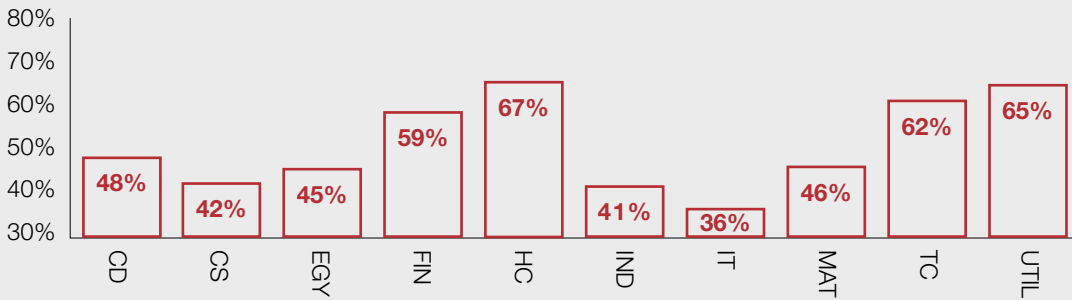


Figure KS18: Percentage of responding companies disclosing intensity targets by sector

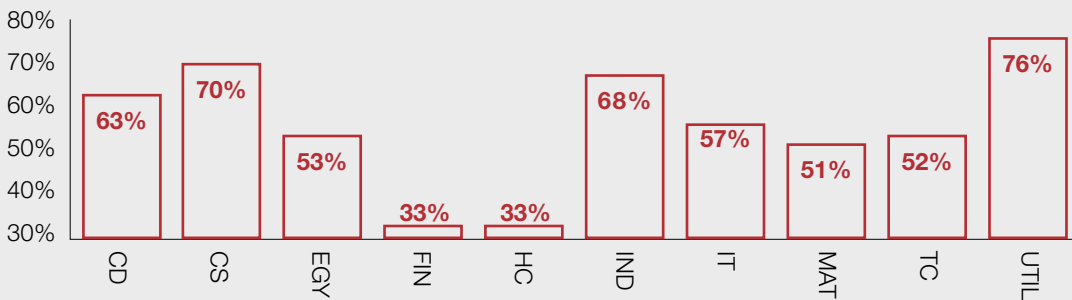


Figure KS19: Percentage of responding companies ahead of or having met targets by sector

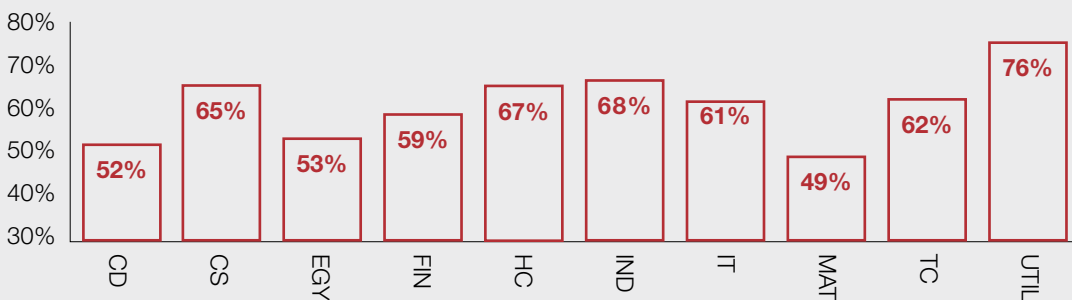


Figure KS20: Percentage of responding companies with evidence of disclosure of climate change information in mainstream filings or other external communications by sector

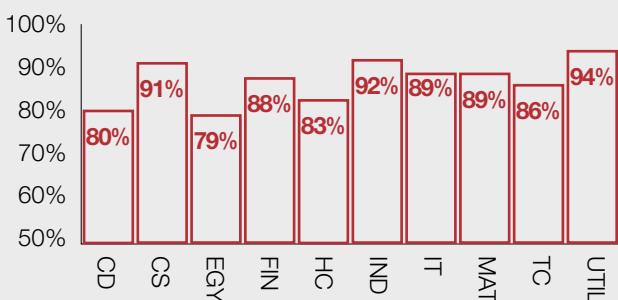
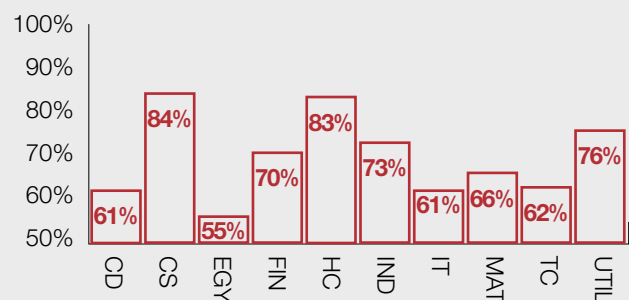


Figure KS21: Percentage of responding companies with emissions reductions due to implementation of activities by sector



Appendix I - Non-responding companies

Company name	Country	2013 Status
Consumer Discretionary		
Amazon.com	USA	NR
Belle International	Greater China	NR
Comcast	USA	IN
Fast Retailing	Japan	NR
Hermes International	France	NR
Kia Motors	South Korea	DP
Kinder Morgan.	USA	NR
Luxottica Group	Italy	DP
Prada	Italy	NR
Priceline.Com	USA	NR
S.A.C.I. Falabella	Chile	NR
Sands China	Greater China	NR
Time Warner Cable	USA	NR
Consumer Staples		
Archer Daniels Midland	USA	NR
Magnit	Russia	DP
Want Want China Holdings	Greater China	NR
Energy		
China Petroleum & Chemical	Greater China	NR
Coal India	India	NR
EOG Resources	USA	IN
Formosa Petrochemical	Greater China	NR
Lukoil	Russia	DP
Marathon Oil	USA	NR
Marathon Petroleum	USA	IN
National Oilwell Varco	USA	NR
Oil & Natural Gas	India	NR
Phillips 66	USA	NR
Reliance Industries	India	NR
Rosneft	Russia	NR
Tenaris	Luxembourg	NR
Valero Energy	USA	IN
Williams Companies	USA	NR
Financials		
AIA	Greater China	NR
Bank Central Asia	Indonesia	NR
Bank Mandiri	Indonesia	NR
Bank of China	Greater China	NR
BB&T	USA	NR
Berkshire Hathaway	USA	NR
Cheung Kong	Greater China	NR
China Construction Bank	Greater China	NR
China Life Insurance	Greater China	NR
China Overseas Land & Investment	Greater China	NR
CIMB	Malaysia	NR
DBS	Singapore	NR
Discover Financial Services	USA	IN
Equity Residential	USA	DP
General Growth Properties	USA	NR
GRUPO FINANCIERO INBURSA-O	Mexico	NR
Housing Development Finance	India	NR
ICICI Bank	India	NR
Picc Property & Casualty	Greater China	NR
Public Bank BHD	Malaysia	NR
Public Storage	USA	NR
Sampo Oyj	Finland	NR
Sberbank	Russia	NR
Siam Commercial Bank PCL	Thailand	NR
Sun Hung Kai Properties	Greater China	NR
United Overseas Bank	Singapore	NR
VTB Bank	Russia	NR
Wharf Holdings	Greater China	NR

Company name	Country	2013 Status
Healthcare		
Alexion Pharmaceuticals	USA	NR
Gilead Sciences	USA	NR
Intuitive Surgical	USA	NR
McKesson	USA	DP
Express Scripts Holding	USA	DP
Valeant Pharmaceuticals International	Canada	NR
Industrials		
Caterpillar	USA	IN
FANUC	Japan	NR
General Dynamics	USA	NR
Grupo Mexico B. de CV	Mexico	NR
Hutchison Whampoa	Greater China	NR
Jardine Matheson	Greater China	NR
Jardine Strategic	Greater China	NR
Precision Castparts	USA	NR
Information Technology		
Apple	USA	NR
ASML Holding	Netherlands	DP
Facebook	USA	NR
Tencent Holdings	Greater China	NR
Materials		
LyondellBasell Industries	Netherlands	NR
MMC Norilsk Nickel	Russia	DP
Siam Cement	Thailand	NR
Southern Copper Corporation	Peru	NR
Telecommunication Services		
Advanced Info Service	Thailand	NR
América Móvil	Mexico	NR
American Tower	USA	DP
Axiata Group Berhad	Malaysia	NR
Bharti Airtel	India	NR
China Mobile	Greater China	NR
China Telecom	Greater China	NR
Crown Castle International Corp	USA	NR
SoftBank	Japan	NR
Telekom Indonesia	Indonesia	NR
Utilities		
CEZ	Czech Republic	NR
Dominion Resources	USA	DP
Hong Kong and China Gas	Greater China	NR
National Thermal Power (NTPC)	India	NR
NextEra Energy	USA	NR
The Southern Company	USA	IN

Appendix Key :

- AQ: Answered questionnaire
 AQ(L): Answered questionnaire late, and therefore is not scored.
 DP: Declined to participate
 IN: Information provided (e.g. CSR report)
 NR: No response
 SA: See another - refers to another company response
 Not public: the company responded privately
 Scope 3 column: value indicates number of S3 categories that were reported as 'relevant and calculated'
 *: the asterisk on scope 1 or scope 2 emissions figure indicates full points were awarded for verification that is complete or underway using an approved standard
 Bold: companies that are in either CPLI (performance band A) or CDLI (disclosure score 97 or higher), or both.



To read 2013 company responses in full please go to www.cdp.net/en-US/Results/Pages/responses.aspx

Appendix II - Responding companies, scores and emissions data

Company name	Country	2013 Score	Scope 1	Scope 2	Scope 3	Company name	Country	2013 Score	Scope 1	Scope 2	Scope 3
Consumer Discretionary						Imperial Tobacco	United Kingdom	83 B	144,153*	163,819*	0
Adidas	Germany	86 B	12,169	57,551	1	ITC	India	85 B	1,150,203*	172,121*	4
Astra International	Indonesia	32		Not public		Japan Tobacco	Japan	96 B		Not public	
BMW	Germany	100 A	484,612*	862,214*	7	Kellogg Company	USA	84 B	536,069*	671,729*	2
Bridgestone	Japan	93 B		Not public		Kimberly-Clark	USA	72 C	2,461,675*	2,967,804*	2
British Sky Broadcasting	United Kingdom	95 A	20,972*	80,458*	11	Kraft Foods	USA	81 B	477,813*	695,225*	9
Carnival	United Kingdom	83 C	10,819,814*	57,585*	4	L'Oreal	France	93 A	66,920*	126,500*	5
CBS	USA	24				Mondelez International	USA	91 B	1,075,761*	954,755*	9
Christian Dior	France	59 E		Not public		Nestle	Switzerland	100 A	3,706,080*	3,391,319*	11
Compagnie Financière Richemont	Switzerland	79 B	18,600	45,200	1	PepsiCo	USA	94 B	3,854,784*	1,928,490*	4
Compass	United Kingdom	82 C	76,141	9,064	0	Pernod-Ricard	France	59 E	283,345	92,502	0
Continental AG	Germany	82 C	591,681*	1,860,558*	1	Philip Morris International	USA	97 B	441,953*	433,892*	6
Daimler	Germany	100 A	960,464*	2,330,559*	11	Procter & Gamble	USA	47	2,799,000	3,028,000	0
Denso	Japan	71 C		Not public		Reckitt Benckiser	United Kingdom	99 B	104,934*	208,576	7
DIRECTV	USA	91 B	106,060*	88,145*	5	Reynolds American	USA	70 B	107,093*	167,402*	0
eBay	USA	75 D	14,374	225,952	1	SABMiller	United Kingdom	74 B	1,009,825*	997,465*	0
Ford Motor	USA	72 C	1,698,799*	3,440,338	0	Seven & I Holding	Japan	82 B	169,619*	2,310,530*	2
General Motors	USA	100 A-	2,454,755*	5,531,380*	7	Souza Cruz (see British American Tobacco)	Brazil	SA (AQ)			
H&M Hennes & Mauritz	Sweden	83 A	15,282*	329,630*	2	Sysco	USA	66 C	788,200	336,857	0
Home Depot	USA	99 A-	250,224*	2,529,646*	1	Tesco	United Kingdom	96 A-	1,418,798*	3,764,068*	7
Honda	Japan	99 A	1,410,000*	3,540,000*	12	Time Warner	USA	AQ(L)			
Hyundai	South Korea	87 B	877,211*	1,533,990*	3	Unilever	United Kingdom	82 A	1,053,344*	907,399*	8
Hyundai Mobis	South Korea	94 B	40,967*	291,957*	1	Unilever NV (see Unilever)	Netherlands	SA (AQ)			
Inditex	Spain	80 B	24,479*	290,120*	2	Walgreens	USA	86 C		Not public	
Johnson Controls	USA	94 A-	866,181*	1,465,658*	8	Wal-Mart de Mexico	Mexico	71 C	851,495	1,078,080	2
Las Vegas Sands	USA	98 A-	225,157*	821,527*	2	Wal-Mart Stores	USA	94 A-	5,605,099*	15,581,135*	4
Lowe's	USA	85 D	303,721	2,552,740	1	Wesfarmers	Australia	77 B	2,508,924	2,790,505	4
LVMH	France	67 C	48,365*	299,150*	5	Woolworths	Australia	96 B	383,871*	2,499,051*	3
McDonald's	USA	71 D		Not public		Energy					
Naspers	South Africa	59 E		Not public		Anadarko Petroleum	USA	75 C	5,056,818*	535,843	1
News Corporation	USA	97 A-	62,360*	376,022*	6	Apache	USA	70 C	10,766,000	1,314,000	0
NIKE	USA	70 D		Not public		Baker Hughes	USA	90 B	516,000*	425,000*	1
Nissan	Japan	99 A	835,766*	2,432,889*	12	BG Group	United Kingdom	89 A	7,739,569*	20,295*	3
Royal Philips	Netherlands	100 A	442,549*	408,517*	4	BP	United Kingdom	80 C	59,830,000*	8,360,000*	1
PPR	France	90 B	15,078*	98,950*	3	Canadian Natural Resources	Canada	AQ(L)			
Rogers Communications	Canada	68 C	38,870	159,819	4	Cenovus Energy	Canada	94 B	4,657,427*	1,079,646*	0
Starbucks	USA	86 C	239,972*	792,644*	1	Chevron	USA	97 A-	58,559,220*	3,849,319*	1
Target	USA	91 B	527,047*	2,489,866*	1	CNOOC (Red Chip)	Greater China	22		Not public	
Thomson Reuters	USA	95 B		Not public		ConocoPhillips	USA	83 B	24,171,000	1,638,000	3
TJX Companies	USA	98 B	63,084*	686,955*	0	Devon Energy	USA	86 B	7,596,657*	1,087,905	1
Toyota	Japan	96 B	2,727,000*	4,499,000*	10	Ecopetrol	Colombia	48		Not public	
Viacom	USA	60 D		Not public		Enbridge	Canada	85 C	3,091,100	2,982,900	1
Vivendi Universal	France	69 D	90,755*	345,818*	2	Eni	Italy	92 B	52,493,340*	834,197*	6
Volkswagen	Germany	99 A	4,133,581*	4,572,344*	5	Exxon Mobil	USA	80 B	132,000,000*	14,000,000*	1
Walt Disney Company	USA	78 C	867,353	899,027	1	Gazprom	Russia	62 C	133,428,139	5,146,743	0
WPP	United Kingdom	95 B	9,859*	164,206*	1	Halliburton	USA	65 D	4,211,808	839,363	1
Yum! Brands	USA	92 B	156,510*	2,377,372*	1	Hess	USA	97 B	7,409,486*	584,695*	3
Consumer Staples						Husky Energy	Canada	86 C	9,171,000*	2,381,000	0
Altria	USA	75 C	283,926	236,169	0	Imperial Oil	Canada	62 D	9,780,351*	1,367,700	0
Ambev - Cia. Bebidas das Americas	Brazil	66 C	757,236	235,799	0	Inpex	Japan	96 B	485,041*	27,981*	4
Anheuser Busch InBev	Belgium	85 A	2,459,221*	1,588,297*	0	Noble Energy	USA	76 C	2,078,600	61,630	0
Associated British Foods	United Kingdom	85 B	2,295,328*	1,067,934*	0	Novatek	Russia	40	2,336,375	73,460	1
Beiersdorf AG	Germany	51 C	22,071	51,571	0	Occidental Petroleum	USA	61 E	14,270,000	5,600,000	0
BRF Brasil Foods	Brazil	83 B		Not public		Petrobras	Brazil	82 C	65,983,676*	1,394,740*	1
British American Tobacco	United Kingdom	94 B	359,184*	387,168*	4	PETROCHINA	Greater China	AQ(L)			
Carrefour	France	80 B	1,630,800*	1,585,600*	1	PTT	Thailand	84 B	29,332,000*	1,583,000*	3
Coca-Cola	USA	90 A-	2,607,171*	1,143,628*	5	PTT Exploration & Production	Thailand	85 C	4,431,143*	1,649*	2
Colgate-Palmolive	USA	99 B	232,574*	435,061*	1	Repsol	Spain	98 B	14,062,806*	811,243*	3
Costco Wholesale	USA	45	362,802	1,197,983	0	Royal Dutch Shell	Netherlands	90 B	72,000,000*	9,000,000*	5
CVS Caremark	USA	92 B	201,000*	1,495,000*	0	Sasol	South Africa	96 B	66,895,000*	8,553,000*	8
Danone	France	93 B	894,206*	847,529*	6	Schlumberger	USA	83 C	2,200,000	550,000	2
Diageo	United Kingdom	98 A	597,619*	83,898*	4	Spectra Energy	USA	98 A	8,381,680*	608,390*	8
Femsa - Fomento Economico Mexicano	Mexico	73 C		Not public		Statoil	Norway	86 B	15,362,600*	409,443	2
General Mills	USA	78 B	259,400*	737,000	2	Suncor Energy	Canada	94 B	18,608,320*	2,232,478*	4
H.J. Heinz	USA	27		Not public		Surgutneftegas	Russia	23		Not public	
Heineken	Netherlands	96 B	1,263,773*	737,418*	6	Total	France	81 C	47,000,000*	4,400,000	2
Hindustan Unilever (see Unilever)	India	SA (AQ)				TransCanada	Canada	91 B	12,186,545*	231,494*	1
						Tullow Oil	United Kingdom	72 B		Not public	
						Woodside Petroleum	Australia	72 C	9,889,254*	8,455*	2

Appendix II - Responding companies, scores and emissions data - continued

Company name	Country	2013 Score	Scope 1	Scope 2	Scope 3
Financials					
Ace	Switzerland	93 A	12,912*	39,791*	4
Aflac	USA	85 B	3,884*	18,536*	3
AKBANK T.A.Ş.	Turkey	78 B		Not public	
Allianz	Germany	97 B	84,161*	166,019*	3
Allstate	USA	96 B	40,796*	150,401*	3
American Express	USA	87 C	23,371	142,667	1
American International Group	USA	62 D		Not public	
Assicurazioni Generali	Italy	87 A	17,862*	47,877*	3
Australia and New Zealand Banking	Australia	92 A-	16,428*	205,462*	5
Aviva	United Kingdom	79 B	23,849*	75,733*	4
AXA	France	94 A	51,886*	119,930*	2
Banco Bradesco	Brazil	76 C	4,780*	30,219*	3
Banco do Brasil	Brazil	54 D	7,444	54,348	4
Banco Santander	Spain	84 B	31,857*	342,928*	2
Banco Santander Brasil	Brazil	64 C	15,790	22,861	8
Bank of America	USA	98 A	116,666*	1,421,829*	10
Bank of Communications	Greater China	2			
Bank of Montreal	Canada	94 B	20,933*	86,853*	3
Bank of Nova Scotia	Canada	72 C	16,310*	128,052*	1
Barclays	United Kingdom	92 A	46,757*	786,547*	1
BBVA	Spain	76 D	9,267	295,771	1
BlackRock	USA	79 C		Not public	
BNP Paribas	France	93 A	70,319*	388,323*	1
BNY Mellon	USA	100 A	9,513*	208,926*	8
BOC Hong Kong	Greater China	AQ (L)			
Brookfield Asset Management	Canada	63 D	67,649	587,875	0
Canadian Imperial Bank of Commerce	Canada	61 D	21,079	54,959	1
Capital One Financial	USA	71 C	14,501	194,433	1
Charles Schwab	USA	55 E		Not public	
Chubb	USA	52 D	1,129	10,133	0
Cielo SA	Brazil	53 E	1,564*	285*	3
Citigroup	USA	95 B	35,570*	993,687*	2
Commonwealth Bank of Australia	Australia	88 B	11,160	145,989	9
Credit Agricole	France	59 D	10,241*	18,149*	1
Credit Suisse	Switzerland	88 B	23,511	151,561	4
Deutsche Bank	Germany	91 A	94,031*	443,165*	5
DnB	Norway	84 B	1,571*	13,587*	3
FirstRand Limited	South Africa	96 A	11,572*	257,172*	2
Franklin Resources	USA	86 C	8,175	29,552	1
Goldman Sachs	USA	98 A	14,559*	276,815*	7
Great West Lifeco	Canada	67 B		Not public	
Hang Seng Bank	Greater China	42	0	24,617	0
HCP	USA	97 A-	28,940*	216,887*	1
HDFC Bank	India	75 E	5,872	347,770	3
Hong Kong Exchanges & Clearing	Greater China	76 D		Not public	
HSBC	United Kingdom	97 A	64,918*	688,827*	1
Industrial and Commercial Bank of China	Greater China	5		Not public	
ING	Netherlands	96 B	27,039*	87,735*	3
Intesa Sanpaolo	Italy	92 B	58,994*	54,539*	2
Itaú Unibanco Holding	Brazil	83 C	8857*	48,890*	5
JPMorgan Chase	USA	91 B	83,343*	1,219,748*	1
Lloyds Banking	United Kingdom	90 B	49,414*	290,726*	2
Malayan Banking	Malaysia	67 C	652	88,427	1
Manulife Financial	Canada	84 C	213,835	195,565	3
Marsh & McLennan	USA	98 B	3,429*	97,423*	1
MetLife	USA	92 A-		Not public	
Mitsubishi Estate	Japan	76 C		Not public	
Mitsubishi UFJ Financial Group	Japan	76 C	18,556	238,444	1
Mitsui Fudosan Co.	Japan	67 C		Not public	
Mizuho Financial	Japan	89 B	16,177*	202,850*	10
Morgan Stanley	USA	96 A	13,757*	330,747*	2
Munich Re	Germany	91 A	64,755*	87,106*	2
National Australia Bank	Australia	91 A	25,363*	171,767*	6
Nomura Holdings	Japan	86 B	3,629*	95,377*	2
Nordea Bank	Sweden	93 B	0*	64,175*	1
Oversea-Chinese Banking	Singapore	3			

Company name	Country	2013 Score	Scope 1	Scope 2	Scope 3
Ping An Insurance Company of China	Greater China	AQ(L)			
PNC Financial Services	USA	89 B	47,606*	398,414*	3
Power Financial Corporation	Canada	86 C		Not public	
Prudential	United Kingdom	70 D	12,500	114,636	0
Prudential Financial	USA	63 C	5,090	70,613	1
Royal Bank of Canada	Canada	77 D	32,046	127,445	1
Royal Bank of Scotland	United Kingdom	88 B	66,586*	497,763*	9
Simon Property Group	USA	98 B	21,854*	496,006*	2
Skandinaviska Enskilda Banken AB (SEB AB)	Sweden	74 B	0	9,308	3
Societe Generale	France	85 B	31,763*	205,871*	4
Standard Bank	South Africa	71 C	9,198*	363,916*	4
Standard Chartered	United Kingdom	91 B	26,560*	229,122*	0
State Bank of India	India	16			
State Street	USA	87 C	10,009*	98,756*	1
Sumitomo Mitsui Financial Group	Japan	86 B		Not public	
Svenska Handelsbanken	Sweden	81 B	41	4,889*	2
Swire Properties	Greater China	SA (AQ)			
Swiss Re	Switzerland	92 A	4,850*	8,800*	1
T.GARANTI BANKASI A.Ş.	Turkey	80 C	15,568	73,994	1
Tokio Marine Holdings	Japan	83 B	17,918*	70,971*	1
Toronto-Dominion Bank	Canada	94 A	43,289*	64,108*	2
Travelers Companies	USA	63 C	35,633	48,175	0
U.S. Bancorp	USA	78 C	38,055	370,672	4
UBS	Switzerland	92 A-	21,838*	172,421*	3
Unibail-Rodamco	France	79 B	15,429*	66,533*	6
UniCredit	Italy	77 C	67,425*	308,348*	3
Ventas	USA	85 C	43,381	314,379	0
Wells Fargo	USA	96 A	93,904*	1,333,372*	7
Westfield	Australia	85 B	25,187*	458,569*	4
Westpac Banking	Australia	91 A	12,134*	176,648*	3
Zurich Insurance	Switzerland	65 C		Not public	
Healthcare					
Abbott Laboratories	USA	84 B	470,781*	537,821*	5
Allergan	USA	91 B	49,128*	52,049*	2
Amgen	USA	76 B	119,968*	286,679*	3
Astellas Pharma	Japan	88 B	85,937*	125,398*	1
AstraZeneca	United Kingdom	85 B	340,800*	286,200*	5
Baxter International	USA	82 B	345,000*	445,000*	10
Bayer	Germany	99 A-	4,240,000*	4,120,000*	10
Biogen Idec	USA	92 B	46,588*	39,307*	7
Bristol-Myers Squibb	USA	96 B	269,734*	262,565*	2
Celgene	USA	80 C	14,458*	18,420*	2
Covidien	Ireland	70 C	230,511	402,132	0
CSL	Australia	85 C	55,383	136,951	2
Eli Lilly	USA	86 B	415,040*	1,160,941*	4
Essilor International	France	28	3	55100	3
Fresenius Medical Care	Germany	72 D		Not public	
GlaxoSmithKline	United Kingdom	98 A	1,005,447*	804,283*	5
Johnson & Johnson	USA	98 A-	329,556*	853,700*	2
Medtronic	USA	61 D	31,460	170,685	2
Merck & Co.	USA	87 B	1,053,000*	927,000*	3
Novartis	Switzerland	96 B	637,838*	1,013,238*	6
Novo Nordisk	Denmark	96 B	38,587*	88,294*	5
Pfizer	USA	91 B	1,217,736*	1,155,762*	8
Roche Holding	Switzerland	96 B	394,063*	432,103*	1
Sanofi-Aventis	France	97 A-	694,600*	685,707*	9
Stryker	USA	53 E		Not public	
Takeda Pharmaceutical	Japan	79 C	238,684	168,509	3
Teva Pharmaceutical Industries	Israel	73 D		Not public	
Thermo Fisher Scientific	USA	75 D	64,863	297,992	0
UnitedHealth	USA	98 B	8,694*	104,200*	2
WellPoint	USA	57 C	7,460	114,199	3
Industrials					
3M	USA	70 D	4,540,000	2,230,000	5
ABB	Switzerland	AQ (L)			
Atlas Copco	Sweden	93 B	29,464*	75,561*	4
BAE Systems	United Kingdom	69 C	277,920	590,760	1
Boeing	USA	96 A-	576,000*	998,000*	1
Canadian National Railway	Canada	91 B	5,070,123*	173,129	1
CSX	USA	95 A	5,268,905*	300,170*	2

Company name	Country	2013 Score	Scope 1	Scope 2	Scope 3
Cummins	USA	91 B		Not public	
Danaher	USA	12		Not public	
Deere	USA	79 C	440,147*	1,053,446*	2
Deutsche Post	Germany	98 B	4,800,000*	570,000*	3
EADS	Netherlands	97 B	581,115*	432,092*	0
East Japan Railway	Japan	#		Not public	
Eaton	USA	100 A-	105,382*	637,346*	8
Emerson Electric	USA	AQ(L)			
Empresas COPEC	Chile	32		Not public	
FedEx Corporation	USA	80 B	14,602,697*	959,109	2
General Electric	USA	72 C	1,970,000	2,905,000	1
Hitachi	Japan	95 B	912,154*	3,313,114*	6
Honeywell International	USA	74 B	5,532,844*	1,756,275*	0
Illinois Tool Works	USA	79 C		Not public	
Komatsu	Japan	95 A	123,754*	354,601*	9
Larsen & Toubro	India	83 B	424,351*	248,130*	2
Lockheed Martin	USA	91 A	249,491*	985,006*	2
Mitsubishi	Japan	67 D		Not public	
Mitsui & Co	Japan	78 C		Not public	
MTR	Greater China	87 C	53,568*	1,171,764*	3
Norfolk Southern	USA	90 B	4,925,238*	252,854*	2
Raytheon	USA	98 A	101,715*	435,872*	3
Rolls-Royce	United Kingdom	85 B	213,089	337,064	3
Saint-Gobain	France	91 B	12,801,000*	4,550,000*	5
Sandvik AB	Sweden	64 C		Not public	
Schneider Electric	France	97 A	113,238*	345,123*	10
Siemens	Germany	96 A-	1,042,000*	1,385,000*	5
Sime Darby Berhad	Malaysia	65 D		Not public	
Union Pacific	USA	98 B	11,595,509*	407,176*	1
United Technologies Corporation	USA	87 B	801,694*	880,896*	1
UPS	USA	99 A-	11,715,635*	823,212*	4
Vinci	France	93 B	2,195,535*	193,548*	3
Volvo	Sweden	73 C		Not public	
Information Technology					
Accenture	Ireland	92 B	9,383	224,615	1
Adobe Systems	USA	97 A	2,744*	22,995*	4
Automatic Data Processing	USA	83 C	15,500	157,100	2
Canon	Japan	85 B	145,283	921,409	9
Cisco Systems	USA	100 A	65,832*	628,164*	8
Cognizant Technology Solutions	USA	64 C	46,934	137,460	2
Corning	USA	54 D	383,729*	1,129,330*	0
EMC	USA	97 A	45,886*	368,528*	6
Ericsson	Sweden	85 B	92,335*	263,003*	9
Google	USA	93 B	37,187*	1,149,988*	3
Hewlett-Packard	USA	99 A	246,000*	1,643,000*	7
Hon Hai Precision Industry (see Foxconn Intl Hldg - Asia ex JCK)	Greater China	SA (AQ)			
Infosys	India	92 A	28,015*	134,230*	4
Intel	USA	85 B	794,759*	2,331,048*	6
International Business Machines	USA	86 B	541,584*	2,208,459*	1
MasterCard	USA	43	3,026	37,825	0
Microsoft	USA	96 A	48,516*	1,207,419*	7
Mitsubishi Electric	Japan	60 D	322,000	791,000	3
Oracle	USA	79 C	16,481	440,773	3
Qualcomm	USA	56 D	64,782	49,216	0
salesforce.com	USA	90 C	2,350*	29,429*	2
Samsung	South Korea	99 A	2,098,438*	5,388,036*	5
SAP	Germany	98 A	144,298*	43,004*	8
Taiwan Semiconductor Manufacturing	Greater China	90 B	1,563,306*	3,042,814*	6
Tata Consultancy Services	India	89 A	58,961*	300,555*	2
Texas Instruments	USA	64 D	827,274	1,588,466	0
Visa	USA	61 D	8,151	68,313	3
Yahoo Japan	Japan	15		Not public	
Yahoo!	USA	91 B	4,002*	333,291*	2
Materials					
Air Liquide	France	88 B	11,272,000*	10,853,000*	1
Air Products & Chemicals	USA	99 B	14,767,209*	10,563,030*	5
Anglo American	United Kingdom	96 A	8,470,754*	9,403,534*	11
Antofagasta	United Kingdom	92 C	645,371*	1,539,442*	3
Arcelor Mittal	Luxembourg	88 B	158,192,000*	17,256,000*	1

Company name	Country	2013 Score	Scope 1	Scope 2	Scope 3
Barrick Gold	Canada	87 B	3,784,180*	2,229,368*	0
BASF	Germany	100 A-	20,208,000*	4,479,000*	7
BHP Billiton	United Kingdom	75 C	20,200,000*	20,000,000*	2
Dow Chemical	USA	90 B	27,429,000*	8,403,000*	12
E.I. du Pont de Nemours	USA	96 A	10,817,680*	4,416,220*	1
Ecolab	USA	98 A	336,258	199,296	3
Freeport-McMoRan Copper & Gold	USA	86 C	5,679,367*	3,985,464*	4
Fresnillo	Mexico	68 D	236,184	346,134	2
Glencore International	Switzerland	82 C		Not public	
Goldcorp	Canada	75 C	734,981*	685,344*	2
Holcim	Switzerland	82 C	102,102,123	6,600,687	6
Industrias Peñoles	Mexico	46	674,687*	1,747,388*	0
Kumba Iron Ore	South Africa	98 B	448,274*	516,315*	9
Lafarge S.A.	France	96 B	97,354,270*	8,907,096*	0
LG Chemical	South Korea	95 B	4,454,747*	1,865,116*	4
Linde	Germany	93 A-	6,100,000*	9,800,000*	7
Monsanto	USA	70 D	1,610,000	539,000	4
Newmont Mining	USA	92 B	4,016,150*	1,182,740*	2
Nippon Steel	Japan	85 D		Not public	
POSCO	South Korea	97 B	73,526,000*	3,471,000*	4
Potash Corporation of Saskatchewan	Canada	71 C	7,649,000	1,700,000	0
PPG Industries	USA	60 D	4,053,000	1,810,000	0
Praxair	USA	98 B	5,355,000*	11,329,000*	3
Rio Tinto	United Kingdom	88 B	26,900,000*	16,400,000*	6
Shin Etsu Chemical	Japan	61 C	1,525,214	2,950,932	9
Syngenta International	Switzerland	91 B	733,000*	391,000*	2
Teck	Canada	89 B	2,889,517*	293,514*	1
Uralkali	Russia	41		Not public	
Vale	Brazil	98 B	16,403,834*	1,469,167*	6
Xstrata	Switzerland	82 C		Not public	
Telecommunication Services					
AT&T	USA	96 B	948,441*	7,894,626*	1
BOE	Canada	91 B	99,151*	186,890*	1
BT	United Kingdom	93 A	200,876*	192,644*	10
CenturyLink	USA	66 D	279,523	2,079,912	2
China Unicom	Greater China	2			
Chunghua Telecom	Greater China	65 D	23,169	785,792	1
Deutsche Telekom	Germany	90 B	356,128*	3,291,232*	1
France Telecom	France	85 B	445,424*	1,024,182*	1
KDDI	Japan	72 C	2,947	1,032,629	4
MTN	South Africa	76 D	652,790	384,725	1
Nippon Telegraph & Telephone (NTT)	Japan	95 B	260,000*	3,531,000*	8
NTT DOCOMO	Japan	75 B	87,648*	1,364,600*	3
Singapore Telecom	Singapore	76 C	6,897*	177,321*	3
Swisscom	Switzerland	97 A	25,459*	46,766*	7
Telefonica	Spain	95 B	111,124*	1,649,137*	6
Telefonica Brasil (see Telefonica)	Brazil	SA (AQ)			
Telenor	Norway	95 A	342,073*	787,079*	2
TeliaSonera	Sweden	83 B	35,331*	268,482*	3
Telstra Corporation	Australia	83 B	53,587*	1,374,617*	3
Verizon Communications	USA	84 B	512,899	5,334,874	1
Vodacom	South Africa	94 B	45,851*	401,703*	5
Vodafone	United Kingdom	85 B	404,885*	2,178,178*	2
Utilities					
American Electric Power	USA	68 D	121,927,400	0	0
Centrica	United Kingdom	97 B	7,230,344*	166,476*	6
CLP Holdings	Greater China	94 B	38,245,000*	219,000	2
Duke Energy	USA	67 C	123,430,000		0
E.ON AG	Germany	83 B	126,871,536*	4,363,825*	5
Electricite de France (EDF)	France	95 B	80,283,556*	74,004*	9
Endesa	Spain	98 B	54,676,230*	1,317,120*	5
ENEL	Italy	87 B	127,801,261* 1,140,337*		1
Exelon	USA	98 A	26,038,890*	5,691,542*	4
Gas Natural	Spain	100 A	26,062,058*	956,889*	2
GDF Suez	France	95 B	154,230,874* 3,712,790*		2
Iberdrola	Spain	99 B	35,461,092*	7,189,301*	0
Korea Electric Power Corporation	South Korea	91 B	1,174,220*	132,861*	0
National Grid	United Kingdom	98 B	7,913,978*	4,547,930*	6
Power Assets Holdings	Greater China	96 B	8,960,000*	0	8
RWE	Germany	93 B	181,690,000*	1,940,000*	2
SSE	United Kingdom	90 B	24,560,110*	1,364,652*	1

East Japan Railway responded in Japanese. Please see CDP Japan report for their score.

Appendix III: Investor members

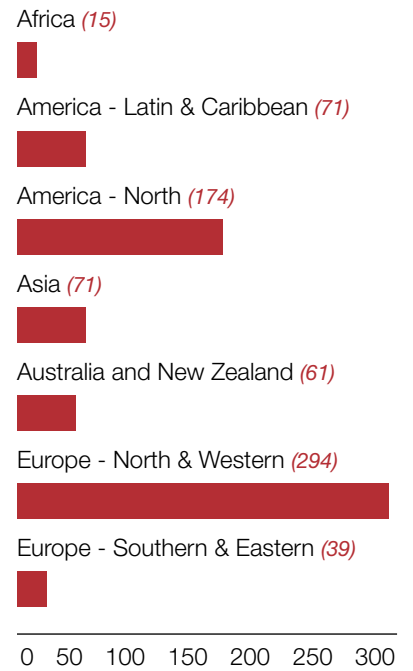
CDP works with investors globally to advance the investment opportunities and reduce the risks posed by climate change by asking over 5,000 of the world's largest companies to report their climate strategies, GHG emissions and energy use through CDP's

standardized format. To learn more about CDP's member offering and becoming a member, please contact us or visit the investor pages at <https://www.cdp.net/en-US/WhatWeDo/Pages/investors.aspx>

ABRAPP - Associação Brasileira das Entidades Fechadas de Previdência Complementar
ATP Group
Aviva Investors
Bank of America
Bendigo and Adelaide Bank
BlackRock
Boston Common Asset Management, LLC
California Public Employees' Retirement System (CalPERS)
California State Teachers' Retirement System (CalSTRS)
Calvert Group, Ltd.
Capricorn Investment Group
Catholic Super
CCLA Investment Management Ltd
Daiwa Asset Management Co. Ltd.
Generation Investment Management
Goldman Sachs Group Inc.
Henderson Global Investors
HSBC Holdings plc
Legg Mason, Inc.
KLP
London Pensions Fund Authority
Mobimo Holding AG

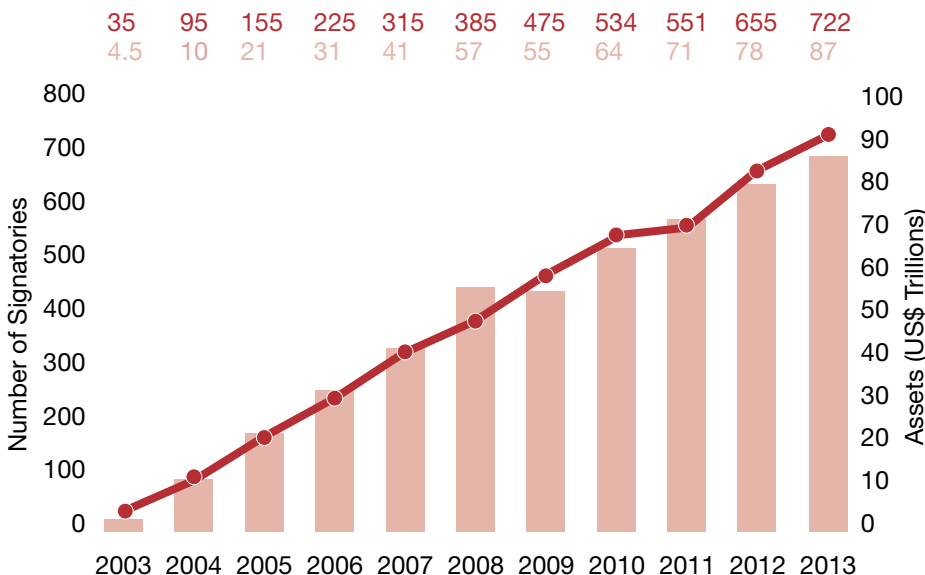
Mongeral Aegon Seguros e Previdência S.A.
Morgan Stanley
National Australia Bank
Neuberger Berman
Newton Investment Management Limited
Nordea Bank
Norges Bank Investment Management (NBIM)
Northwest and Ethical Investments L.P. (NEI Investments)
PFA Pension
Robeco
RobecoSAM AG
Rockefeller Asset Management
Royal Bank of Scotland Group
Sampension KP Livsforsikring A/S
Schroders
Scottish Widows Investment Partnership
Skandinaviska Enskilda Banken AB (SEB AB)
Sompo Japan Insurance Inc.
Standard Chartered
Sun Life Financial Inc
Sustainable Insights Capital Management
TD Asset Management
The Wellcome Trust

2013 INVESTOR SIGNATORY BREAKDOWN - REGION



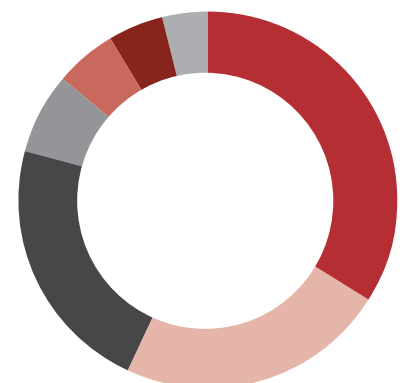
INCREASING NUMBER OF INVESTORS REQUESTING CLIMATE DATA THROUGH CDP

- Investor signatory assets
- Number of investor signatories



2013 INVESTOR SIGNATORY BREAKDOWN - TYPE

- 247 Mainstream Asset Managers
- 167 Pension funds
- 160 Banks
- 51 Insurance
- 39 SRI Asset Managers
- 34 Foundations
- 27 Other



Investor signatories

**722 financial institutions
with assets of US\$87 trillion
were signatories to the
CDP 2013 climate change
information request dated
February 1st 2013**

3Sisters Sustainable Management LLC
Aberdeen Asset Management
Aberdeen Immobilien KAG mbH
ABRAPP - Associação Brasileira das Entidades
Fechadas de Previdência Complementar
Achmea NV
Active Earth Investment Management
Acuity Investment Management
Addenda Capital Inc.
Advanced Investment Partners
Advantage Asset Managers (Pty) Ltd
Aegon N.V.
AEGON-INDUSTRIAL Fund Management Co., Ltd
AFP Integra
AIG Asset Management
AK PORTFÖY YÖNETİMİ A.Ş.
AKBANK T.A.Ş.
Alberta Investment Management Corporation
(AIMCo)
Alberta Teachers Retirement Fund
Alcyone Finance
AllenbridgeEpic Investment Advisers
Alliance Trust
Allianz Elementar Versicherungs-AG
Allianz Global Investors AG
Allianz Group
Altira Group
Amalgamated Bank
Amlin
AMP Capital Investors
AmpegaGerling Investment GmbH
Amundi AM
ANBIMA – Associação Brasileira das Entidades dos
Mercados Financeiro e de Capitais
Antera Gestão de Recursos S.A.
APG Group
AQEX LLC
Aquila Capital
Arisaig Partners
Arkx Investment Management
ARMA PORTFÖY YÖNETİMİ A.Ş.
Armstrong Asset Management
ASM Administradora de Recursos S.A.
ASN Bank
Assicurazioni Generali
ATI Asset Management
Atlantic Asset Management
ATP Group
Auriel Capital Management
Australia and New Zealand Banking Group
Australian Ethical Investment
AustralianSuper
Avaron Asset Management AS
Aviva
Aviva Investors
AXA Group
Baillie Gifford & Co.
BaltCap
Banco Bradesco S/A
Banco Comercial Português SA
Banco de Credito del Peru BCP
Banco de Galicia y Buenos Aires S.A.
Banco do Brasil Previdência
Banco do Brasil S/A
Banco Espírito Santo SA
Banco Nacional de Desenvolvimento Economico e
Social (BNDES)
Banco Popular Espanol
Banco Sabadell
Banco Santander
Banesprev – Fundo Banespa de Seguridade Social
Banesto
BANIF SA

Bank Handlowy w Warszawie SA
Bank Leumi Le Israel
Bank of America Merrill Lynch
Bank of Montreal
Bank of Nova Scotia (Scotiabank)
Bank Sarasin & Cie AG
Bank Vontobel
Bankhaus Schelhammer & Schattera
Kapitalanlagegesellschaft m.b.H.
Bankia
Bankinter
BankInvest
bankmecu
Banque Degroof
Banque Libano-Francaise
Barclays
Basellandschaftliche Kantonalbank
BASF Sociedade de Previdência Complementar
Basler Kantonalbank
Bâtirente
Baumann and Partners S.A.
Bayern LB
BayernInvest Kapitalanlagegesellschaft mbH
BBC Pension Trust Ltd
BBVA
Bedfordshire Pension Fund
Beetle Capital
Befimmo SA
Bendigo and Adelaide Bank
Bentall Kennedy
Berenberg Bank
Berti Investments
BioFinance Administração de Recursos de
Terceiros Ltda
BlackRock
Blom Bank SAL
Blumenthal Foundation
BNP Paribas Investment Partners
BNY Mellon
BNY Mellon Service Kapitalanlage-Gesellschaft
mbH
Boston Common Asset Management, LLC
Brasilprev Seguros e Previdência S/A.
Breckinridge Capital Advisors
British Airways Pensions
British Coal Staff Superannuation Scheme
British Columbia Investment Management
Corporation (bcIMC)
Brown Advisory
BT Financial Group
BT Investment Management
Busan Bank
CAAT Pension Plan
Cadiz Holdings Limited
CAI Corporate Assets International AG
Caisse de dépôt et placement du Québec
Caisse des Dépôts
Caixa de Previdência dos Funcionários do Banco
do Nordeste do Brasil (CAPEF)
Caixa Econômica Federal
Caixa Geral de Depósitos
CaixaBank
California Public Employees' Retirement System
(CalPERS)
California State Teachers' Retirement System
(CalSTRS)
California State Treasurer
Calvert Investment Management, Inc
Canadian Pension Plan Investment Board (CPPIB)
Canadian Imperial Bank of Commerce (CIBC)
Canadian Labour Congress Staff Pension Fund
CAPESESP
Capital Innovations, LLC
Capricorn Investment Group
CARE Super
Carmignac Gestion
Caser Pensiones E.G.F.P
Cathay Financial Holding
Catherine Donnelly Foundation
Catholic Super
CBF Church of England Funds
CBRE Group, Inc.
Cbus Superannuation Fund
CCLA Investment Management Ltd
Celeste Funds Management
Central Finance Board of the Methodist Church

Ceres
CERES-Fundação de Seguridade Social
Change Investment Management
Chinatrust Financial Holding Co Limited
Christian Brothers Investment Services Inc.
Christian Super
Christopher Reynolds Foundation
Church Commissioners for England
Church of England Pensions Board
CI Mutual Funds' Signature Global Advisors
City Developments Limited
ClearBridge Investments
Climate Change Capital Group Ltd
CM-CIC Asset Management
Colonial First State Global Asset Management
Comerica Incorporated
Comgest
Commerzbank AG
CommInsure
Commonwealth Bank of Australia
Commonwealth Superannuation Corporation
Compton Foundation, Inc.
Concordia Versicherungs-Gesellschaft a.G.
Connecticut Retirement Plans and Trust Funds
Conser Invest
Co-operative Asset Management
Co-operative Financial Services (CFS)
Credit Suisse
Daegu Bank
Daesung Capital Management
Daiwa Asset Management Co. Ltd.
Daiwa Securities Group Inc.
Dalton Nicol Reid
Danske Bank A/S
de Pury Pictet Turrettini & Cie S.A.
DekaBank Deutsche Girozentrale
Delta Lloyd Asset Management
Desjardins Financial Security
Deutsche Asset Management
Investmentgesellschaft mbH
Deutsche Bank AG
Deutsche Postbank AG
Development Bank of Japan Inc.
Development Bank of the Philippines (DBP)
Dexia Asset Management
Dexus Property Group
DLM INVISTA ASSET MANAGEMENT S/A
DNB ASA
Domini Social Investments LLC
Dongbu Insurance
Doughty Hanson & Co.
DWS Investments
DZ Bank
Earth Capital Partners LLP
East Sussex Pension Fund
Ecclesiastical Investment Management
Ecofi Investissements - Groupe Credit Cooperatif
Edward W. Hazen Foundation
EEA Group Ltd
Eko
Elan Capital Partners
Element Investment Managers
ELETRA - Fundação Celg de Seguros e Previdência
Environment Agency Active Pension fund
Epworth Investment Management
Equilibrium Capital Group
equinet Bank AG
Erik Penser Fondkommission
Erste Asset Management
Erste Group Bank AG
Essex Investment Management Company, LLC
ESSSuper
Ethos Foundation
Etica SGR
Eureka Funds Management
Eurizon Capital SGR S.p.A.
Evangelical Lutheran Church in Canada Pension
Plan for Clergy and Lay Workers
Evangelical Lutheran Foundation of Eastern Canada
Evli Bank Plc
F&C Asset Management
FACEB – Fundação de Previdência dos
Empregados da CEB
FAELCE – Fundacao Coelce de Seguridade Social

Investor signatories *continued*

FAPERS- Fundação Assistencial e Previdenciária da Extensão Rural do Rio Grande do Sul	Hang Seng Bank	Living Planet Fund Management Company S.A.
FASERN - Fundação COSERN de Previdência Complementar	Hanwha Asset Management Company	Lloyds Banking Group
Fédérés Gestion d'Actifs	Harbour Asset Management	Local Authority Pension Fund Forum
FIDURA Capital Consult GmbH	Harrington Investments, Inc	Local Government Super
FIM Asset Management Ltd	Hauck & Aufhäuser Asset Management GmbH	LOGOS PORTFÓY YÖNETIMI A.Ş.
FIM Services	Hazel Capital LLP	London Pensions Fund Authority
Financiere de l'Echiquier	HDFC Bank Ltd	Lothian Pension Fund
FIPECq - Fundação de Previdência Complementar dos Empregados e Servidores da FINEP, do IPEA, do CNPq	Healthcare of Ontario Pension Plan (HOOPP)	LUCRF Super
FIRA. - Banco de Mexico	Helaba Invest Kapitalanlagegesellschaft mbH	Macquarie Group
First Affirmative Financial Network, LLC	Henderson Global Investors	MagNet Magyar Közösségi Bank Zrt.
First Commercial Bank	Hermes Fund Managers	MainFirst Bank AG
First State Investments	HESTA Super	Malakoff Médéric
First State Superannuation Scheme	HIP Investor	MAMA Sustainable Incubation AG
First Swedish National Pension Fund (AP1)	Holden & Partners	Man Group plc
Firstrand Limited	HSBC Global Asset Management (Deutschland) GmbH	Mandarine Gestion
Five Oceans Asset Management	HSBC Holdings plc	MAPFRE
Florida State Board of Administration (SBA)	HSBC INKA Internationale Kapitalanlagegesellschaft mbH	Maple-Brown Abbott
Folketrygdfondet	Humanis	Marc J. Lane Investment Management, Inc.
Folksam	Hyundai Marine & Fire Insurance Co., Ltd.	Maryland State Treasurer
Fondaction CSN	Hyundai Securities Co., Ltd.	Matrix Asset Management
Fondation de Luxembourg	IBK Securities	Matrix Group
Forma Futura Invest AG	IDBI Bank Ltd	McLean Budden
Fourth Swedish National Pension Fund, (AP4)	IDFC Ltd	MEAG MUNICH ERGO Asset Management GmbH
FRANKFURT-TRUST Investment Gesellschaft mbH	Illinois State Board of Investment	Mediobanca
Friends Fiduciary Corporation	Ilmarinen Mutual Pension Insurance Company	Meeschaert Gestion Privée
Fubon Financial Holdings	Impax Group plc	Meiji Yasuda Life Insurance Company
Fukoku Capital Management Inc	Independent Planning Group	Mendesprev Sociedade Previdenciária
FUNCEF - Fundação dos Economizários Federais	Indusind Bank	Merck Family Fund
Fundação AMPLA de Seguridade Social - Brasileiros	Industrial Alliance Insurance and Financial Services Inc.	Mercy Investment Services, Inc.
Fundação Atlântico de Seguridade Social	Industrial Bank	Mergence Investment Managers
Fundação Atilio Francisco Xavier Fontana	Industrial Bank of Korea	MetallRente GmbH
Fundação Banrisul de Seguridade Social	Industrial Development Corporation	Metrus - Instituto de Seguridade Social
Fundação BRDE de Previdência Complementar - ISBRE	Industry Funds Management	Metzler Investment GmbH
Fundação Chef de Assistência e Seguridade Social - Fachesf	Inflection Point Partners	MFS Investment Management
Fundação Corsan - dos Funcionários da Companhia Riograndense de Saneamento	ING Group	Midas International Asset Management
Fundação de Assistência e Previdência Social do BNDES - FAPES	Insight Investment Management (Global) Ltd	Miller/Howard Investments
FUNDAÇÃO ELETROBRÁS DE SEGURIDADE SOCIAL - ELETROS	Instituto Infraero de Seguridade Social - INFRAPREV	Mirae Asset Global Investments Co. Ltd.
Fundação Forliminas de Seguridade Social - FORLÚZ	Instituto Sebrae De Seguridade Social - SEBRAEPREV	Mirae Asset Securities
Fundação Itaipu BR - de Previdência e Assistência Social	Insurance Australia Group	Mirvac Group
FUNDAÇÃO ITAUBANCO	IntReal KAG	Missionary Oblates of Mary Immaculate
Fundação Itaúsa Industrial	Investec Asset Management	Mistra, Foundation for Strategic Environmental Research
Fundação Promon de Previdência Social	Investing for Good	Mitsubishi UFJ Financial Group, Inc.
Fundação Rede Ferroviária de Seguridade Social - Refer	Irish Life Investment Managers	Mitsui Sumitomo Insurance Co.,Ltd
FUNDAÇÃO SANEPAR DE PREVIDÊNCIA E ASSISTÊNCIA SOCIAL - FUSAN	Itaú Asset Management	Mizuho Financial Group, Inc.
Fundação Sistel de Seguridade Social (Sistel)	Itaú Unibanco Holding S.A.	Mn Services
Fundação Vale do Rio Doce de Seguridade Social - VALIA	Janus Capital Group Inc.	Momentum Manager of Managers (Pty) Ltd
FUNDIÁGUA - FUNDAÇÃO DE PREVIDENCIA COMPLEMENTAR DA CAESB	Jarislowsky Fraser Limited	Monega Kapitalanlagegesellschaft mbH
Futuregrowth Asset Management	Jessie Smith Noyes Foundation	Mongeral Aegon Seguros e Previdência S.A.
GEAP Fundação de Seguridade Social	JOHNSON & JOHNSON SOCIEDADE PREVIDENCIARIA	Morgan Stanley
General Equity Group AG	JPMorgan Chase & Co.	Mountain Cleantech AG
Generali Deutschland Holding AG	Jubitz Family Foundation	MTAA Superannuation Fund
Generation Investment Management	Jupiter Asset Management	Mutual Insurance Company Pension-Fennia
Genus Capital Management	Kaiser Ritter Partner Privatbank AG (Schweiz)	Nanuk Asset Management
German Equity Trust AG	KB Kookmin Bank	Natcan Investment Management
Gjensidige Forsikring ASA	KBC Asset Management NV	Nathan Cummings Foundation, The
Global Forestry Capital S.a.r.l.	KBC Group	National Australia Bank
GLS Gemeinschaftsbank eG	KCPS and Company	National Bank of Canada
Goldman Sachs Group Inc.	KDB Asset Management Co., Ltd.	National Bank Of Greece
GOOD GROWTH INSTITUT für globale Vermögensentwicklung mbH	KDB Daewoo Securities Co. Ltd.	National Grid Electricity Group of the Electricity Supply Pension Scheme
Governance for Owners	KEPLER-FONDS Kapitalanlagegesellschaft m. b. H. KEVA	National Grid UK Pension Scheme
Government Employees Pension Fund ("GEFP"), Republic of South Africa	KeyCorp	National Pensions Reserve Fund of Ireland
GPT Group	KfW Bankengruppe	National Union of Public and General Employees (NUPGE)
Greater Manchester Pension Fund	Killik & Co LLP	Nativus Sustainable Investments
Green Cay Asset Management	Kiwi Income Property Trust	Natixis SA
Green Century Capital Management	Kleinwort Benson Investors	Natural Investments LLC
GROUPAMA EMEKLILIK A.Ş.	KlimainVEST	Nedbank Limited
GROUPAMA SIGORTA A.Ş.	KLP Insurance	Needmor Fund
Groupe Crédit Coopératif	Korea Investment Management	Nelson Capital Management, LLC
Groupe Investissement Responsable Inc.	Korea Technology Finance Corporation	Nest Sammelstiftung
GROUPE OFI AM	KPA Pension	Neuberger Berman
Grupo Financiero Banorte SAB de CV	La Banque Postale Asset Management	New Alternatives Fund Inc.
Grupo Santander Brasil	La Financiere Responsable	New Amsterdam Partners LLC
Gruppo Bancario Credito Valtellinese	Lampe Asset Management GmbH	New Forests
Gruppo Monte Paschi	Landsorganisationen i Sverige	New Mexico State Treasurer
Guardians of New Zealand Superannuation	LaSalle Investment Management	New York City Employees Retirement System
	LBBW - Landesbank Baden-Württemberg	New York City Teachers Retirement System
	LBBW Asset Management Investmentgesellschaft mbH	New York State Common Retirement Fund (NYSCRF)
	LD Lonmodtagernes Dyrtidsfond	Newton Investment Management Limited
	Legal & General Investment Management	NGS Super
	Legg Mason, Inc.	NH-CA Asset Management
	LGT Capital Management Ltd.	Nikko Asset Management Co., Ltd.
	LIG Insurance Co., Ltd.	Nipponkoa Insurance Company, Ltd
	Light Green Advisors, LLC	Nissay Asset Management Corporation
		NORD/LB Kapitalanlagegesellschaft AG
		Nordea Bank
		Norfolk Pension Fund

Norges Bank Investment Management (NBIM)	Rose Foundation for Communities and the Environment	TFL Pension Fund
North Carolina Retirement System	Rothschild	The ASB Community Trust
Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC)	Royal Bank of Canada	The Brainerd Foundation
Northern Star Group	Royal Bank of Scotland Group	The Bullitt Foundation
Northern Trust	RPMI Railpen Investments	The Central Church Fund of Finland
Northward Capital	RREEF Investment GmbH	The Children's Investment Fund Foundation
Northwest and Ethical Investments L.P. (NEI Investments)	Russell Investments	The Clean Yield Group
Nykredit	Sampension KP Livsforsikring A/S	The Collins Foundation
OceanRock Investments Inc.	Samsung Fire & Marine Insurance	The Co-operators Group Limited
Oddo & Cie	Samsung Life Insurance	The Daly Foundation
oeco capital Lebensversicherung AG	Samsung Securities	The Environmental Investment Partnership LLP
ÖKOWORLD	Sanlam	The Hartford Financial Services Group, Inc.
Old Mutual plc	Santa Fé Portfolios Ltda	The Joseph Rowntree Charitable Trust
OMERS Administration Corporation	Santam Ltd	The Korea Teachers Pension
Ontario Pension Board	Sarasin & Partners	The New School
Ontario Teachers' Pension Plan	SAS Trustee Corporation	The Oppenheimer Group
OP Fund Management Company Ltd	Sauren Finanzdienstleistungen GmbH & Co. KG	The Pension Plan For Employees of the Public Service Alliance of Canada
Oppenheim & Co Limited	Schroders	The Pinch Group
Oppenheim Fonds Trust GmbH	Scottish Widows Investment Partnership	The Presbyterian Church in Canada
Opplysningsvesenets fond (The Norwegian Church Endowment)	SEB Asset Management AG	The Russell Family Foundation
OPSEU Pension Trust (OP Trust)	Second Swedish National Pension Fund (AP2)	The Sandy River Charitable Foundation
Oregon State Treasurer	Seligson & Co Fund Management Plc	The Sisters of St. Ann
Orion Energy Systems	Sentinel Funds	The Standard Bank Group
Osmosis Investment Management	SERPROS - Fundo Multipatrocinado	The Sustainability Group
Panahpur	Service Employees International Union Benefit Funds	The United Church of Canada - General Council
Park Foundation	Servite Friars	The University of Edinburgh Endowment Fund
Parnassus Investments	Seventh Swedish National Pension Fund (AP7)	The Wellcome Trust
Pax World Funds	Shiga Bank, Ltd.	Third Swedish National Pension Fund (AP3)
Pensioenfonds Vervoer	Shinhan Bank	Threadneedle Asset Management
Pension Denmark	Shinhan BNP Paribas Investment Trust Management Co., Ltd	Tobam
Pension Fund for Danish Lawyers and Economists	Shinkin Asset Management Co., Ltd	Tokio Marine & Nichido Fire Insurance Co., Ltd.
Pension Protection Fund	Siemens Kapitalanlagegesellschaft mbH	Toronto Atmospheric Fund
Pensionsmyndigheten	Signet Capital Management Ltd	Trillium Asset Management, LLC
Perpetual Investments	Skandia	Triodos Bank
PETROS - Fundação Petrobras de Seguridade Social	Skandinaviska Enskilda Banken AB (SEB AB)	Tri-State Coalition for Responsible Investment
PFA Pension	Smith Pierce, LLC	Tryg
PGGM	SNS Asset Management	Turner Investments
Phillips, Hager & North Investment Management Ltd.	Social(k)	UBS
PhiTrust Active Investors	Sociedade de Previdencia Complementar da Dataprev - Previdata	Unibail-Rodamco
Pictet Asset Management SA	Socrates Fund Management	UniCredit
Pinstripe Management GmbH	Solaris Investment Management	Union Asset Management Holding AG
Pioneer Investments	Sompo Japan Insurance Inc.	Union di Banche Italiane S.c.p.a
Piraeus Bank	Sonen Capital LLC	Union Investment Privatfonds GmbH
PKA	Sopher Investment Management	Unionen
Pluris Sustainable Investments SA	Soprise! LLP	Unipension
PNC Financial Services Group, Inc.	SouthPeak Investment Management	UNISON staff pension scheme
Pohjola Asset Management Ltd	SPF Beheer bv	UniSuper
Polden Puckham Charitable Foundation	Spring Water Asset Management, LLC	Unitarian Universalist Association
Portfolio 21 Investments	Sprucegrove Investment Management Ltd	United Methodist Church General Board of Pension and Health Benefits
Porto Seguro S.A.	Standard Chartered	United Nations Foundation
POSTALIS - Instituto de Seguridade Social dos Correios e Telegrafos	Standard Chartered Korea Limited	Unity Trust Bank
Power Finance Corporation	Standard Life Investments	Universities Superannuation Scheme (USS)
PREVHAB PREVIDÊNCIA COMPLEMENTAR	State Bank of India	Vancity Group of Companies
PREVI Caixa de Previdência dos Funcionários do Banco do Brasil	State Street Corporation	VCH Vermögensverwaltung AG
PREVIG Sociedade de Previdência Complementar	StatewideSuper	Ventas Inc
Prologis	Stockland	Veris Wealth Partners
Provincial Rheinland Holding	Storebrand ASA	Veritas Investment Trust GmbH
Prudential Investment Management	Strathclyde Pension Fund	Vermont State Treasurer
Prudential PLC	Stratus Group	Vexiom Capital, L.P.
Psagot Investment House Ltd	Sumitomo Mitsui Financial Group	VicSuper
PSP Investments	Sumitomo Mitsui Trust Holdings, Inc.	Victorian Funds Management Corporation
Q Capital Partners Co. Ltd	Sun Life Financial Inc.	VIETNAM HOLDING ASSET MANAGEMENT LTD.
QBE Insurance Group	Superfund Asset Management GmbH	Vinva Investment Management
Rabobank	SUSI Partners AG	Voigt & Collegen
Raiffeisen Fund Management Hungary Ltd.	Sustainable Capital	VOLKSBANK INVESTMENTS
Raiffeisen Kapitalanlage-Gesellschaft m.b.H.	Sustainable Development Capital LLP	Waikato Community Trust
Raiffeisen Schweiz	Sustainable Insight Capital Management	Walden Asset Management, a division of Boston Trust & Investment Management Company
Rathbone Greenbank Investments	Svenska Kyrkan, Church of Sweden	WARBURG - HENDERSON
RCM (Allianz Global Investors)	Svenska Kyrkans Pensionskassa	Kapitalanlagegesellschaft für Immobilien mbH
Real Grandeza Fundação de Previdência e Assistência Social	Swedbank	WARBURG INVEST
REI Super	Swift Foundation	KAPITALANLAGEGESELLSCHAFT MBH
Reliance Capital Ltd	Swiss Re	Water Asset Management, LLC
Representative Body of the Church in Wales	Swisscanto Holding AG	Wells Fargo & Company
Resolution	Sycomore Asset Management	West Yorkshire Pension Fund
Resona Bank, Limited	Syntrus Achmea Asset Management	WestLB Mellon Asset Management (WMAM)
Reynders McVeigh Capital Management	T. Rowe Price	Westpac Banking Corporation
River Twice Capital Advisors, LLC	T.GARANTI BANKASI A.Ş.	WHEB Asset Management
RLAM	T.SINAI KALKINMA BANKASI A.Ş.	White Owl Capital AG
Robeco	Tata Capital Limited	Woori Bank
RobecoSAM AG	TD Asset Management	Woori Investment & Securities
Robert & Patricia Switzer Foundation	Teachers Insurance and Annuity Association - College Retirement Equities Fund	YES BANK Limited
Rockefeller Asset Management	Telluride Association	York University Pension Fund
	Tempis Capital Management Co., Ltd.	Youville Provident Fund Inc.
	Terra Forvaltning AS	Zegora Investment Management
	TerraVerde Capital Management LLC	Zevin Asset Management
		Zurich Cantonal Bank
		Zurich Cantonal Bank

Appendix IV: 50 companies used in 2009 to 2013 analysis.†

AUSTRALIA



Energy

Woodside Petroleum

BRAZIL



Energy

Petróleo Brasileiro SA - Petrobras

Materials

Vale

CANADA



Energy

Husky Energy

Imperial Oil

Suncor Energy

Materials

Potash Corporation of
Saskatchewan

FRANCE



Energy

Total

Industrials

Saint-Gobain

Materials

Air Liquide

Utilities

Electricite de France (EDF)

GDF Suez

GERMANY



Consumer Discretionary

Volkswagen

Materials

BASF

Linde

Utilities

E.ON

RWE

ITALY



Utilities

ENEL

JAPAN



Materials

Nippon Steel & Sumitomo

Metal

LUXEMBOURG



Materials

Arcelor Mittal

NETHERLANDS



Energy

Royal Dutch Shell

NORWAY



Energy

Statoil

S. AFRICA



Energy

Sasol

S. KOREA



Materials

POSCO

SPAIN



Energy

Repsol

Utilities

Gas Natural SDG

SWITZERLAND



Materials

Holcim

Xstrata

UK



Consumer Discretionary

Carnival

Energy

BP

Materials

Anglo American

BHP Billiton

Rio Tinto

Utilities

National Grid

USA



Consumer Staples

Wal-Mart

Energy

Apache

Chevron

ConocoPhillips

Devon Energy

Exxon Mobil

Occidental Petroleum

Industrials

FedEx

Materials

Air Products & Chemicals

Dow Chemical

E.I. du Pont de Nemours

Praxair

Telecommunication services

AT&T

Utilities

American Electric Power

Duke Energy

Exelon

† the 50 largest emitters in 2013 for whom complete data was available from 2009 as part of the G500

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