The Corporate Climate Communications Report 2007

A study of climate change disclosures by the Global FT500

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Contents

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Our website leads in the provision of global CSR resources. The site includes the world's most comprehensive directory of corporate non-financial reports, with 16,000 reports from over 4,000 companies across 105 countries (status February 2008).

We provide most of our CSR resources free of charge, and 20,000 global CSR stakeholders are registered to use our website.

We have specialised in non-financial reporting since 1996, researching, analysing and comparing reports. After having developed several free publications surrounding CSR reporting, this study of climate change disclosure in CSR reports is our first to research specific report content.

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Introduction

Introduction

Climate Change is now not only the dominant issue in CSR and corporate sustainability, it has transcended these specialist fields and is regarded as a mainstream business issue. So how are the world's largest companies acknowledging and addressing climate change? That is the subject of this report, the first in a series by CorporateRegister.com looking at leading CSR and corporate sustainability issues.

The report examines *communications* by companies on the issue. Unlike other studies in this field the intention is not to document or benchmark *performance*, and we are not 'naming and shaming' specific companies. Comparing and contrasting disclosures across business sectors and regions, examining the mitigation measures taken and the communications methods used gives new insights into the issues.

We have approached six Global FT500 companies, all leaders in their sectors, for statements on their approach to climate communications. Their responses are found throughout this report. We would like to thank each of these companies for their contribution to this project.

About this report

Over 2,500 companies publish sustainability and CSR reports every year. These reports are a highly relevant source of information on climate change at the corporate level. Until now there has been little attempt to examine these reports and extract information on climate change disclosure, methodically and consistently, and publish the findings. We've taken the Global FT500 companies, researched which of these publish a relevant report, and used these reports as the basis of the study.

CorporateRegister.com's view is that climate change disclosure in these reports serves as a proxy for climate change action by the global business community.

We make no attempt to judge or rank the climate change disclosure of individual companies against a standard of our own. Instead, we looked for the inclusion or absence of a range of elements eg emissions data (see Appendix 1 for Methodology).

Copies of this report have been sent to every Global FT500 company. We are pleased to offer it free of charge to all registered users of the CorporateRegister.com website, and hope it makes for both useful and interesting reading. For stakeholders needing yet more detail, we have compiled spreadsheets of all the underlying data, linked to specific reports and companies. Please contact us at climate@corporateregister.com or +44 20 7014 3366 for more information.

METHODOLOGY SUMMARY

The Scope of Study

CSR reports published between September 2006 and December 2007 by Global FT500 companies are the basis of the study. This universe was chosen because it provides a representative overview of the world's largest companies. These companies represent a very high proportion of global capital, and in many respects are regarded as 'leaders' within business sectors and across regions. Some regions and sectors are poorly represented within this study universe, which should be borne in mind when interpreting our results.

Corporate non-financial reports are the basis of the study: these reports have various titles, ranging from environmental, citizenship and CSR reports to sustainability and triple bottom line reports. Throughout this publication we refer to 'CSR reports', the term most widely used.[1]

Of the Global FT500, 335 companies produced reports which met our definition.

How we approached the Research

Information on climate change disclosure in the CSR reports has been collected as objectively and methodically as possible. We chose study issues which could be compared consistently and fully across all the reports.

In all, we evaluated a total of 29 specific issues across the following 5 climate change themes:

A. General discussion
B. Performance disclosure
C. Mitigation disclosure
D. Target setting disclosure
E. Assurance / Guidelines disclosure

A listing and discussion of the specific issues can be found in Appendix 1.

1 *The vast majority of reports profiled on CorporateRegister.com and the reports used in this study are stand-alone reports. However, where a company does not publish a stand-alone CSR reports but does include a relevant section of at least 6 pages in an Annual Report, these sections are included*

Overall findings

SNAPSHOT

87%

of reporters address climate change

Is climate change addressed?

Within the Global FT500 universe, 67% (335) publish CSR reports, and these are the reports examined throughout this study and to which the statistics apply. The reports vary in scope and content, so how do they address climate change as a whole?

87% of CSR reports published by Global FT500 companies over the past 15 months address climate change, to varying degrees.

78% of the reports include quantitative dislosure.

THE NUMBERS

65% include specific climate change section
41% climate change addressed in CEO/Chairman's introduction
16% state management responsibility for addressing climate change

Moreover, 65% of the reports include a specific climate change section, underlining the significance of climate change within CSR reporting.

How does the issue resonate within company management? We found that while climate change was addressed in the CEO / Chairman's introduction in 41% of the reports, it was far less common to outline where management responsibility for climate change issues lies. Just 16% of the reports state this clearly.

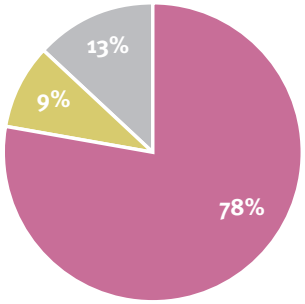


FIGURE 1.

Climate Change Disclosure by Type

- Quantitative Disclosure
- Qualitative Disclosure Only
- No Reference to Climate Change

What kind of data is being disclosed?

Quantitative data may be disclosed in two ways:

1. In absolute numbers.
2. In relative numbers – adjusted using other key metrics such as turnover, product throughput or employee numbers.

Combining both ways provides firm numbers and also a contextualised view: 78% of the reports provide quantitative data on greenhouse as emissions, of which 40% include both absolute and relative numbers. These are high figures, demonstrating notable transparency by these companies.

Looking more closely at the performance data, it seems companies prefer not to disaggregate it. Just 19% of reports disaggregate their data by operations and even fewer by region.

THE NUMBERS

14% disaggregate emissions data by region
19% disaggregate emissions data by operations

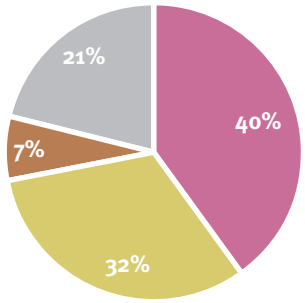


FIGURE 2.

Emissions Data Disclosure by Type

- Absolute & Relative Emissions Data
- Absolute Emissions Data Only
- Relative Emissions Data Only
- No Emissions Data

SNAPSHOT

78%

of reporters disclose quantitative emissions data on climate change

SNAPSHOT

63%

of reporters align with the WBCSD/ WRI GHG Protocol to calculate and report their emissions

Who's aligning with the WBCSD/WRI GHG Protocol?

The GHG Protocol is a tool for calculating an organisation's greenhouse gas emissions, as a form of common reporting language. Using the methodology a company can calculate and report its greenhouse gas emissions in a standardised, comparable manner.

Well over half (63%) of the reports align with the GHG Protocol, of itself an impressive statistic. Of these reports, 45% include the most comprehensive and demanding level of the Protocol, Scope 3. Scope 3 includes emissions sources such as employee business travel and the transport of products sold, and by its cumulative nature is also inclusive of both Scopes 2 & 1.

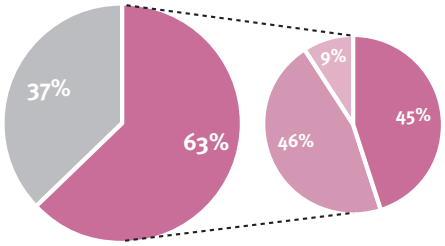


FIGURE 3.

Alignment with WBCSD/WRI GHG Protocol

- Aligning with GHG Protocol
- Not Aligning with GHG Protocol

Aligning with WBCSD/WRI GHG Protocol By Scope (See Methodology for Definitions)

- Scope 3 GHG Protocol
- Scope 2 GHG Protocol
- Scope 1 GHG Protocol

What mitigation measures are companies referring to?

We examined the reports for references to four major measures for GHG emissions reduction. Other measures exist, but these are the most common and are reported more consistently across all sectors.

Energy efficiency initiatives are by far the most widely reported emissions measure, referenced in 74% of reports.

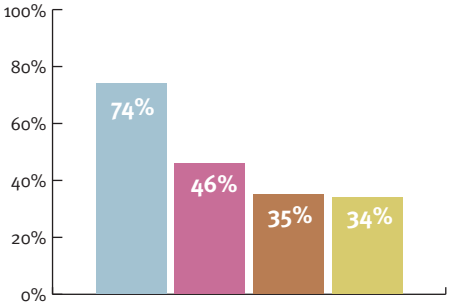


FIGURE 4.

Mitigation Measures Referenced

- Energy Efficiency Initiatives
- Renewable Energy Initiatives
- Transport Initiatives
- Emissions Trading

CLIMATE COMMUNICATIONS SURVEY RESPONSE:

American Electric Power

Why address Climate Change in your CSR Report?
Climate change is a significant issue for society and as one of the largest consumers of coal in the United States we believe it is a central issue for our corporate sustainability. As such, we have already reduced our greenhouse gas emissions significantly and support legislation in the U.S. that mandates reasonable carbon controls in the future.

Why include performance data on Climate Change?
To achieve real GHG reductions, companies' progress must be measured against goals and targets. Companies' performance data communicates the effectiveness of climate change actions and strategies.

What are your main measures to reduce GHG emissions?
We have already taken actions to reduce or offset our emissions, largely through improvements in our power plant efficiency, nuclear generation, the addition of wind power and retirements of inefficient fossil units. In the long term, a portfolio of options will be required that includes new technology such as carbon capture and storage; renewable energy such as wind and biomass with supporting transmission infrastructure; new nuclear units; a modern distribution system that integrates generation to provide for more efficient use of energy; and, greenhouse gas emissions offsets through forestry and agricultural methane capture and destruction.

Why set a target to reduce GHG emissions?
A target is important because it provides a measurement to benchmark against and from which strategic success can be measured.

Do you feel Climate Change Disclosure needs to be separately verified?
Yes. Independent auditing allows shareholders to evaluate companies' performance against emission reduction targets and the commitments made to shareholders. In the United States, members of the Chicago Climate Exchange, including American Electric Power, are the only companies currently receiving third party auditing and compliance via the National Association of Securities Dealers.

SNAPSHOT

51%

of reporters setting SMART targets or objectives for reducing emissions

SNAPSHOT

7%

of reporters include assurance statements specifically covering climate change

Are companies setting targets?

How are companies committing themselves to specific action on climate change? We distinguish between 'SMART targets' (Specific, Measurable, Achievable, Realistic and Time-scaled) and 'Objectives' (broader statements of intent).

Only half of the reports include commitments to reduce emissions, with 37% setting SMART targets and 14% opting for broad objectives.

THE NUMBERS

Of the 37% setting SMART target reductions:
20% set SMART targets for *absolute* emissions
17% set SMART targets for *relative* emissions

SMART targets for absolute emissions are the more challenging commitment: depending on the parameters used, a given company performance might meet a *relative* emissions target while breaching an *absolute* one.

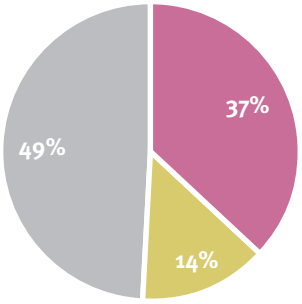


FIGURE 5.
Inclusion of SMART Targets or Objectives
- SMART Reduction Targets
- Reduction Objectives Only
- No Targets or Objectives

Credibility – which reports are externally assured?

While many companies allow the reported data and statements to speak for themselves, others go further by including an external assurance (verification) statement. This adds credibility to the report and is important to many stakeholders. Assurance within Global FT500 companies is more widespread than within the general run of reporting companies: while just 27% of the 2,500 CSR reports published during 2007 include an assurance statement[2], this rose to 44% within our study universe.

We examined the reports for two types of assurance statement: those specifically addressing the climate change disclosures, and those addressing the report as a whole.

Of the 44% assuring their data, 37% include a general assurance statement covering the entire report, which may or may not include climate change disclosure. Very few companies (7%) went the last mile by having their climate change disclosures specifically and separately assured by an external body.

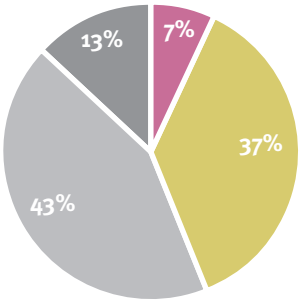


FIGURE 6.
Inclusion of Assurance
- Specific Climate Change Assurance
- General Report Assurance
- No Assurance
- No Climate Change Disclosure

2 *Data from CorporateRegister.com*

CLIMATE COMMUNICATIONS SURVEY RESPONSE:

Telefónica

Why address Climate Change in your CSR Report?
Telefónica is aware of its responsibility in relation to greenhouse gas emissions and is working on strategies to reduce energy consumption and the emissions that come from running networks, buildings and transport. On the other hand, telecommunication services can also provide opportunities to address the climate change issue. Our CSR report serves as the perfect tool for communicating with our stakeholders on this complex issue.

Why include performance data on Climate Change?
Our report summarises Telefónica's work across a number of important Corporate Responsibility areas, including climate change. We set out our position on each issue, and illustrate these with detailed performance data from our global footprint. Our commitment to transparency and to disclosure of information on climate change has directly inspired our Action Plan on this issue.

What are your main measures to reduce GHG emissions?
Telecommunications services are currently recognised internationally as a key sector in helping to minimise power consumption and contribute to solving the problem of climate change, for example through teleconferencing, remote working or online billing.

Our greatest environmental impact is energy consumption, so this is an important area for us to tackle. However, collecting consistent and comparable data across an organisation of our size presents significant challenges. Therefore in 2007/08 we are focusing on effective internal data reporting and aggregation with regards to energy consumption to reach a robust understanding of our impact.

We also have a number of existing energy efficiency initiatives in place across our global operations and through the Climate Change Action Plan we hope to consolidate these efforts and apply consistent measures across the group to quantify our energy savings.

Why set a target to reduce GHG emissions?
Telefónica is not directly affected by the European regulations that apply in the area of climate change and emissions trading. However, we are a company committed to enhancing people's lives and the communities where we operate, so of course we want to reduce our effects regarding climate change, given the significant economic, social, and environmental challenges it poses. Therefore in 2008, we will clearly set out our Action Plan in this area.

Do you feel Climate Change disclosure needs to be separately verified?
Telefónica believes in the importance of disclosing accurate, verifiable data for all areas of its operations. The relative costs and benefits of providing separate assurance for any single issue must be determined on a company by company basis.

SNAPSHOT

28%

of reports with a GRI Contents Index do not reference the specific emissions indicators

Which reports include GRI indicators?

The Global Reporting Initiative (GRI) provides a framework and guidance for CSR/sustainability reporting. The 2002 (G2) version of GRI guidelines includes one specific indicator for greenhouse gas emissions, while the 2006 version (G3) includes three specific indicators:

G2 EN8: Greenhouse gas emissions
G3 EN16: Total direct and indirect greenhouse gas emissions by weight
G3 EN17: Other relevant indirect greenhouse gas emissions by weight
G3 EN18: Initiatives to reduce greenhouse as emissions and reductions achieved

Around 700 of the world's current 2,500 CSR reporters follow GRI guidelines to varying extents. Both G2 and G3 versions are currently in use, and we examined our study universe of CSR reports for both.

Of the reports in our study, 54% include a GRI contents index, with the majority (33%) including a G3 contents index.

For those reports with a GRI contents index, 54% refer to the G3 EN16 indicator, 18% to the G2 EN8 but 28% make no reference to the GRI indicators on Climate Change.

FIGURE 7.

Reporters Following GRI: Inclusion Of GRI Contents Index

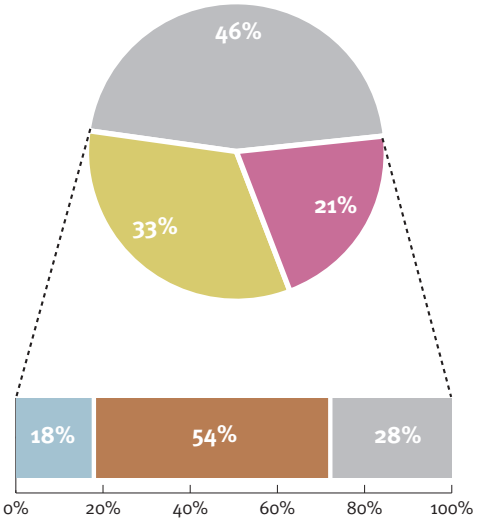


FIGURE 8.

Reporters Including A GRI Contents Index: Who Is Using Climate Indicators?

Regional analysis

Regional analysis

Of the Global FT500, the following table shows the regional breakdown of those companies publishing CSR reports September 2006 – December 2007. Note the small sample size for some of these regions, which reflects the constituency of the Global FT500 but should be borne in mind when drawing comparisons:

TABLE 1. **Companies and Reporters by Region**

	Companies	Reporters	%
North America	210	118	56%
South America	7	7	100%
Europe	172	152	88%
Africa & Middle East	12	5	42%
Asia (Ex Japan)	40	9	23%
Japan	49	38	78%
Australasia	10	6	60%

Is climate change addressed?

How do different regions choose to disclose their climate change performance?

- Our first chart indicates that Australasia, Japan and Europe are the leading regions.
- All Australasian reports include climate change performance data.
- Japanese CSR reports have a slight edge over their European counterparts while North American reports are noticeably lacking in climate change disclosure.
- CSR reports from Asia and South America are the most likely to include only qualitative disclosure around climate change, a characteristic somewhat surprisingly shared by 15% of North American reports.
- Japanese companies are taking climate change disclosure very seriously. Most Japanese reporters include a specific section on climate change, and they lead the field in publishing their management commitment on the issue.
- Australasian and European reporters also perform consistently well, but while European companies often include a specific section on climate change, they appear reluctant to demonstrate management commitment on the issue.

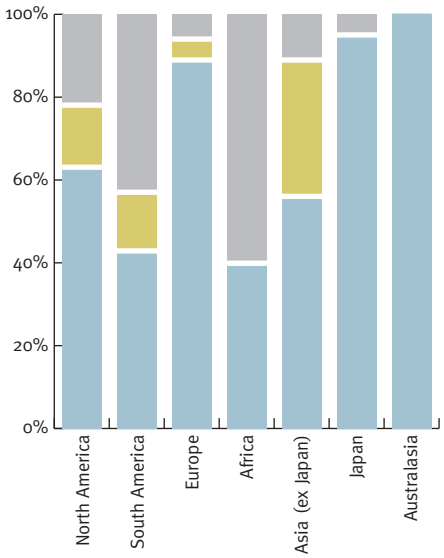


FIGURE 9.

Regional Climate Change Disclosure By Type

- Quantitative Disclosure
- Qualitative Disclosure Only
- No Reference to Climate Change

TABLE 2. **Climate Change Disclosure by Region**

	Specific Climate Change section	Rank	Covered in CEO introduction	Rank	Stated management Responsibility	Rank
North America	55%	5	32%	5	12%	6
South America	43%	6	29%	6	0%	7
Europe	70%	2	46%	3	17%	4
Africa	40%	7	40%	4	20%	3
Asia (ex Japan)	56%	4	22%	7	22%	2
Japan	82%	1	55%	2	24%	1
Australasia	67%	3	67%	1	17%	4

What kind of data is being disclosed?

- Australasia, Japan and Europe are the leading regions in climate change data disclosure. The Australasian reports demonstrate most transparency within this group, with most of their CSR reports disclosing both absolute and relative emissions data.
- No reports from South America include data on both absolute and relative greenhouse gas emissions, and on this aspect North America again demonstrates middling performance.

Moving on to table 3, we look at how this performance data is broken down, by region or by company operations. Most regions prefer to disaggregate their emission data by operations, and this can be identified as a global pattern.

- Australasian reports do not conform to the global pattern, being most likely to disaggregate their data by region (and at the same time Australasian companies are those most likely to disaggregate their data).
- Again, Japan, Australasia and Europe lead on this issue.

TABLE 3. **Data Disaggregation by Region**

	Regional Data Disaggregation	Rank	Operational Data Disaggregation	Rank
North America	10%	4	16%	4
South America	0%	5	0%	6
Europe	16%	3	21%	2
Africa	0%	5	0%	6
Asia (ex Japan)	0%	5	11%	5
Japan	21%	2	32%	1
Australasia	33%	1	17%	3

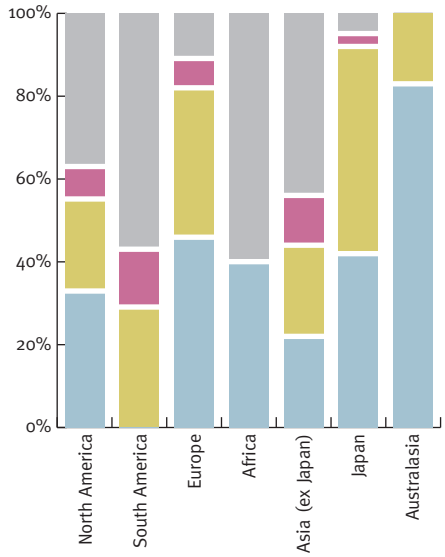


FIGURE 10.

Regionals Emissions Data Disclosure By Type

- Absolute & Relative Emissions Data
- Absolute Emissions Data Only
- Relative Emissions Data Only
- No Emissions Data

SNAPSHOT

95%

of Japanese reporters provide quantitative disclosure on climate change

SNAPSHOT

32%

of North American reporters include a CEO statement on climate change

Who's aligning with the WBCSD/WRI GHG Protocol?

- Reporting companies from Japan and Europe lead the way in aligning with the GHG Protocol, with fully 82% of Japanese CSR reports using data aligned with the GHG Protocol.
- Very few regions limit themselves entirely to reporting Scope 1 emissions. Several European and Japanese reporters report only to Scope 1, yet these numbers are far outweighed by other reports, reporting in more detail, from the same regions. Japanese and North American companies are most likely to include Scope 1 and Scope 2 data, while Australasian and European companies are the most likely to go the further step by reporting to Scope 3.

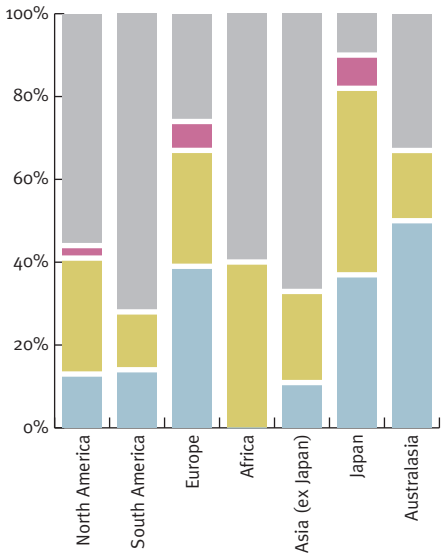


FIGURE 11.

Regional Alignment with WBCSD/WRI GHG Protocol (See Methodology for definitions)

- Scope 3 GHG Protocol
- Scope 2 GHG Protocol
- Scope 1 GHG Protocol
- Not Aligning with GHG Protocol

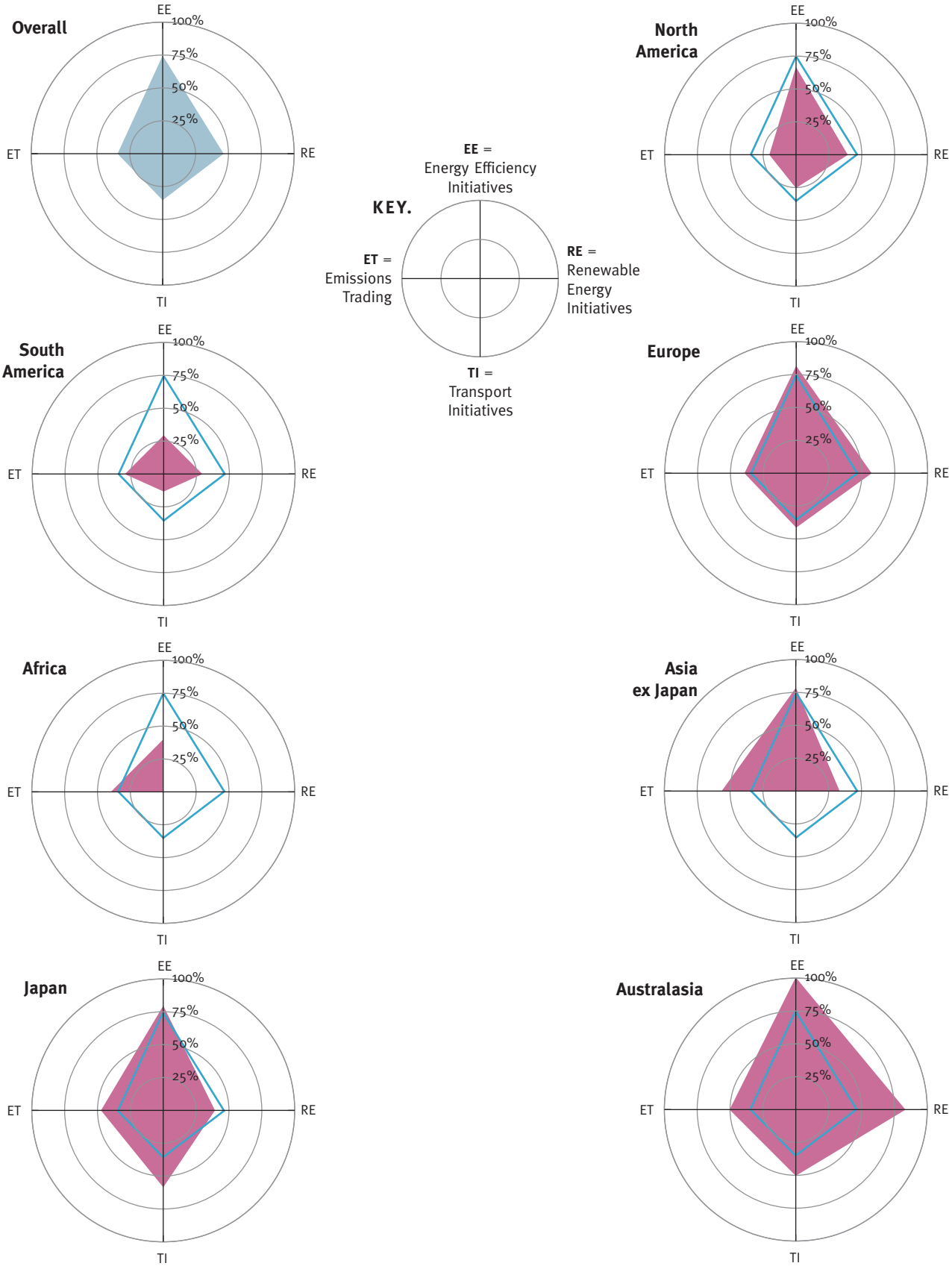
What mitigation measures are companies refering to?

So what concrete measures are companies taking to reduce their greenhouse gas emissions? We identified four main strategies by which a company can address this issue, and examined how approaches vary across regions.

We first established a 'global average' (see fig. 12). This 'global average' shows that the Global FT500 reporters refer most commonly to energy efficiency, followed by renewable energy initiatives, and then to emissions trading and transport initiatives equally.

- European CSR reports are more likely to refer to these mitigation measures than the global average, while at the same time following the global pattern.
- North American CSR reports refer less markedly to these mitigation measures, but the pattern again reflects the global average.
- Australasian CSR reports are the clear leaders here. They also reflect the pattern of the global average, but refer to these measures far more often. All reports refer to energy efficiency, and over three quarters refer to renewable energy initiatives.
- Japanese CSR reports appear to vary the pattern. Energy efficiency is the most common mitigation measure, as may be expected, but the reports discuss emissions trading and transport initiatives more commonly than they do renewable energy initiatives.
- Of the three remaining regions, only South America follows the broad global pattern. The CSR reports from Africa and Asia (excluding Japan) favour referrals to emissions trading, while also stressing the significance of energy efficiency.

FIGURE 12. **Regional Mitigation Measures Reference**



Are companies setting targets?

How are the Global FT 500 setting targets for reducing their greenhouse gas emissions?
We distinguish between genuine targets, defined as SMART targets, and broad objectives.

SMART emissions targets

Overall

- Japanese companies lead the way in publishing SMART targets in their CSR reports, closely followed by the Australasians and then, at more distance, the Europeans and the North Americans.
- The African countries put in a strong showing here, with 40% of their CSR reports including a SMART target for greenhouse gas emissions reduction.

Absolute and Relative SMART emissions targets

TABLE 4. **Type of Emissions Target by Region**

	Absolute Emissions Reduction Targets	Rank	Relative Emissions Reduction Targets	Rank
North America	19%	3	14%	5
South America	14%	5	0%	6
Europe	20%	2	15%	4
Africa	0%	7	40%	1
Asia (ex Japan)	11%	6	0%	6
Japan	29%	1	34%	2
Australasia	17%	4	33%	3

Further sub-division of reports disclosing SMART targets for *absolute* emissions, as compared against SMART targets for *relative* emissions, reveals no clear patterns. Reports from the European and North American companies are more likely to include absolute rather than relative SMART targets, as are those from Asia (excluding Japan) and South America. However, while reports from Australasia and Japan may set the pace in setting SMART targets overall, the targets themselves are likely to involve relative emissions only. All African SMART targets are based on relative emissions.

Objectives

- No general pattern may be discerned here. Very few Japanese companies restrict themselves to broad objectives (they favour SMART targets instead). On the other hand, South American and European companies include a higher proportion of broad emissions objectives.

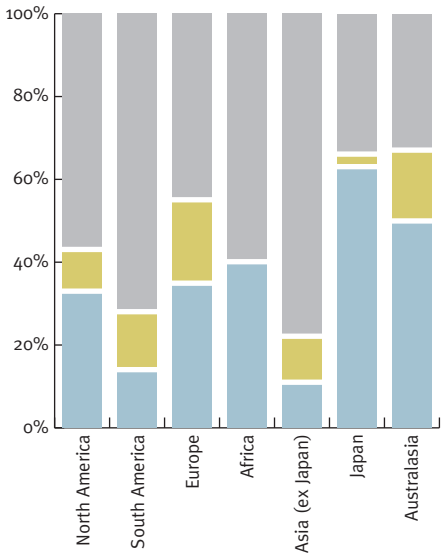


FIGURE 13.

Regional Inclusion of SMART Targets or Objectives

- SMART Reduction Targets
- Reduction Objectives Only
- No Targets or Objectives

CLIMATE COMMUNICATIONS SURVEY RESPONSE:

Westpac

Why address Climate Change in your CSR Report?
There are clearly significant commercial imperatives in the climate change debate, on both the risk and opportunity side. There is also increasing pressure on companies from institutional investors, calling for greater clarity on how businesses are strategically and tactically managing their response to the implications of climate change.

Companies need to be able to analyse, manage and communicate their response to these challenges, to ensure both the near and long-term viability of their operations.

Why include performance data on Climate Change?
As reporting frameworks and mandated disclosure requirements continue to grow, it will become increasingly important for companies to understand their footprint, and to publicly disclose what measures they have taken to reduce greenhouse gas emissions.

The application of robust and consistent carbon accounting and verification methods provides greater certainty to the market on long-term performance trends and efficiency gains.

What are your main measures to reduce GHG emissions?
Westpac has been examining and addressing the impact of environmental issues on our business for well over a decade. In that time, Westpac has reduced direct emissions by around 40%, begun trading in environmental markets, launched a number of environmental products and services, promoted the application of ESG issues in risk assessment and investment considerations and publicly advocated for greater certainty in climate change policy and regulation.

Westpac reports annually on managing climate change through its Stakeholder Impact Report and has reported greenhouse gas emissions through the Australian Government Greenhouse Challenge program since 1997. Further information is available at www.westpac.com.au/corporateresponsibility

Why set a target to reduce GHG emissions?
Essentially, because it remains a truism that what gets measured gets managed.

As regulatory requirements on the reduction of greenhouse gas emissions continue to tighten, companies must be able to demonstrate to the market and to their wider stakeholders that they are actively managing and reducing their footprint.

Do you feel Climate Change disclosure needs to be separately verified?
Effective market mechanisms for reducing greenhouse gas emissions depend upon consistent, verifiable, comparative and accurate data. This is particularly true in the current environment, where reporting frameworks continue to evolve. Therefore, it remains highly important for reported greenhouse gas data to be independently verified and assured.

This allows companies to increase understanding in the impacts of their own operations, to identify opportunities to increase efficiency and reduce greenhouse gas emissions and provides greater confidence to environmental and carbon market participants.

Credibility – which reports are externally assured?

How do reports from different regions approach the issue of assurance on their climate change disclosures? We differentiate between general assurance covering the CSR report as a whole, and assurance which specifically covers the climate change disclosures.

General report assurance

- Once again a familiar pattern emerges: Australasia, Japan and Europe lead the way and around two-thirds of their CSR reports include a general assurance statement (which also covers any climate change disclosures).
- The startling finding is the low level of North American reports which include assurance – these are the least likely to include any form of external assurance and fall well below the global average. This finding prompts a wider question on the prevalence of external assurance in North American CSR reports, and an analysis of all CSR reports published during the timeframe of this study and profiled on CorporateRegister.com confirms the same low rate of assurance at 7%.

Specific climate change assurance

- Regions generally regarded as less developed are those most likely to include assurance specifically covering climate change disclosures – South America and Africa. To a lesser degree, some North American and European reports also include such specific assurance.

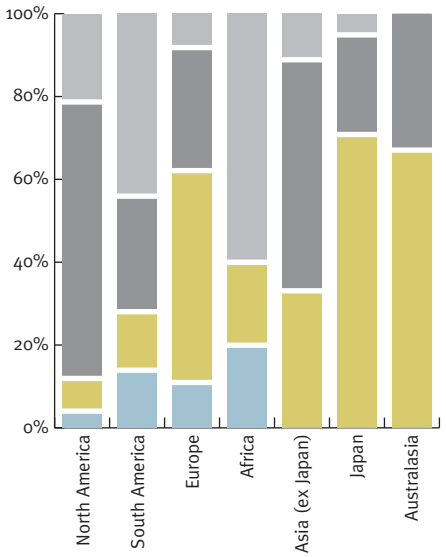


FIGURE 14.

Regional Inclusion of Assurance

- Specific Climate Change Assurance
- General Report Assurance
- No Assurance
- No Climate Change Disclosure

Which reports include GRI indicators?

Which of the reports in this study use GRI indicators?

- Australasia and Europe are enthusiastic, especially on the inclusion of a G3 contents index
- Japan and North America are less likely to include a GRI contents index.

For those reporters which include a GRI contents index:

- 100% of Australian reports and 57% of Japanese reports refer to G2 EN8
- 64% of European reports refer to the more recent G3 EN16 indicator
- 60% of Asian reports and 38% of North American reports make no reference to the GRI indicators on Climate Change

Given the significance of climate dislosure in CSR reports, the relatively low percentages of GRI reporters including specific GRI climate indicators is surprising. "Materiality" is a key factor in deciding report content, and we would expect almost all GRI reporters to map against specific climate indicators – indeed, other findings in this study indicate that these companies are addressing and communicating on these issues. For whatever reason, some companies do not map their efforts against the corresponding GRI indicators.

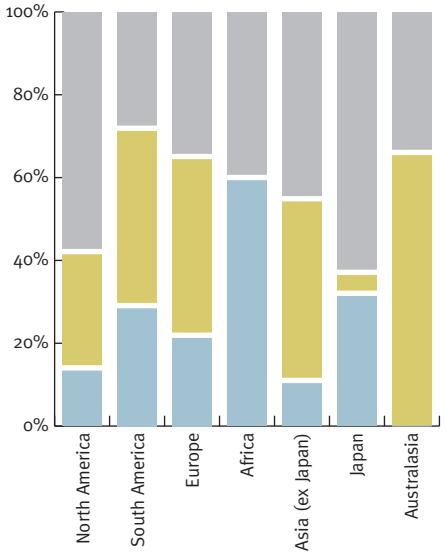


FIGURE 15.

Regional Use of GRI Guidelines Part One: Inclusion of GRI Contents Index

- G2
- G3
- No GRI Contents Index

TABLE 5. **Regional Use of GRI Guidelines: Specific Climate Indicator Use in Reports with G3 Contents Index**

	GRI G3 - EN17	Rank	GRI G3 - EN18	Rank
North America	39%	6	61%	4
South America	67%	2	67%	2
Europe	45%	5	62%	3
Africa	0%	7	0%	7
Asia (ex Japan)	50%	3	50%	5
Japan	50%	3	50%	5
Australasia	75%	1	100%	1

The 2006 G3 guidelines include two further climate change indicators: EN17 and EN 18. These cover more detailed information on extra-GHG emissions and reduction measures. Analysing our reports for these additional indicators we can see that:

- Again, Australasian companies take a commanding lead.
- European and South American companies follow, but with markedly less enthusiasm than their Australasian peers.

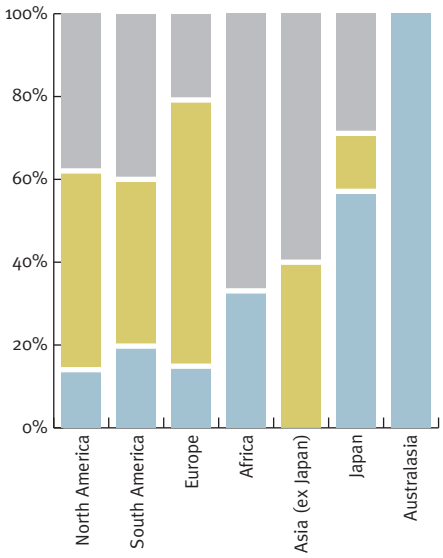


FIGURE 16.

Regional Use of GRI Guidelines Part Two: Specific Climate Change Indicators in Reports with GRI Contents Index

- G2 EN8 Indicator
- G3 EN16 Indicator
- No GRI Indicators for Climate Change

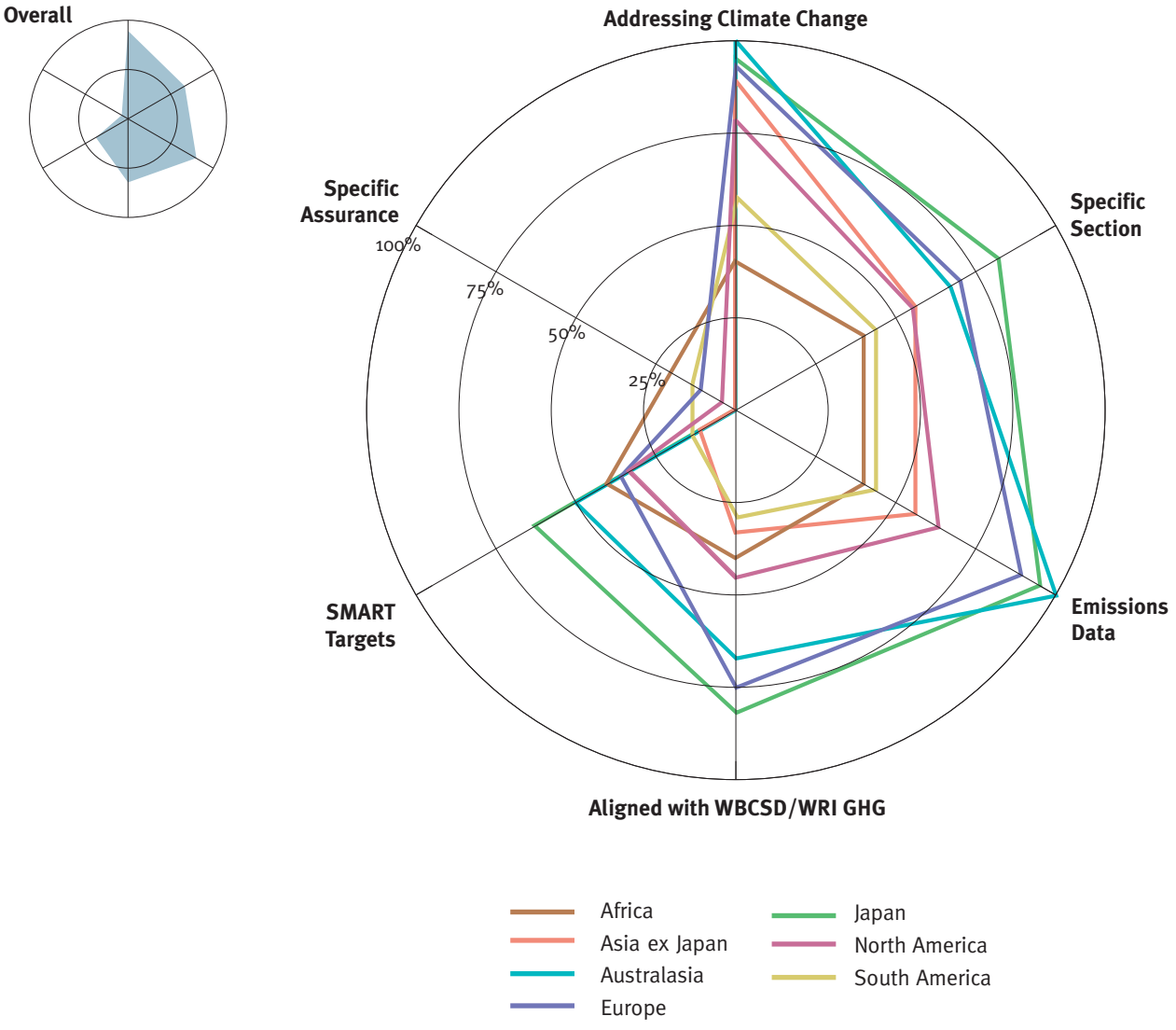
The Big Picture

The following radar charts show the proportions of CSR reports which include six key elements of climate change disclosure. Starting with the simplest and most important element (*'does the report address climate change?'*) and moving clockwise, the elements become increasingly exacting and consequently less common. As the plot line moves clockwise it therefore typically spirals inwards – see the plot line on the 'overall' chart below.

We can draw broad conclusions on the state of climate change communications in each region by plotting each line separately in a single chart – see below.

- Reports from Australasia and Japan lead: they devote most attention to disclosure on climate change. They are followed by European reports.
- Reports from North America devote the least attention to disclosure on climate change. They are outperformed on several headings by companies from less developed regions.
- There is a wide range of variance between regions.

FIGURE 17. **Regional Climate Commitment Overview**



Sectoral analysis

Sectoral analysis

Of the Global FT500 the following table shows the sectoral breakdown of those companies publishing CSR reports between September 2006 – December 2007. Note the small sample size for some of these sectors, which reflects the constituency of the Global FT500 but should be borne in mind when drawing comparisons.

TABLE 6. **Companies and Reporters by Sector**

	Companies	Reporters	%
Automobiles & Parts	12	11	92%
Banks & Finance	112	58	52%
Chemicals	10	8	80%
Foods & Beverages	17	14	82%
Health & Pharmaceuticals	34	23	68%
Industrials	39	27	69%
Insurance	31	18	58%
Leisure & Media	23	12	52%
Mining & Metals	22	19	86%
Oil & Gas	39	28	72%
Personal & Household Goods	11	10	91%
Retailers	23	16	70%
Support Services	3	2	67%
Technology	46	32	70%
Telecommunications	32	19	59%
Tobacco	3	3	100%
Transport & Logistics	12	6	50%
Utilities	31	27	87%

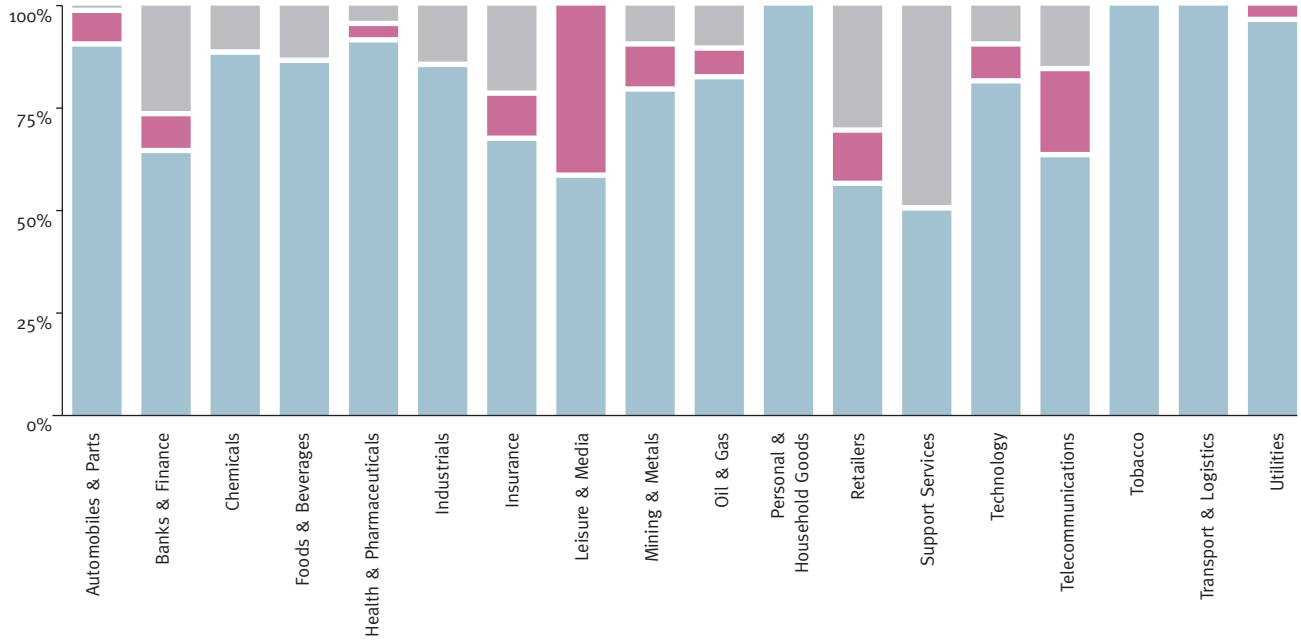


FIGURE 18. **Sectoral Climate Change Disclosure by Type**

Quantitative Disclosure Qualitative Disclosure Only No Reference to Climate Change

SNAPSHOT

93%

of reporters in the Utilities sector include a specific section on climate change

SNAPSHOT

44%

of reporters in the insurance sector include a specific section on climate change

TABLE 7. **Climate Change Disclosure by Sector**

	Specific Climate Change section	Rank	Covered in CEO Introduction	Rank	Stated Management Responsibility	Rank	Regional Data Disaggregation	Rank	Operational Data Disaggregation	Rank
Automobiles & Parts	64%	10	55%	4	27%	2	18%	6	27%	6
Banks & Finance	50%	14	29%	16	16%	8	19%	3	10%	13
Chemicals	50%	14	50%	5	0%	15	0%	13	25%	7
Foods & Beverages	79%	4	36%	12	14%	11	0%	13	7%	16
Health & Pharmaceuticals	74%	5	35%	13	26%	3	17%	7	13%	10
Industrials	59%	12	41%	10	22%	5	19%	3	15%	9
Insurance	44%	18	33%	14	28%	1	6%	11	6%	17
Leisure & Media	50%	14	42%	9	0%	15	8%	10	8%	15
Mining & Metals	74%	5	63%	3	26%	3	5%	12	21%	8
Oil & Gas	71%	7	64%	2	18%	7	10%	9	50%	2
Personal & Household Goods	80%	3	40%	11	20%	6	0%	13	50%	2
Retailers	56%	13	25%	18	6%	13	13%	8	13%	10
Support Services	50%	14	50%	5	0%	15	0%	13	50%	2
Technology	69%	8	47%	7	9%	12	25%	1	9%	14
Telecommunications	63%	11	26%	17	5%	14	21%	2	11%	12
Tobacco	66%	9	33%	14	0%	15	0%	13	0%	18
Transport & Logistics	83%	2	67%	1	16%	8	0%	13	67%	1
Utilities	93%	1	44%	8	15%	10	19%	3	30%	5

Is climate change addressed?

The chart and table show a coherent picture of the relative importance accorded to climate change issues amongst the 18 defined business sectors, as evidenced by the CSR reports of the Global FT500. As may be expected, there is a correlation between the importance accorded to climate change within a sector, and the impact a sector may be regarded as having on climate change.

Sector groupings

We have categorised our 18 business sectors into three broad groupings: 'Heavy industry'; 'Light industry'; 'Service industry'. See appendix 2 for details.

Intuitively we might expect reports from the following 'Heavy industry' sectors to place greater emphasis on Climate Change disclosure:

- *Utilities*
- *Transport & Logistics*
- *Automobiles & Parts*
- *Mining & Metals*
- *Oil & Gas*
- *Chemicals*

As expected the 'Heavy industry' sector does provide more robust climate change disclosure, with the surprising exception of the *Chemicals* sectors which consistently underperforms.

Our analysis also indicates that those sectors loosely grouped under 'Light industry' devote an intermediate degree of attention to climate change in their CSR reports. Surprisingly, and perhaps counter-intuitively the *Personal & Household Goods* sector far outperformed other sectors in this grouping by providing a depth of climate change communication similar to that of the 'Heavy industry' grouping:

- *Industrials*
- *Personal & Household Goods*
- *Health & Pharmaceuticals*
- *Food & Beverages*
- *Tobacco*
- *Technology*

Finally, those sectors loosely grouped under 'Service industry' devote the least attention to climate change in their CSR reports:

- *Telecommunications*
- *Insurance*
- *Banks & Finance*
- *Retailers*
- *Leisure & Media*
- *Support Services*

Specific sectors

Climate change has become such a pressing issue that within some sectors, all companies publishing a CSR report will address it to some degree.

Within our study, every CSR reporter within the following sectors addresses climate change:

- *Utilities*
- *Transport & Logistics*
- *Personal & Household Goods*
- *Automobiles & Parts*
- *Tobacco*
- *Leisure & Media*

Within our three loose sector groupings, the 'Heavy industry' and 'Light industry' groupings are equally likely to include quantitative GHG emissions data, with the 'Service industry' grouping least likely to do so.

We analysed whether the company reports include a specific climate change section, and found wide divergence across sectors:

- Whereas fully 93% of CSR reports from the *Utilities* sector include a specific section, this drops to just 44% from the *Insurance* sector.

On the issue of detailing management commitment on climate change:

- The *Utilities* sector performs weakly compared against other sectors within the 'Heavy industry' grouping.
- *Insurance* is the sector most likely to disclose management commitment on climate change, despite being within the 'Service industry' grouping.

CLIMATE COMMUNICATIONS SURVEY RESPONSE:

GlaxoSmithKline

Why address Climate Change in your CSR Report?
We at GlaxoSmithKline believe the United Nations Intergovernmental Panel when they report that climate change is happening and it is 90% probable that it is caused by human activity. We believe we have a responsibility to do our part and are focusing on our energy efficiency. We include climate change in our CSR report because, just as our stakeholders want us to report on other social issues, such as access to medicines, they also want to know what we plan to do to address our contribution to global warming and how we are progressing.

Why include performance data on Climate Change?
Transparency is fundamental to accountability. At GlaxoSmithKline we know that failure to demonstrate openness on issues that society is concerned about can damage our global brands and reputation. So, we use internationally recognised protocols to identify, evaluate and track our energy consumption and production of greenhouse gases every year. Climate change performance data tracks year-on-year performance and shows trends. It is essential to building stakeholder confidence in our commitment.

What are your main measures to reduce GHG emissions?
We have a climate change fund dedicated to reducing our energy use and global warming potential. It is distinct and separate from the existing budget. We have already identified more than 400 projects eligible to receive support from this fund up to the end of 2008. These projects have the potential to save 400 million kilowatt hours of energy a year – that's as much energy as 20,000 households in the UK. We track the results of our work and report our performance to external stakeholders annually.

We are also working to integrate energy efficiency considerations into all aspects of our business including transportation and investment decisions.

Why set a target to reduce GHG emissions?
Targets are important because they enable us to measure our progress. The target also provides a clear signal to stakeholders that GlaxoSmithKline is committed to making a contribution to tackling climate change.

At GlaxoSmithKline, we have set targets to reduce our use of energy and our global warming potential (GWP) from our operations relative to sales, by at least 20% by the end of 2010 and by 45% by the end of 2015 per unit sales from a 2006 baseline.

Do you feel Climate Change Disclosure needs to be separately verified?
GlaxoSmithKline's annual EHS report, which includes information about our contribution to climate change, is independently verified every year. We believe that this is sufficient verification for the majority of stakeholders.

What kind of data is being disclosed?

- Very few reports disclose *only* relative emissions data – there's a slight preference to publish both absolute *and* relative emissions data.
- Some sectors stand out from the pack:
  - The *Tobacco* sector reports all include both absolute and relative emissions data.
  - The *Utilities* sector reports show a strong preference for including both absolute and relative emissions data.
  - The *Chemicals* sector reports favour including absolute emissions data only – this is in contrast with the others in 'Heavy industry' which are generally more likely to disclose absolute and relative data.
  - The *Foods & Beverages* sector reports are more likely to include relative emissions data only.
  - The *Personal & Household Goods* sector reports all include emissions data.

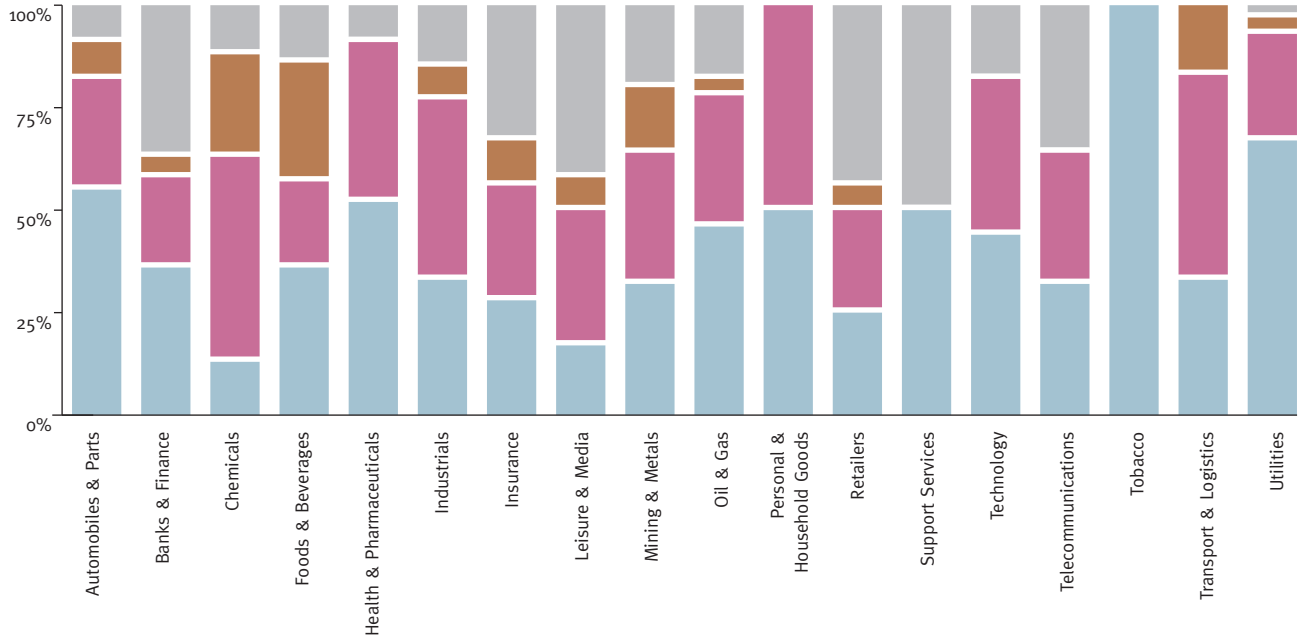


FIGURE 19. **Sectoral Emissions Data Disclosure by Type**

Absolute & Relative Emissions Data
Absolute Emissions Data Only
Relative Emissions Data Only
No Emissions Data

SNAPSHOT

90%

of reporters in the Personal & Household Goods sector align with the WBCSD/WRI GHG Protocol

Who's aligning with the WBCSD/WRI GHG Protocol?

Which sectors align with the GHG Protocol?

- From our three loose groupings of sectors, the 'Heavy industry' and 'Light industry' groupings are equally likely to align with the GHG Protocol to calculate their emissions data, the 'Service industry' grouping least likely to do so.
- The *Oil & Gas* sector stands out as an anomaly. Its companies are unlikely to align with the GHG Protocol, and this despite the sector belonging to the 'Heavy industry' grouping. In fact, only the *Leisure & Media* sector is less likely to align with the GHG Protocol.

How do sectors align with the different Scopes of the GHG Protocol in their reports?

- Most companies across all sectors go beyond reporting only to Scope 1 level.
- There is a broadly even split across most sectors between companies reporting to Scope 2, and those going as far as Scope 3.

Some specific observations on sectors:

- The *Support Services* sector reports include Scope 2 emissions only.
- The *Mining & Metals*, *Chemicals*, and *Transport & Logistics* sector companies all prefer reporting to Scope 2.
- The *Insurance*, *Retailers* and *Leisure & Media* sector reports all give priority to Scope 3.
- The *Utilities* sector merits special mention. Very few *Utilities* companies report to Scope 2 (indirect emissions from purchased electricity for own use). This is because most *Utilities* companies produce their own power and do not need to pay much consideration to emissions derived from purchased electricity.

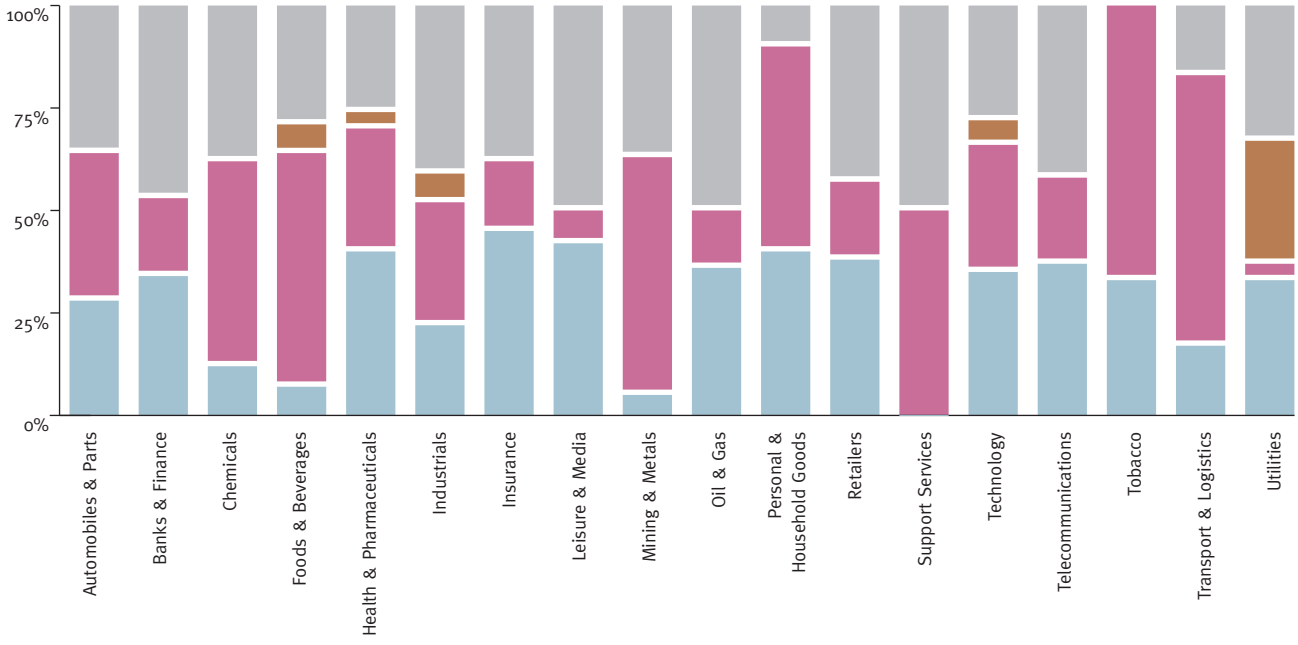


FIGURE 20. **Sectoral Alignment with WBCSD/WRI GHG Protocol** (See Methodology for Definitions)

Scope 3 GHG Protocol Scope 2 GHG Protocol Scope 1 GHG Protocol Not Aligning with GHG Protocol

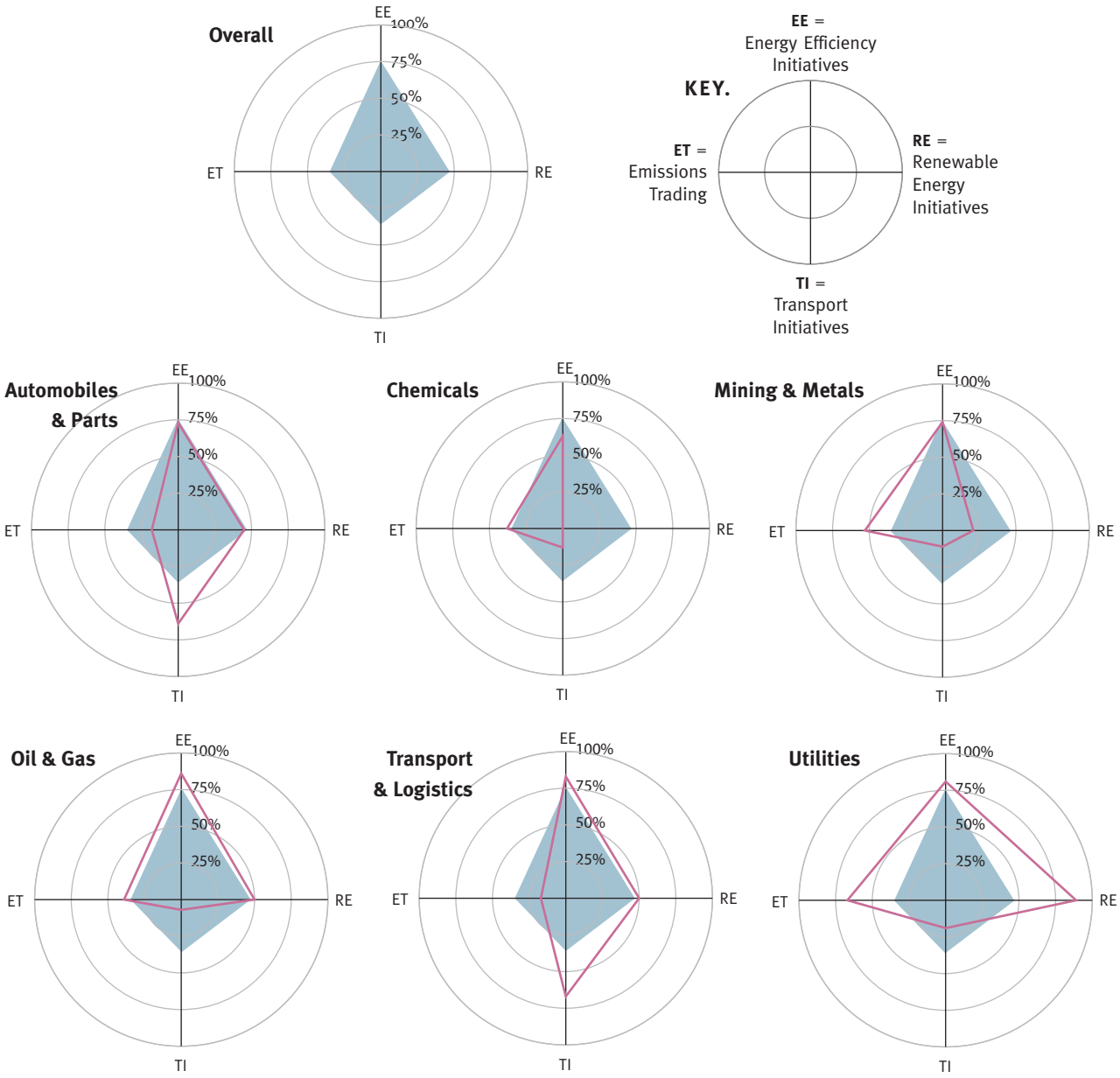
What mitigation measures are companies referring to?

Heavy industry grouping trends

There is greater disclosure of measures to reduce GHG emissions within this grouping than the global average analysed in the study. Each sector includes energy efficiency in its CSR reports. There is considerable divergence in reporting within this grouping.

- The *Utilities* sector reports devote a relatively high degree of attention to renewable energy initiatives and to emissions trading.
- The *Transport & Logistics* and *Automobiles & Parts* sectors demonstrate a clear preference for reporting on transport initiatives.
- By contrast, *Mining & Metals* and *Oil & Gas* companies very seldom report on transport initiatives.
- The *Chemicals* sector reports make minimal reference to reduction measures and practically ignore renewable energy and transport initiatives.

FIGURE 21A. **Sectoral Mitigation Measures Referenced: 'Heavy Industry'**

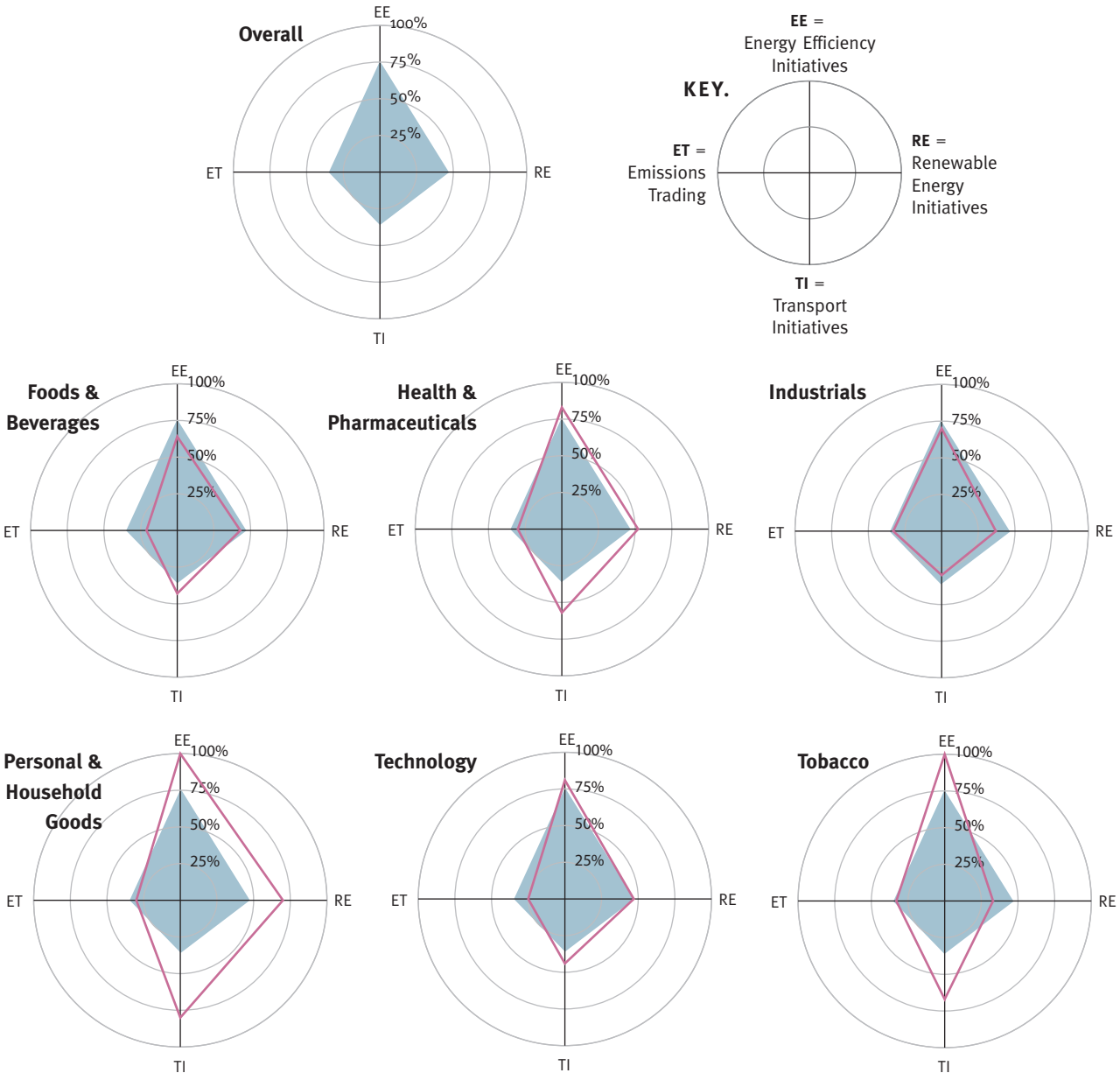


Light industry grouping trends

The disclosure of measures to reduce GHG emissions by companies in this grouping is broadly consistent with the global average analysed in the study.

- The *Industrials*, *Technology*, *Foods & Beverages* and *Personal & Household Goods* sectors prioritise energy efficiency, followed by renewable energy and with less attention given to transport initiatives and emissions trading. This also approximates to the global trend.
- *Health & Pharmaceuticals* and *Tobacco* sectors prioritise transport initiatives.

FIGURE 21B. **Sectoral Mitigation Measures Referenced: 'Light Industry'**

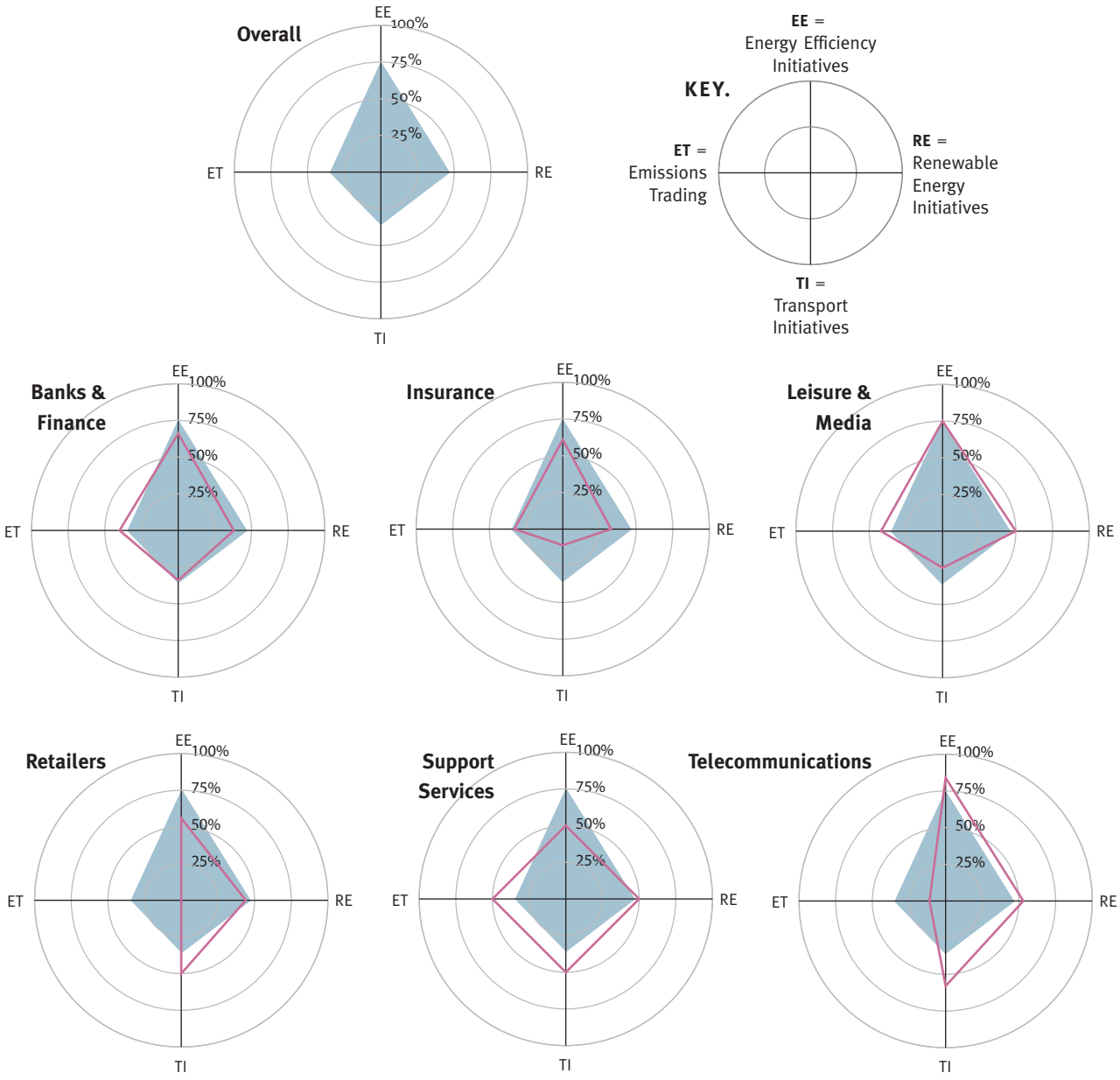


Service industry grouping trends

This grouping refers less frequently to measures to reduce GHG emissions than our global average. At the same time, refence to the measures is highly divergent within this grouping.

- The *Telecommunications* and *Retailers* sectors focus strongly on transport initiatives in their CSR reports, but pay very little attention to emissions trading.
- By contrast, the *Insurance* sector reports exhibit relatively weak interest in transport initiatives.

FIGURE 21C. **Sectoral Mitigation Measures Referenced: 'Service Industry'**



SNAPSHOT

91%

of reporters in the Automobiles & Parts sector set SMART targets or objectives to reduce emissions

Are companies setting targets?

How are companies across different sectors setting targets for reducing their greenhouse gas emissions? We distinguish between 'genuine' targets, defined as SMART targets, and broad objectives.

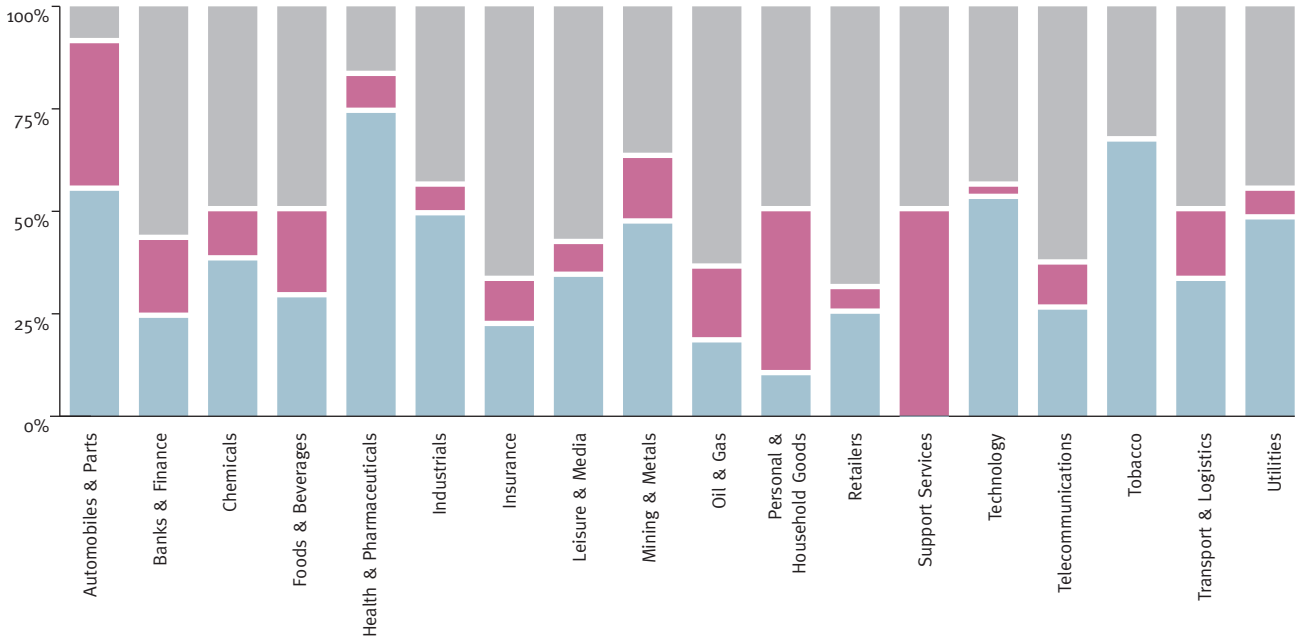


FIGURE 22. **Sectoral Inclusion of SMART Targets or Objectives**

SMART Reduction Targets Reduction Objectives Only No Targets or Objectives

SMART emissions targets

Overall

- The 'Heavy industry' and 'Light industry' groupings are comparable in their inclusion of SMART targets for GHG emissions reduction in their CSR reports.
- The 'Service industry' grouping is least likely to include SMART targets.
- The *Oil & Gas* and *Personal & Household Goods* sectors appear to be anomalies: both are among the least likely to include a SMART target.

There is considerable divergence across sectors on setting SMART targets:

- 74% of reports from the *Health & Pharmaceuticals* sector include a SMART target.
- By contrast, not one report from the *Support Services* sector includes a SMART target.

Absolute and Relative SMART emissions targets

	Absolute Emissions Reduction Targets	Rank	Relative Emissions Reduction Targets	Rank
Automobiles & Parts	18%	8	36%	3
Banks & Finance	16%	9	9%	12
Chemicals	0%	17	38%	2
Foods & Beverages	7%	15	21%	6
Health & Pharmaceuticals	35%	2	39%	1
Industrials	26%	6	22%	5
Insurance	11%	13	11%	10
Leisure & Media	25%	7	8%	13
Mining & Metals	16%	9	32%	4
Oil & Gas	14%	12	4%	14
Personal & Household Goods	10%	14	0%	15
Retailers	6%	16	19%	7
Support Services	0%	17	0%	15
Technology	34%	3	19%	7
Telecommunications	16%	9	11%	10
Tobacco	67%	1	0%	15
Transport & Logistics	33%	4	0%	15
Utilities	30%	5	19%	7

TABLE 8. **Type of Emissions Target by Sector**

How do companies set their SMART targets? Do they refer to *relative* or to *absolute* emissions?

- The *Transport & Logistics*, *Personal & Household Goods* and *Tobacco* sectors all set only SMART targets for *absolute* emissions in their CSR reports.
- The *Oil & Gas*, *Technology* and *Leisure & Media* sectors also all prefer to set SMART targets for *absolute* emissions in their reports.
- By contrast, the *Chemicals* sector reports show only SMART targets for *relative* emissions, and the *Automobiles & Parts, Food & Beverages* and *Retailers* sectors also all prefer SMART targets for *relative* emissions.

Objectives

As in the regional analysis, it is difficult to identify a pattern here.

- Leaving aside the *Support Services*, *Personal & Household Goods* and *Automobiles & Parts* sectors, reports from companies across all the remaining sectors are unlikely to include broad objectives rather than SMART targets – there's a clear preference for setting 'proper' targets.

Credibility – which reports are externally assured?

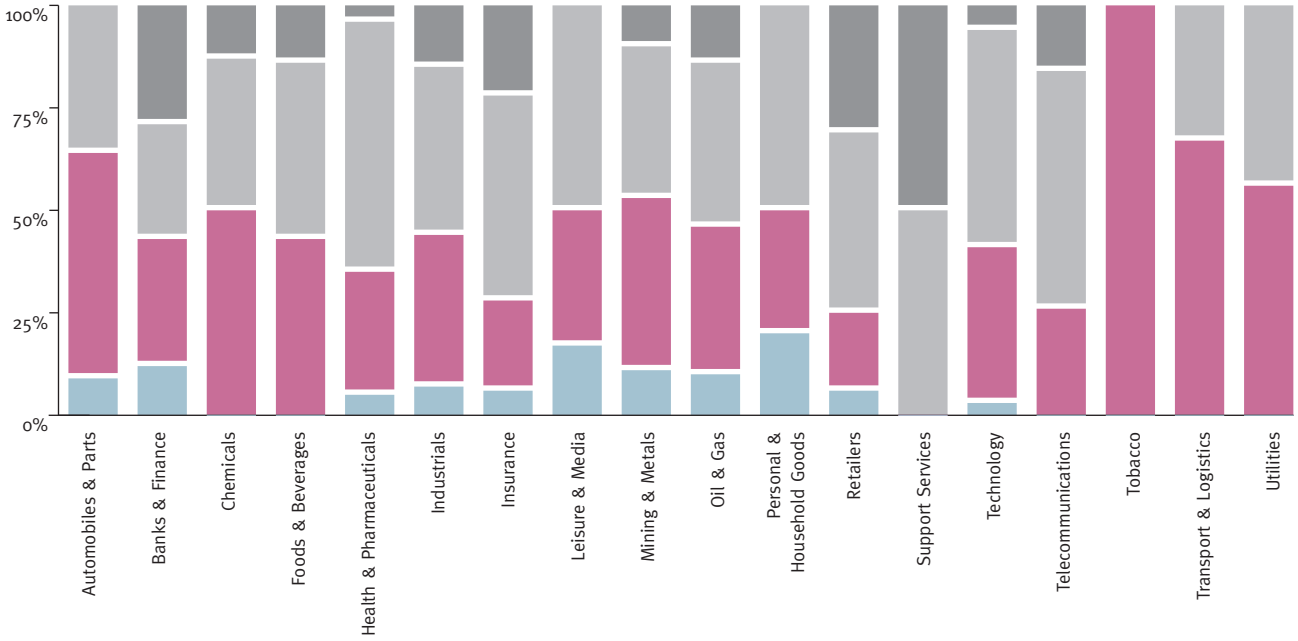


FIGURE 23. **Sectoral Inclusion of Assurance**

Specific Climate Change Assurance | General Report Assurance | No Assurance | No Climate Change Disclosure

- Reports from the 'Heavy industry' grouping are most likely to include both general assurance covering the entire report together with specific assurance on climate change disclosures.
- Reports from the 'Service industry' grouping are more likely to include specific climate change assurance than are reports from the 'Light industry' grouping – given other findings for these groupings, this is surprising.
- Put another way, reports from the 'Light industry' grouping are more likely to include only a general assurance statement.

Which reports include GRI indicators?

A correlation between our broad business sector groupings and the prevalence of GRI adherence in the reports cannot readily be found.

- CSR reports most likely to include GRI indicators on climate change are found from the *Personal & Household Goods*, *Oil & Gas*, *Support Services*, *Insurance* and *Industrials* sectors.
- Reports from the *Retailers* sector are least likely to include a GRI climate change indicator.

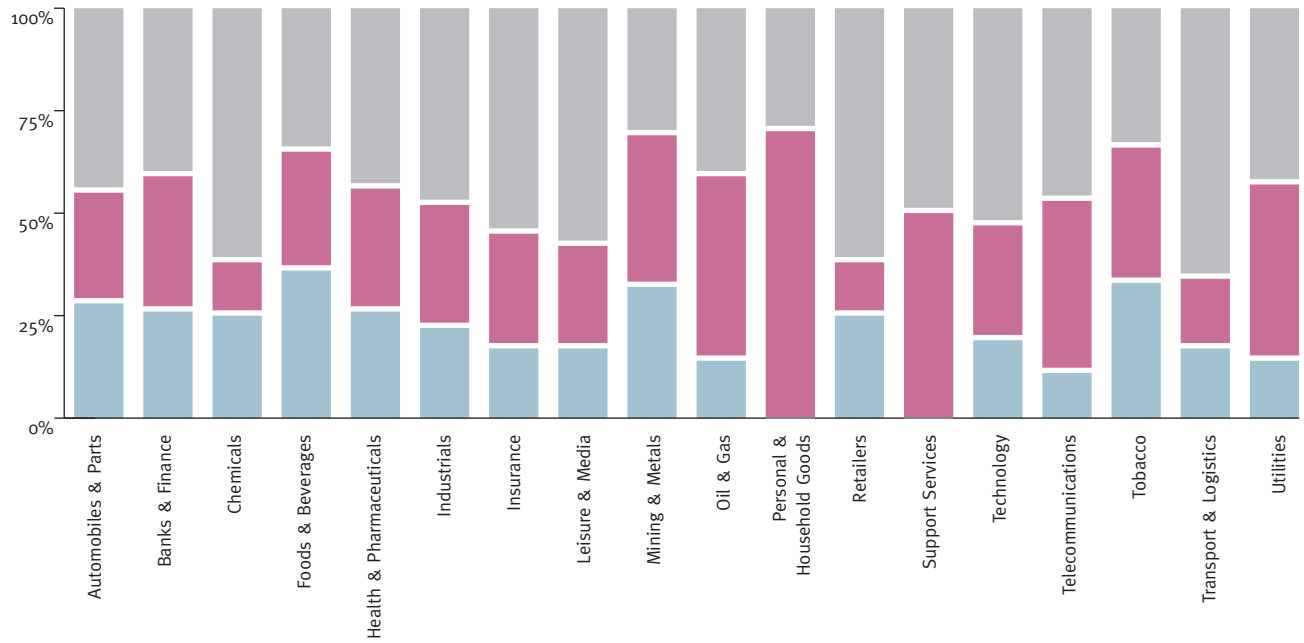


FIGURE 24. **Sectoral Use of GRI Guidelines Part One: Inclusion of GRI Contents Index**

G2 G3 No GRI Contents Index

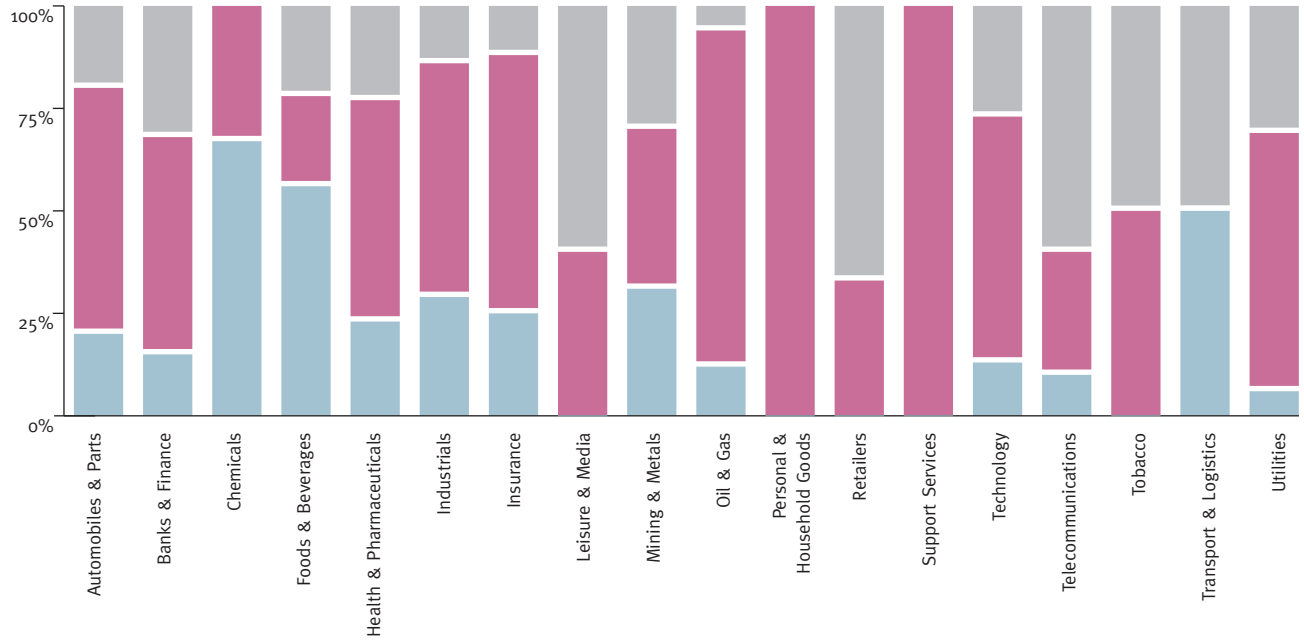


FIGURE 25. **Sectoral Use of GRI Guidelines Part Two: Specific Climate Change Indicators in Reports with GRI Contents Index**

G2 EN8 Indicator G3 EN16 Indicator No GRI Indicators for Climate Change

TABLE 9. **Sectoral Use of GRI Guidelines: Specific Climate Indicator Use in Reports with G3 Contents Index**

	GRI G3 – EN17	Rank	GRI G3 – EN18	Rank
Automobiles & Parts	67%	3	100%	1
Banks & Finance	63%	5	74%	8
Chemicals	0%	17	0%	17
Foods & Beverages	50%	7	25%	16
Health & Pharmaceuticals	43%	11	29%	15
Industrials	25%	14	75%	7
Insurance	40%	12	80%	5
Leisure & Media	67%	3	33%	14
Mining & Metals	14%	15	57%	11
Oil & Gas	46%	10	77%	6
Personal & Household Goods	50%	7	63%	9
Retailers	50%	7	100%	1
Support Services	100%	1	100%	1
Technology	33%	13	44%	12
Telecommunications	13%	16	38%	13
Tobacco	100%	1	100%	1
Transport & Logistics	0%	17	0%	17
Utilities	58%	6	58%	10

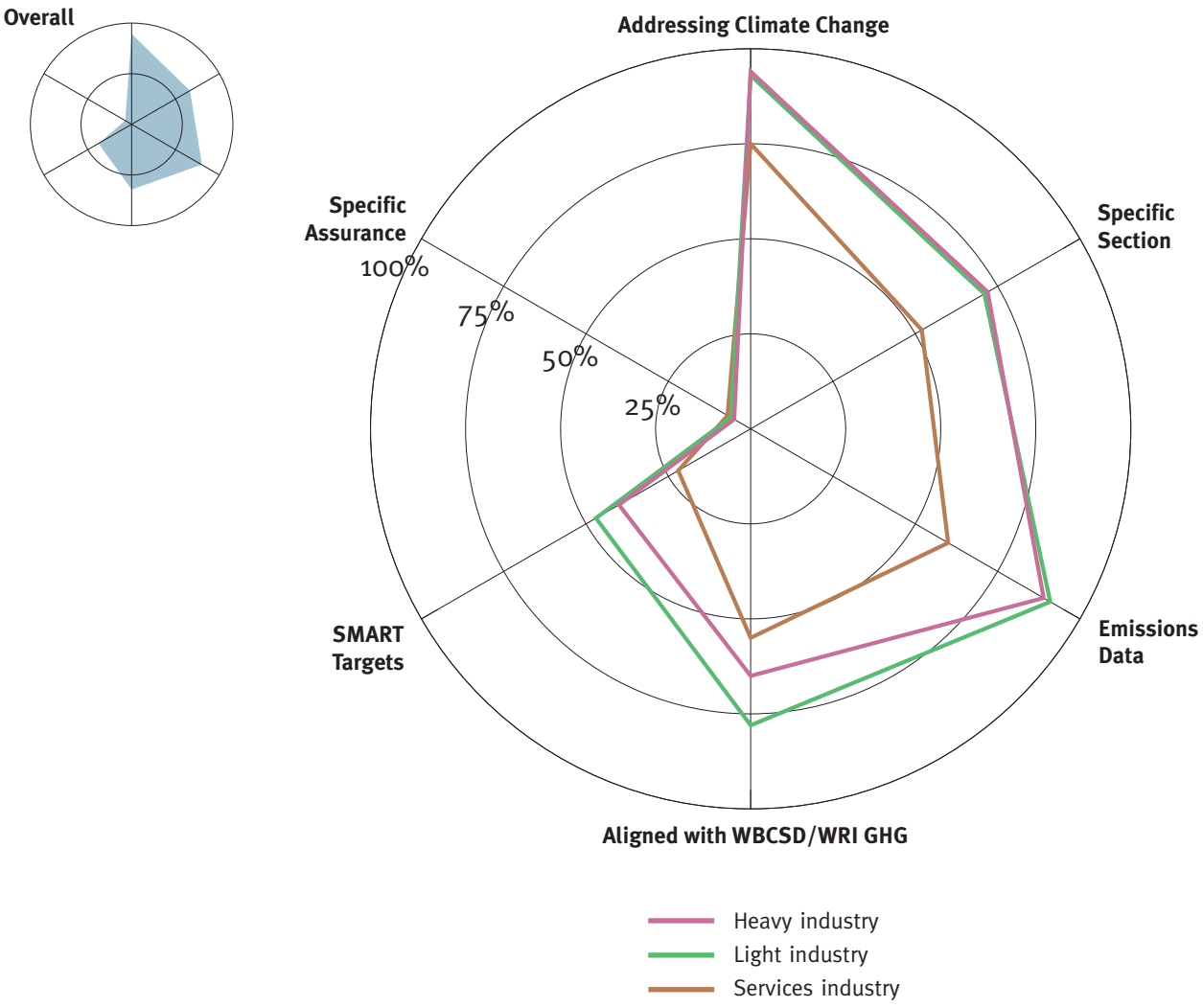
The Big Picture

The following radar charts show the proportions of CSR reports which include six key elements of climate change disclosure. Starting with the simplest and most important element (*'Does the report address climate change?'*) and moving clockwise, the elements become increasingly exacting and consequently less common. As the plot line moves clockwise it therefore typically spirals inwards – see the plot line on the 'overall' chart below.

We can draw broad conclusions on the state of climate change communications across each grouping by plotting each line separately in a single chart – see below. Overall we can see that:

- Sectors in the 'Heavy industry' grouping devote the most attention to climate change issues in their CSR reports.
- Sectors in the 'Service industry' grouping devote the least attention to climate change in their CSR reports.
- There is a variance between the 'Heavy' and 'Light industry' groupings, but it's relatively unimportant compared with the much larger variance between both these groupings and the 'Service industry' grouping.

FIGURE 26. **Sectoral Climate Commitment Overview**



Market capitalisation analysis

Market capitalisation analysis

To the best of our knowledge no study of this kind has evaluated climate communications against market capitalisation. We allocated each of the Global FT500 to one of five market cap bandings, in US dollars, with as even a distribution as possible. See Table 10.

TABLE 10.

Companies and Reporters by Market Cap

	Companies	Reporters	%
› $80 bn	85	67	79%
$45 bn – $80 bn	92	72	78%
$30 bn – $45 bn	109	78	72%
$22 bn – $30 bn	123	65	53%
‹ $22 bn	91	51	56%

Is climate change addressed?

This chart would suggest that the larger a company the greater the significance it is likely to ascribe to climate change in a CSR report.

- Companies with market capitalisation above $80bn and those in the range $45bn – $80bn are the most likely to publish a CSR report containing quantitative data on GHG emissions.
- The largest companies by market capitalisation are also the most likely to detail management commitment to address climate change issues.

However, the correlation between market capitalisation and climate change disclosure is not linear.

- Companies with a market capitalisation of less than $22bn are more likely to address climate change in their CSR reports than are those in the market cap range $22bn – $30bn.
- The banding of smallest companies by market capitalisation is also the most likely to include only qualitative climate change disclosure in its CSR reports, but no correlation can be identified between company size and qualitative disclosure across other bandings.

The trends identified across bandings of market capitalisation are weak, and certainly less evident than the trends noted across our regional and sectoral analyses. Overall, performance across different bandings of market capitalisation are relatively similar.

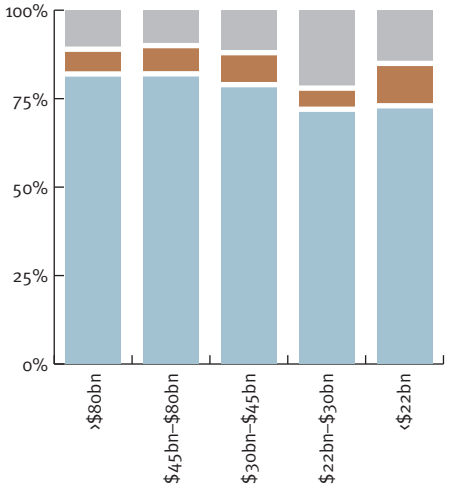


FIGURE 27.

Market Cap Climate Change Disclosure

- Quantitative Disclosure
- Qualitative Disclosure Only
- No Reference to Climate Change

TABLE 11.

Climate Change Disclosure by Market Cap / **Data Disaggregation by Market Cap**

	Specific Climate Change section	Rank	Covered in CEO Introduction	Rank	Stated management Responsibility	Rank	Regional Data Disaggregation	Rank	Operational Data Disaggregation	Rank
› $80 bn	81%	1	51%	1	28%	1	19%	2	18%	4
$45 bn – $80 bn	64%	2	47%	2	13%	4	21%	1	22%	1
$30 bn – $45 bn	56%	5	38%	4	14%	2	9%	4	14%	5
$22 bn – $30 bn	62%	4	29%	5	14%	2	9%	4	22%	1
‹ $22 bn	63%	3	41%	3	10%	5	12%	3	22%	1

SNAPSHOT

81%

of reporters with a market capitalisation above US$80bn include a specific climate change section

What kind of data is being disclosed?

How does company size influence disclosure of climate change performance data?

Once again, the largest companies can be seen to perform strongly:

- Companies with a market capitalisation above $80bn are those most likely to include both absolute and relative emissions data in their CSR reports.
- However, companies with a market capitalisation below $22bn also perform well. In particular, reports from this banding are likely to include both absolute and relative emissions data.

There does not appear to be a distinct correlation between company size by market capitalisation and its tendency to disaggregate climate change performance data. Each banding of companies is equally likely to disaggregate its data.

- Most companies, regardless of banding by market capitalisation, are more likely to disaggregate data by operations rather than by region.

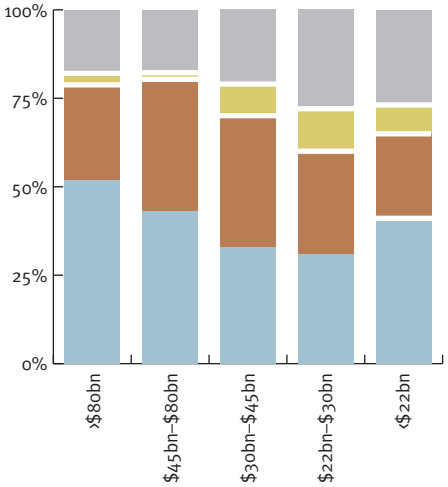


FIGURE 28.

Market Cap Emissions Data Disclosure by Type

- Absolute & Relative Emissions Data
- Absolute Emissions Data Only
- Relative Emissions Data Only
- No Emissions Data

Who's aligning with the WBSCD/WRI GHG Protocol?

There does not appear to be any distinct pattern on this parameter by market capitalisation.

- CSR reports from the banding of smallest companies by market capitalisation show greater alignment with the GHG Protocol than some of their larger peers.
- The greatest alignment with the GHG Protocol is evident in reports from the $45bn – $80bn banding, and these reports are also most likely to include Scope 2 emissions data.

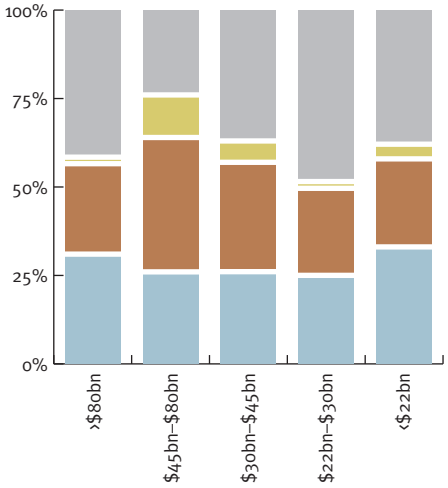


FIGURE 29.

Market Cap Alignment with WBCSD/WRI GHG Protocol

- Scope 3 GHG Protocol
- Scope 2 GHG Protocol
- Scope 1 GHG Protocol
- Not Aligning with GHG Protocol

CLIMATE COMMUNICATIONS SURVEY RESPONSE:

Shell

Why address Climate Change in your CSR Report?
The implications of climate change and the need for society to address the root causes could result in a fundamental shift for the oil and gas industry. We will have to learn how to manage emissions and how to supply our customers with energy that doesn't result in net additional emissions. Our customers, our stakeholders and our investors have all indicated they want to know more about this journey that the industry is starting to take.

Why include performance data on Climate Change?
Measurement and reporting is fundamental to achieving a goal and evaluating progress.

What are your main measures to reduce GHG emissions?
We are reducing our own GHG emissions by improving our energy efficiency and reducing flaring in our upstream facilities. We have already eliminated the continuous venting of associated gas from upstream production facilities. In the future, we hope to use technologies such as Carbon Capture and Storage to manage emissions.

Why set a target to reduce GHG emissions?
We set a target in 1998 at a time of zero regulation on CO_2 emissions, with a view to providing our stakeholders with a simple metric to follow progress on three key initiatives undertaken by the Group – elimination of operational venting, elimination of operational flaring and energy efficiency. We are delivering on these initiatives as can be seen from progress on our target. Going forward, the world is a very different place. CO_2 regulation now exists. Emissions trading is a reality and companies can choose to buy allowances rather than make reductions or vice versa. These approaches are growing rapidly and spreading throughout the world. As a world scale participant in these activities, setting our own inward looking target within this new context just isn't a practical option anymore.

Do you feel Climate Change Disclosure needs to be separately verified?
Between 1998 and 2004, with the advice of external auditors, we developed a range of internal controls to help assure accuracy of the facts in our external disclosures. These controls include audit trails for all the data and statements included in our Sustainability Reports, signed off by senior managers and available for internal audit.

What mitigation measures are companies referring to?

Does a company's size influence how it chooses to disclose measures to reduce GHG emissions? Some trends can be identified, but they are far less distinct than those identified in the regions and business sector analyses.

- CSR reports from companies with a market capitalisation of more than $80bn and those in the range $45bn – 80bn are more likely to include references to mitigation measures than the global average.
- Companies with a market capitalisation of more than $80bn are slightly more likely to reference emissions trading.
- Companies with a market capitalisation of $45bn – $80bn are slightly more likely to reference transport initiatives.
- The companies in the smallest banding of less than $22bn perform more strongly than their peers in the next highest banding.

FIGURE 30. **Market Cap Mitigation Measures Referenced**

Are companies setting targets?

SMART emissions targets:
Is there a correlation between the size of a company and its willingness to set GHG emissions targets? The largest companies are the most active:

- Companies with a market capitalisation of over $80bn lead the way, with half disclosing SMART targets.
- These largest companies are also the most likely to include SMART targets for *absolute* emissions.
- Companies with a $22bn – $30bn market capitalisation are least likely to set SMART targets.
- Companies with a market cap of $30bn – $45bn are equally likely to set either broad objectives or SMART targets.

TABLE 12. **Type of Emissions Target by Market Cap**

	Absolute Emissions Reduction Targets	Rank	Relative Emissions Reduction Targets	Rank
› $80 bn	33%	1	18%	2
$45 bn - $80 bn	24%	2	17%	3
$30 bn - $45 bn	12%	5	13%	5
$22 bn - $30 bn	15%	4	14%	4
‹ $22 bn	18%	3	25%	1

- The smallest companies by market capitalisation are those most likely to include a SMART target based on relative rather than absolute emissions

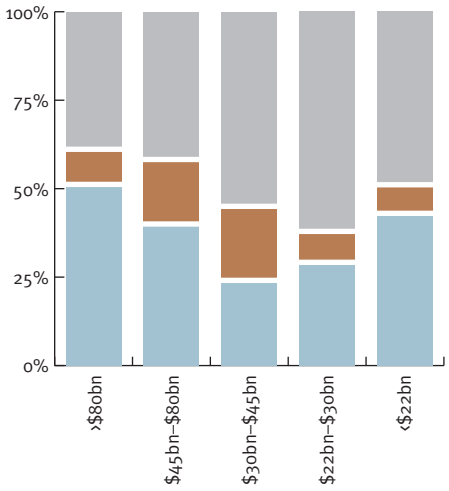


FIGURE 31.
Market Cap Inclusion of SMART Targets or Objectives

- SMART Reduction Targets
- Reduction Objectives Only
- No Targets or Objectives

Credibility – which reports are externally assured?

Does a company's size influence its decision to assure its disclosures? Large companies are more likely to include specific assurance on the climate change disclosures, but the picture remains inconclusive:

- Companies with a market capitalisation above $80bn are most likely to include specific climate change assurance, followed by the smallest companies (less than $22bn market capitalisation) and the $45bn – $80bn banding.

Overall, we can say that a company's market capitalisation has little influence on assurance decision making.

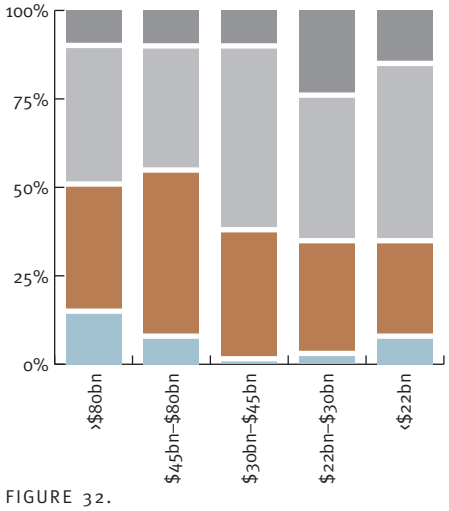


FIGURE 32.
Market Cap Inclusion of Assurance

- Specific Climate Change Assurance
- General Report Assurance
- No Assurance
- No Climate Change Disclosure

CLIMATE COMMUNICATIONS SURVEY RESPONSE:

Volkswagen

Why address Climate Change in your CSR Report?
Climate change is one of the most urgent environmental challenges the world is facing today with deep implications for society and business. As a car manufacturer we are developing and delivering products which emit a substantial amount of CO_2 during their usage, thus we have to acknowledge our responsibility whilst identifying new markets for our innovative and efficient products. Our activities influence climate change and climate change alters our business. Therefore a CSR report neglecting this issue would be far from being credible or even complete.

Why include performance data on Climate Change?
Collecting performance data is an essential step in developing a strategy. Transparent communication of data forms an important platform for discussing both climate change impacts and mitigation. For complex issues like climate change, lack of data is often one of the largest barriers to formulating integrated, robust and efficient policies and measures. Reporting is an important first step to reaching a common understanding of how to collect and interpret climate change data.

What are your main measures to reduce GHG emissions?
Looking at the lifecycle of our products – cars – the largest contribution to GHG emissions stems from the usage phase, through the burning of fossil fuels. Therefore, improving the efficiency of our products is paramount in our climate strategy. The Volkswagen Fuels- and Powertrain Strategy clearly outlines our approach to sustainable mobility from the short to long term. Use of high efficiency Combined Heat & Power systems and conducting energy audits are just two examples of efforts to reduce our emissions from production sites.

Why set a target to reduce GHG emissions?
Target setting involves considering what may be possible, which often reveals a raft of potential measures. Further into the process, setting targets itself stimulates innovation, and involves tracking performance and making resources available. Finally, the drive to meet targets is a strong motivation to address an issue.

Do you feel Climate Change Disclosure needs to be separately verified?
Climate change has to form an integral part of broader sustainability disclosure and should be verified in this context, in compliance with relevant standards and procedures. In relation to GHG emissions data the WBCSD GHG protocol forms a solid basis. Arguably the verification of GHG emissions data presents specific challenges which could warrant a separate approach. However giving precedence to one issue over all others is contrary to the notion of sustainability where economic, social and environmental issues are in balance.

VOLKSWAGEN
AKTIENGESELLSCHAFT

Which reports include GRI indicators?

This confirms the pattern revealed by preceding questions: the largest companies lead the way but there is no straight line correlation, as the $22bn - $30bn banding always takes an unexpected dip.

- The largest companies are most likely to include specific GRI climate change indicators – G2 EN8 or G3 EN16.

TABLE 13. **Market Cap Use of GRI Guidelines: Specific Climate Indicator Use in Report with G3 Contents Index**

	GRI G3 - EN17	Rank	GRI G3 - EN18	Rank
› $80 bn	35%	4	59%	3
$45 bn - $80 bn	54%	2	58%	4
$30 bn - $45 bn	42%	3	62%	2
$22 bn - $30 bn	33%	5	58%	4
‹ $22 bn	67%	1	80%	1

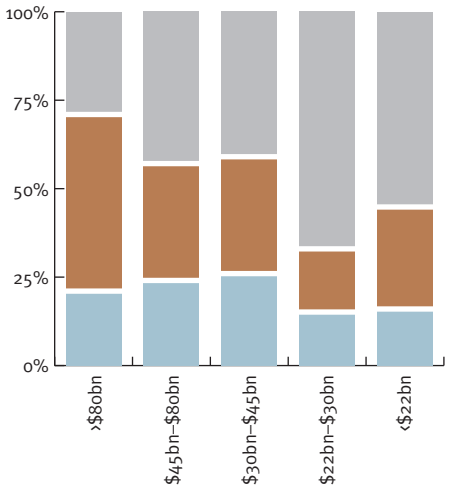


FIGURE 33.

Market Cap Use of GRI Guidelines Part One: Inclusion of GRI Contents Index

- G2
- G3
- No GRI Contents Index

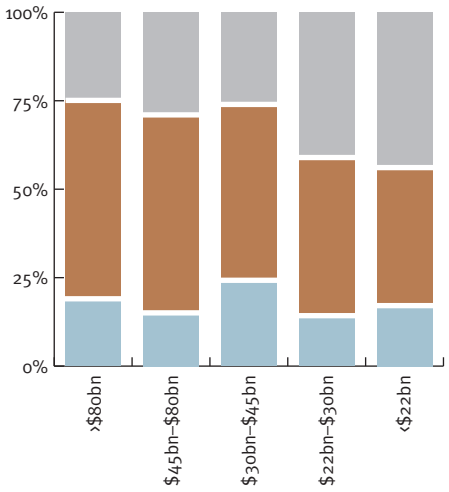


FIGURE 34.

Market Cap Use of GRI Guidelines Part Two: Specific Climate Change Indicators in Reports with GRI Contents Index

- G2 EN8 Indicator
- G3 EN16 Indicator
- No GRI Indicators for Climate Change

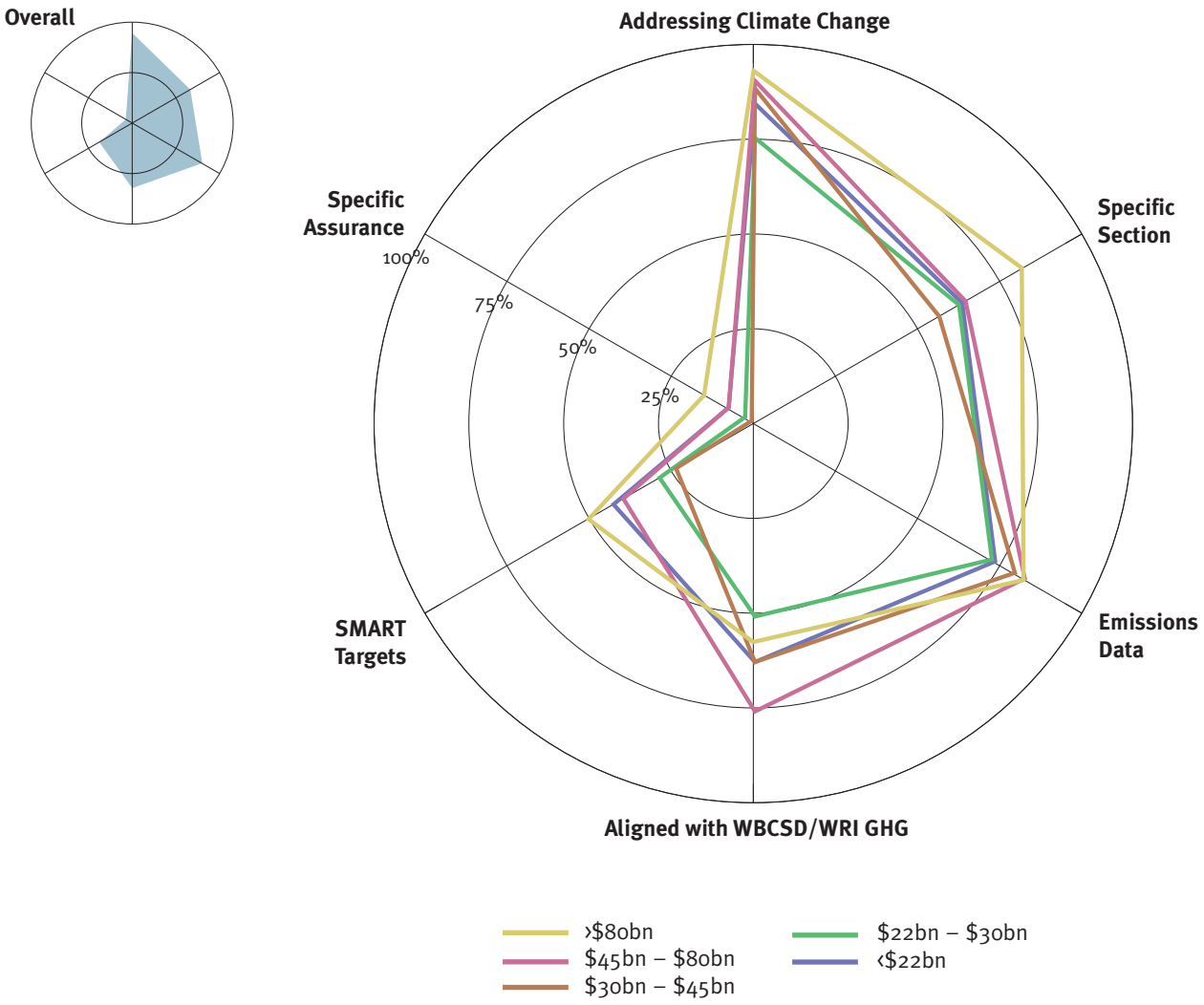
The Big Picture

The following radar charts show the proportions of CSR reports which include six key elements of climate change disclosure. Starting with the simplest and most important element (*'Does the report address climate change?'*) and moving clockwise, the elements become increasingly exacting and consequently less common. As the plot line moves clockwise it therefore typically spirals inwards – see the plot line on the 'overall' chart below.

We can draw broad conclusions on the state of climate change communications across each sector by plotting each line separately in a single chart – see below.

- The largest companies – those in the two highest market capitalisation bandings – have the greatest breadth and depth of climate change reporting in their CSR reports
- These largest companies are followed closely by the smallest in our study, those with a market capitalisation of under $22bn.

FIGURE 35. **Market Cap Climate Commitment Overview**



Conclusions

What we have established

CSR reporting favoured by leading companies
Of our study universe of the world's 500 top companies, one third do not publish CSR reports. This doesn't mean that relevant CSR information is missing completely (we also check annual reports and include relevant sections of at least 6 pages). It does mean that one third of top companies has chosen not to produce the form of publication which is acknowledged best practice for non-financial issues. Of course, we'd like to see one third empty as being two-thirds full.

Climate Change established on the business agenda
Of the two-thirds majority publishing CSR reports, our study reveals that nearly all discuss climate change (87%), most publish quantitative emissions data (78%) and well over half (65%) devote a specific section to climate change issues. This is more than just talk: these reports are on the record, they are available to anyone who cares to read them and almost half include external assurance. This shows conclusively that for most of the world's top companies across all business sectors, regions and differing levels of market capitalisation, climate change is now a mainstream business issue.

This is a far cry from the years of the Global Climate Coalition and wholesale climate change denial by big business. The results of this study show we have progressed beyond simple acknowledgement: we may even be witnessing the beginning of corporate climate activism. We now have evidence that the world's leading companies are internalising the climate change issue, quantifying their roles and in many cases (170 of 500 companies) are committing to progress by setting objectives and SMART targets, in contrast with many political efforts. These companies have the means in terms of global reach and capital, consumer loyalty and international networks to effect change on a significant scale.

The wider picture
Overall, we have some interesting findings on corporate climate communications, especially regarding regions and sectors. The variance between the different groupings by market cap is less obvious, other than that the very largest companies are the most active on climate change. To some extent this is surprising, as the Global FT500 are clearly leading global business on climate change, and we might have expected the 'biggest amongst the big' to have increased their lead more than our evidence shows.

Beyond the Global FT500 thousands of other companies, right down to SME level, are addressing climate change issues and communicating on them. This study acts not only as a proxy by which to gauge global business climate disclosure: it also provides an insight into how the corporate 'leaders' will set the climate communications agenda for others.

There's no doubt: even in the absence of generally accepted standards the momentum of disclosure is increasing, consensus on best practice is emerging, and the collective will to climate change action is becoming more focused.

The way forward

Business is setting the pace
Business should be encouraged to address climate change, to measure emissions and set SMART reduction targets and disclose this information. Already we can see the global business community is in many ways more prepared to address climate change and disclose views and information than are national governments. Certainly the disclosures by Australasian companies, published before the 2007 election, more accurately reflected opinion across Australia than did the anti-Kyoto Protocol stance taken by the then national government. Our results show leading companies in the USA certainly are addressing climate change, and expect the next elections to reflect this opinion shift.

Refining disclosure tools
To maximise the effectiveness of climate change reporters in addressing business change, reporting tools need further development and refinement. We need to encourage alignment with the WBCSD/WRI GHG Protocol, the setting of SMART targets and the use of external assurance. Indeed, unaudited financial data in an annual report would be of questionable value. Yet with nine out of ten US reporters in our study content to publish unaudited CSR data, clearly something is amiss.

Similarly some current advanced reporting tools are infrequently used and may even be badly conceived. To take the case of Japanese reporters, here are companies taking a global lead on climate change reporting, which have embraced the WBCSD/WRI GHG Protocol (82% align with it) and yet which have chosen not to use the GRI guidelines. This may indicate that climate change reporting is evolving quite independently of formal reporting frameworks, but may well demonstrate that although the corporate appetite to address climate change exists, some current tools are seen as insufficient or inappropriate. It must be the role of the

global CSR stakeholder community to engage with this, and to examine and adapt the tools as necessary.

Public disclosure increases momentum
Corporate reporting sets a precedent. Once a company has quantified its data, developed policies, set targets and reported then the wheels are in motion. At this point two factors come into play. Firstly, companies continue to report and the best strive to improve by setting the pace. This becomes the *de facto* standard against which others are compared. Secondly, companies become accountable for their published disclosures. Stakeholder awareness is a powerful tool, and the global CSR community can ensure the market and demand for this information grows rapidly. The more public interest in these reports, the more the data is assimilated and comparisons made then the greater the demand for disclosure and the greater the resulting accountability. From the results of this study, leading global business appears ready to supply the demand – but this also means that we as CSR stakeholders should all play our part in growing the momentum.

How to play your part
The climate change information, policies, data and targets for these companies is publicly available in their CSR reports, which are all freely available on the website www.corporateregister.com together with a further 16,000 reports. Reporting companies can compare and contrast their disclosures with those of their peers. Non-reporters can gain the insights to publish their own climate change information, and CSR stakeholders including investors, regulators and journalists can identify best practice as well as noting the laggards. Just giving your feedback to these companies helps build the necessary momentum.

Future research

New standards
The new ISO standard 14064 on quantifying and reporting GHG data is growing in popularity and may become established in this field. Our study period commenced before the launch of the standard and as so few reports would have had the opportunity to include it we did not include it in our research. Anecdotally we can say that very few reports in our study referenced the standard.

Sector dynamics
We have discovered that the *Retail* sector is somewhat ambivalent regarding climate communications. Despite the direct interaction with consumers, climate change disclosure in this sector is relatively poor, yet at the same time the producers of consumer products offered by these retailers have well-developed climate change communications. We don't yet have an insight into the underlying dynamics at work here, although there are several lines of potential enquiry (Do retailers take the easy option of transferring responsibilities back through the supply chain? Does this imply that business to business pressure is more effective than consumer-business or government-business pressure?). This is clearly an area needing research.

Reasons for not reporting
Finally, we haven't learnt why one third of Global FT500 companies have decided not to produce a CSR report. We don't know whether they are averse to CSR disclosure *per se*, or only reluctant to produce a report (while perhaps disclosing by alternative channels). Unfortunately these non-reporters don't publish reports setting out why they don't report, so we may need to ask the question more directly. In the meantime, if you have insights into this issue, or into others raised in this report, we'd very much like to hear from you: climate@corporateregister.com or +44 20 7014 3366.

Paul Scott, Managing Director
Iain McGhee, Director of Services
Martin Wayman, Consultant and Lead Author

CorporateRegister.com

Detailed underlying information on this study is available in the form of spreadsheets. This lists individual companies by name, with all disclosure parameters. Contact **climate@corporateregister.com** or **+44 20 7014 3366** for information.

SGS Commentary

Climate Change at the top of stakeholders' agenda – Building trust through independent assurance

The Corporate Climate Communications (CCC) 2007 study covering the FT500 companies indicates that climate change is high up on the business agenda. Of the two thirds of companies which published a CSR report in 2007, 87% address climate change in their reports, and 65% include a section dedicated to the issue.

44% of the CSR reports featuring in the CCC study include an independent third-party assurance (verification) statement. Moving outside the FT500 study universe and looking at all CSR reports, the respective share within the 2,500 CSR reports issued during 2007 was significantly lower (27%).[1]

Looking at the climate change reporters among the FT500, just over half include a general verification statement. These statements address the entire report and its various sections, and may or may not specifically address the climate change disclosures.

An independent assurance statement can enhance the credibility of a report. Providing this credibility is essential to building trust between a company and its stakeholders.

What are the drivers to voluntarily report and reduce GHG Emissions?

Greenhouse gas (GHG) emissions are not just measured for inclusion in CSR reports. Boardroom decisions in many companies already take the GHG emissions associated with investments into account. This can be irrespective of any mandatory requirements to measure or reduce emissions.

Beyond the expectations of the boardroom and the readers of CSR reports, there are more strategic and competitive drivers to voluntarily report and reduce GHG emissions:

- protection of early action to reduce GHGs for companies that face mandatory regulation in the future (baseline protection);
- expected market advantages through the provision of emission neutral product and service offerings; and,
- to an increasing degree, pressure from governments/buyers who want to know the emissions embedded in the products and the supply chain of the products they source.

The common denominator behind all these drivers is that the measurement of GHGs and their reduction creates value for the company. In emissions trading markets, this value creation is obvious. However, the value created for a company from voluntary reporting is less tangible. Financial incentives can range from inclusion of a company's stock in a Sustainable Development (or Social Responsible Investment) index to influencing consumer choices.

Reporting of emissions is only half the message – stakeholders want assurance

A consumer survey of 2,734 people in the US and UK during 2007,[2] undertaken by AccountAbility and Consumers International, found the following:

"Sixty percent of respondents in the US and UK want companies to provide more product-based information at the point of sale, and half would rather do business with companies that are working to reduce their contribution to global warming. But consumers tend not to trust information from businesses on climate change. Two thirds of respondents said that business needs to take global warming more seriously (combined 66.4%: US 63.2%, UK 69.5%). Seventy percent of respondents in the US and UK said that climate change claims should be proven by independent parties."

As the impact of a product on climate change becomes an important element in consumer choice, not only the consumers but even more so the companies should be interested in third party assurance of climate change claims made by their competitors.

Assurance solutions

General assurance of CSR reports is an important first step. Independent verification of CSR/ Sustainability reports is usually carried out against international guidelines, such as GRI and the AA1000 Assurance Standard. A thorough approach to general report assurance in these areas is based on different levels or modules that address the varying needs of clients:

1. Independent review to ensure accuracy of the chosen reporting scope. This is most relevant for companies which make public social and environmental statements for the first time;
2. Measurement against GRI and AA 1000 in addition to verifying accuracy. Objective is to help organisations with a long history of issuing social and environmental reports identify strengths and weaknesses where improvements can be made;
3. Set up of systems to help manage relationships with stakeholders. This solution is relevant for organisations that consider social responsibility and environmental reports as on-going management tools.

However, it is important to note that the verification of

accuracy and environmental integrity in reported GHG data requires a more detailed approach. The Corporate Climate Communications 2007 study shows that an increasing number of companies report their emissions in line with the WBSCD/WRI GHG Protocol. For current and forthcoming reporting cycles, reporting and verification against ISO 14064 requirements is of growing relevance in this field. For companies that already use the WBCSD/WRI protocol this will represent only a small step. However, this small step can become your competitive advantage.

Robert Dornau, Director of Climate Change Programme

SGS is the world's leading inspection, verification, testing and certification company. SGS is recognized as the global benchmark for quality and integrity.

1 *Source : CorporateRegister.com*
2 *http://businessassurance.com/downloads/2007/07/what-assures-consumers-on-climate-change.pdf*

Useful resources and Glossary

Useful resources

WBCSD/WRI Greenhouse Gas Protocol
www.ghgprotocol.org
The Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. The GHG Protocol Initiative, a decade-long partnership between the World Resources Institute and the World Business Council for Sustainable Development, is working with businesses, governments, and environmental groups around the world to build a new generation of credible and effective programs for tackling climate change.

The Global Reporting Initiative (GRI)
www.globalreporting.org
The GRI has developed a sustainability reporting framework which sets out principles and indicators that organisations can use to measure and report their CSR performance.

Carbon Disclosure Project
www.cdproject.net
The Carbon Disclosure Project (CDP) is an independent not-for-profit organisation aiming to create a lasting relationship between shareholders and corporations regarding the implications for shareholder value and commercial operations presented by climate change. Its goal is to facilitate a dialogue, supported by quality information, from which a rational response to climate change will emerge.

The Climate Group
www.theclimategroup.org
The Climate Group is an independent, nonprofit organisation dedicated to advancing business and government leadership on climate change. It is based in the UK, the USA and Australia and operates internationally.

United States Climate Action Partnership
www.us-cap.org
United States Climate Action Partnership (USCAP) is a group of businesses and leading environmental organisations that have come together to call on the federal government to enact strong national legislation to require significant reductions of greenhouse gas emissions. USCAP has issued a landmark set of principles and recommendations to underscore the urgent need for a policy framework on climate change.

Glossary

CSR – Corporate Social Responsibility

CSR Report – Report produced by a company or organisation to describe its performance in the field of CSR (typically covering e.g. environmental, human resources, community issues)

Data Disaggregation – The division of company performance data into its constituent parts by region or by operations

External Assurance (Verification) Statement – An independent third party assessment of certain aspects of a report (e.g. data accuracy, alignment with given principles, methods underlying the compilation of the report etc.)

Global FT500 – Financial Times index of the world's 500 largest companies by market capitalisation

GRI Contents Index – An index of GRI indicators against which a CSR Report may be checked

Market Capitalisation – A measurement of corporate or economic size equal to the share price x the number of shares outstanding of a public company

Mitigation Measures – Steps or actions that a company may take in order to reduce the output of Greenhouse Gases from its operations

SMART Targets – Specific, Measurable, Achievable, Realistic and Timescaled Targets

Stakeholders – A person or group who affects, or can be affected by, a company's actions such as employees, customers, investors, government bodies, the media and NGOs

Appendices

Appendix 1 – Methodology

Full listing of themes and elements used in this study:

A. General discussion

Looking at climate change disclosure at the most basic level, this looks at whether the CSR reports even address climate change, and examines management commitment on the issue.

1. Which reports address climate change?
2. Which reports include a specific section on climate change?
3. Which reports address climate change in the CEO / Chairman's introduction?
4. Which reports refer to management responsibility for addressing climate change?

B. Performance disclosure

Exactly how do companies choose to discuss their performance on climate change, in terms of greenhouse gas emissions? In the absence of a universally accepted standard by which to compare emissions figures, we decided not to scrutinise the specific reported greenhouse gas emissions data. Indeed, the variations in how emissions data were presented which we noted in looking through the reports confirmed that there is as yet no consensus on how to report. This means that without extensive interpretation and re-calculation, reported emissions data cannot be represented in a consistent and comparable way.

Instead, we looked at the issues deriving from the emissions data. We examined whether the reported data covered:

- Absolute emissions (the tonnes of CO_2 equivalent produced during company operations)
- Relative emissions (the tonnes of CO_2 equivalent produced during company operations, divided by some measure such as product throughput, revenue, number of employees)
- Both

We also investigated whether the emissions data was aggregated or disaggregated. Many companies give an overall emissions figure for all their operations, while some companies go further by disaggregating this overall figure into different regions or elements of their operations.

Finally, we reviewed whether companies arrived at their emissions figures by aligning with the WBCSD/WRI Greenhouse Gas Protocol (GHG Protocol). We also examined whether companies aligned with the different Scopes of the GHG Protocol:

Scope 1: Direct emissions through fuel combustion of company owned vehicles
Scope 2: Indirect emissions through purchased electricity
Scope 3: Indirect emissions through employee business travel, contracted vehicle use, waste disposal, production of purchased materials and any outsourced activities

Reporting to Scope 1 is the most straightforward: the degree of difficulty increases from Scope 1 through to Scope 3.

For the purpose of this study, each GHG Protocol Scope is cumulative, ie Scope 3 is inclusive of Scopes 2 and 1; Scope 2 is inclusive of Scope 1; Scope 1 is limited to Scope 1. Companies did not need to specifically reference the GHG Protocol to be included in our findings: if the reports categorised their emissions in line with the GHG Protocol Scopes, we classified them as being in alignment.

During the course of our research a new tool to assist companies in calculating and verifying their GHG emissions was launched – namely the ISO 14064 Standard. We expect this standard will be of use to companies and that its popularity will grow during the next reporting cycle. However, the relatively new nature of the standard meant that it was not mentioned in reports during our study period. Therefore, we did not include the ISO 14064 Standard as an element in this study.

We noted whether companies made a qualitative statement on greenhouse gas emissions, even if they do not report quantitative data. For example the statement 'We significantly reduced our greenhouse gas emissions over the past year' would be classified as a qualitative performance disclosure in this study.

5. Which reports include quantitative performance data on greenhouse gas emissions?
6. Which reports include both absolute and relative emissions data?
7. Which reports include only absolute emissions data?
8. Which reports include only relative emissions data?
9. Which reports disaggregate such performance data by region?
10. Which reports disaggregate such performance data by operations?
11. Which companies use the GHG Protocol to calculate their performance data?
12. Which reports include emissions data up to GHG Protocol Scope 3?
13. Which reports include emissions data up to GHG Protocol Scope 2?

14. Which reports include emissions data for GHG Protocol Scope 1?
15. Which reports include only qualitative emissions / climate change disclosure?

C. Activity disclosure

What measures are companies taking to reduce their GHG emissions? We did not distinguish between simple references to mitigation measures and more detailed descriptions of specific actions taken.

Although references were made to several different mitigation measures, we focused on the following four as they were by far the most common, in addition to being comparable across all companies:

16. Which reports refer to energy efficiency initiatives?
17. Which reports refer to renewable energy initiatives?
18. Which reports refer to transport initiatives?
19. Which reports refer to emissions trading?

D. Target setting disclosure

How are companies looking to the future, committing themselves to specific action on climate change? We looked for SMART targets (Specific, Measurable, Achievable, Realistic, Time-scaled). We also classified the targets as relating to absolute or relative emissions.

For those companies without SMART targets, we noted whether their reports include broad objectives to address climate change.

20. Which reports include a SMART target for GHG emissions reduction?
21. Which reports only include objectives for GHG emissions reduction?
22. Which reports set a SMART target for absolute emissions reduction?
23. Which reports set a SMART target for relative emissions reduction?

E. Assurance / Guidelines disclosure

Have the reported elements of climate change disclosure been externally assured? Have they been checked against any standardised reporting guidelines?

We examined whether the climate change disclosures are specifically assured by an independent external organisation, or are included under a more general external assurance statement covering the full CSR report.

We also examined whether companies followed one of the most widespread non-financial reporting frameworks, the Global Reporting Initiative (GRI) Framework and Guidelines. The GRI provides guidance on how companies might report their sustainability performance. Reporting companies tailor guidance and indicators to fit their needs and their stakeholders' interests.

Two versions of guidance from the GRI, issued in 2002 (G2) and 2006 (G3) respectively, are currently in use. The indicators referencing GHG emissions differ across these two versions:

- The G2 Guidelines include the following indicator on climate change:
  EN8: Greenhouse gas emission

- The G3 Guidelines include the following indicators on climate change:
  EN16: Total direct and indirect greenhouse gas emissions by weight
  EN17: Other relevant indirect greenhouse gas emissions by weight
  EN18: Initiatives to reduce greenhouse gas emissions and reductions achieved

24. Which reports include specific assurance on climate change disclosure?
25. Which reports include only general assurance which may cover climate change disclosure?
26. Which reports include GRI G2 indicator EN8?
27. Which reports include GRI G3 indicator EN16?
28. Which reports include GRI G3 indicator EN17?
29. Which reports include GRI G3 indicator EN18?

Appendix 2 – Sector classification

Categorisation of sectors on CorporateRegister.com into the sectoral divisons used in the study:

Industrial groupings	Study sectors	CorporateRegister.com sectors
Heavy Industry	Automobiles & Parts	Automobiles & Parts
	Chemicals	Chemicals
	Mining & Metals	Mining Steel & Other Metals
	Oil & Gas	Oil & Gas
	Transport & Logistics	Distributors Transport
	Utilities	Electricity Gas Distribution MultiUtilities Water
Light Industry	Foods & Beverages	Beverages Food Producers & Processors
	Health & Pharmaceuticals	Health Pharmaceuticals & Biotechnology
	Industrials	Aerospace & Defence Construction & Building Materials Diversified Industrials Engineering & Machinery
	Personal & Household Goods	Household Goods & Textiles Personal Care & Household Products
	Technology	Electronic & Electrical Equipment IT Hardware Software
	Tobacco	Tobacco
Service Industry	Banks & Finance	Banks Investment Companies Specialty Finance Real Estate
	Insurance	Life Assurance Insurance
	Leisure & Media	Leisure, Entertainment & Hotels Media & Photography
	Retailers	Food & Drug Retailers General Retailers
	Support Services	Support Services
	Telecommunications	Telecommunications
Sectors not included in this study		Education Forestry & Paper Government, Authorities & Agencies Packaging

Appendix 3 – Global FT500

Global FT500 constituent companies during period of study

Exxon Mobil Corporation
General Electric Company
Microsoft Corporation
Citigroup
AT&T Inc
JSC Gazprom
Toyota Motor Corporation
Bank of America
Industrial And Commercial Bank Of China
Royal Dutch Shell plc
BP plc
HSBC Holdings plc
Procter & Gamble Inc
Wal-Mart Stores Inc
Altria Group Inc
China Mobile Ltd
Pfizer Inc
American International Group Inc
Johnson & Johnson
Berkshire Hathaway Inc
JP Morgan Chase & Co
Total SA
Bank of China Limited
Chevron Corporation
GlaxoSmithKline plc
Nestlé SA
Roche Holding Ltd
Cisco Systems Inc
Electricité de France
Novartis International AG
International Business Machines Corporation
Vodafone Group plc
BHP Billiton Limited
Eni SpA
China Construction Bank Corporation
UBS AG
The Royal Bank of Scotland Group plc
The MUFG Group
Sanofi-Aventis Group
Wells Fargo & Company
China Life Insurance Company Limited
ConocoPhillips
Banco Santander SA
The Coca-Cola Company
Verizon Communications Inc
Intel Corporation
Telefónica SA
Hewlett-Packard Company
Wachovia Corporation
PetroBrás SA
Google Inc
Pepsico Inc
SINOPEC Shanghai Petrochemical Co Ltd
Unilever plc / NV
UniCredito Italiano SpA
Samsung Electronics Co Ltd
BNP Paribas Groupe
Intesa Sanpaolo SpA
Merck & Co Inc
Siemens AG
Arcelor Mittal
Nokia Group
Internationale Nederlanden Groep NV
E.ON AG
Oracle Corporation
Barclays plc
Allianz SE
OJSC Rosneft
AXA SA
Grupo BBVA
Crédit Suisse
Genentech Inc
Rio Tinto plc
Companhia Vale do Rio Doce SA
Abbott Laboratories
Goldman Sachs & Co
NTT DoCoMo Inc
Morgan Stanley Dean Witter & Co
DaimlerChrysler AG
ABN Amro Holding NV
Nippon Telegraph & Telephone Corporation
Schlumberger Ltd
AstraZeneca plc
Comcast Corporation
Apple Computer Inc
Société Générale SA
EnCana Corporation
Anglo American plc
Saudi Basic Industries Corporation
HBOS plc
United Parcel Service of America Inc
Mizuho Financial Group Inc
Time Warner Inc
News Corporation
JSC Lukoil Oil Company
Deutsche Telekom AG
The Home Depot Inc
Merrill Lynch & Co Inc
Unitedhealth Group Incorporated
Canon Inc
Qualcomm Inc
The Walt Disney Company
Sberbank Rossii OAO
The Boeing Company
Sumitomo Mitsui Financial Group
Deutsche Bank AG
L'Oréal SA
Tesco plc
France Télécom SA
Wyeth
American Express Co
Suez SA
Enel SpA
RBC Financial Group
Amgen Inc
United Technologies Corporation
British American Tobacco plc
Crédit Agricole SA
Honda Motor Company Ltd
Tyco International Ltd
Lloyds TSB Group plc
USBancorp
Eli Lilly and Company
Diageo plc
Statoil ASA
Fortis AG/NV
Telefonaktiebolaget LM Ericsson
RWE AG
Fannie Mae
Takeda Pharmaceutical Company Limited
Unified Energy System of Russia RAO
Endesa SA
América Móvil SA de CV
Medtronic Inc
SAP AG
BASF SE
3M
Bristol-Myers Squibb Company
National Australia Bank Group
McDonald's Corporation
Assicurazioni Generali SpA
LVMH-Moët Hennessy Louis Vuitton SA
Manulife Financial Corporation
Sprint Nextel Corporation
Taiwan Semiconductor MFG Co Ltd
Telecom Italia SpA
Volkswagen AG
Dell Inc
CVS Caremark Corporation
Commonwealth Bank of Australia
Carrefour SA
Surgutneftegas OAO
Target Corporation
Sony Corporation
Bayer AG
Xstrata plc
WellPoint Inc
Matsushita Electric Industrial Co Ltd
BT Group plc
Japan Tobacco Inc
BG Group plc
Nissan Motor Co Ltd
Lowe's Companies Inc
Nippon Steel Corporation
Metropolitan Life Insurance Company
Bank Of Communications Company Limited
Vivendi Universal SA
Bank of Nova Scotia
The Tokyo Electric Power Company Inc
Exelon Corporation
Walgreen Co
El du Pont de Nemours & Company
Gaz de France
Ebay Inc
Mitsubishi Estate Company Ltd
Australia & New Zealand Banking Group Ltd
KBC Group NV
The AP Moller / Maersk Group
Toronto-Dominion Bank
The Dow Chemical Company
InBev
Reliance Industries Limited
Freddie Mac
Philips Electronics NV
Texas Instruments Inc
Caterpillar Inc
Oil And Natural Gas Corporation
Norsk Hydro ASA
Iberdrola SA
Danone Group
Yahoo! Inc
Prudential Financial Inc
National Grid Transco plc
Motorola Inc
Hennes & Mauritz AB
Ping An Insurance Co of China Ltd
Zürich Financial Services Group
Occidental Petroleum Corporation
Nordea Bank AB
Nintendo Co Ltd
Repsol YPF SA
Hutchison Whampoa Ltd
Lockheed Martin Corporation
Nomura Holdings Inc
Banco Bradesco SA
Valeo SA
Standard Chartered plc
Banco Itaú Holding Financeira SA
Alcon Inc
Carnival Corporation
Westpac Banking Corporation
Mitsubishi Corporation
Inditex SA
Münchener Rückversicherungs AG
Telstra Corporation Ltd
BMW AG
TeliaSonera AB
Anheuser-Busch Companies Inc
Lehman Brothers Holdings Inc
CNOOC Ltd
Schering-Plough Corporation
Aviva plc
Anglo Platinum Limited
ABB Ltd
Allstate Corporation
Reckitt Benckiser plc
Washington Mutual Inc
Honeywell International Inc
VINCI
POSCO - Pohang Iron & Steel Co Ltd
Wal-Mart de México SA de CV
The Travelers Companies Inc
Deutsche Post AG
AB Volvo
Saint-Gobain SA
KDDI Corporation
Corning Inc
JFE Holdings Inc
OJSC MMC Norilsk Nickel
Imperial Oil Ltd
Gilead Sciences Inc
Suncor Energy Inc
Saudi Telecom Company
AmBev
Hon Hai Precision Industry Co Ltd
Dexia SA
Prudential plc
Emerson Electric Co
Singapore Telecommunications Pte Ltd
Colgate-Palmolive Company
Baxter International Inc
Marathon Oil Company
Swiss Reinsurance Company
Time Warner Cable Inc
Al Rajhi Banking & Investment Corporation
Bharti Airtel Limited
Renault SA
FedEx Corporation
SABMiller plc
Denso Corporation
Mitsui & Co Ltd
Canadian Imperial Bank Of Commerce
Cemex SA DE CV
China Merchants Bank
Danske Bank A/S
Aegon NV
Imperial Tobacco Group PLC
Assurances Générales de France IART
Halliburton Company
Fiat SpA
Kimberly-Clark Corporation
Bank of Montreal
East Japan Railway Company
The Hartford Financial Services Group Inc
General Dynamics Corporation
Capital One Financial Corporation
Dominion Resources Inc
Devon Energy Corporation
Las Vegas Sands Corp
The Bank of New York Company Inc
Franklin Resources Inc
Resona Holdings Inc
Schneider Electric SA
Millea Holdings Inc
Veolia Environmental Services
Kookmin Bank Ltd
Koninklijke KPN NV
Monsanto Company
Commerzbank AG
Teva Pharmaceutical Industries Ltd
Canadian Natural Resources Limited
Telenor ASA
Liberty Media Holding Corporation
Husky Energy Inc
Natixis
Alcoa Inc
Westfield Group
Suntrust Banks Inc
TXU Corporation
Seven&I Holdings Co Ltd
Cheung Kong (Holdings) Ltd
Air Liquide SA
Cardinal Health Inc
EMC Corporation
Compagnie Financiere Richemont SA
Burlington Northern Santa FE Corporation
BAE Systems plc
Illinois Tool Works Inc
Sun Hung Kai Properties Ltd
Viacom Inc
Anadarko Petroleum Corporation
National Thermal Power Corporation Limited
The DIRECTV Group Inc
Reed Elsevier NV
Great-West Lifeco Inc
Centrica plc
ScottishPower plc
Tata Consultancy Services Limited
Sears Holdings Corporation
Kansai Electric Power Co Inc
Lafarge SA
Union Pacific Corporation
Sun Life Financial Inc
The Southern Company
Tenaris SA
Hang Seng Bank Ltd
SoftBank Corporation
Stryker Corporation
Alcatel-Lucent
Banco do Brasil
Cadbury Schweppes plc
Chubu Electric Power Co Inc
The Thomson Corporation
Automatic Data Processing Inc
Northrop Grumman Corporation
CEZ as
Woolworths Limited
Shin-Etsu Chemical Co Ltd
Hitachi Ltd
Scottish and Southern Energy plc
Allied Irish Banks plc
Fortum Corporation
Regions Financial Corporation Inc
Infosys Technologies Limited
Mitsui Fudosan Co Ltd
Bouygues SA
Novo Nordisk A/S
BOC Hong Kong Holdings
Korea Electric Power Corporation
Applied Materials Inc
Heineken Holding NV
Duke Energy Corporation
Power Financial Corporation
Central Japan Railway Company
BCE Inc
Thyssen Krupp AG
Research In Motion Limited
FPL Group Inc
MTN Group
European Aeronautic Defence & Space Company NV
Holcim Ltd
National Bank of Greece SA
The PNC Financial Services Group Inc
Banco Popular Español SA
Simon Property Group Inc
Sumitomo Metal Industries Ltd
Loews Corporation
Barrick Gold Corporation
Deere & Company
Kohls Corp
Adobe Systems Incorporated
Erste Bank der Österreichischen Sparkassen AG
Costco Wholesale Inc
Astellas Pharma Inc
CBS Corporation
Archer Daniels Midland Co
Transocean Inc
Freeport-McMoran Copper & Gold Inc
Samba Financial Group
Federated Department Stores Inc
ORIX Corporation
National City Corporation
Starbucks Corporation
Best Buy Co Inc
Raytheon Company
Apache Corporation
Capitalia Spa
Charles Schwab Corporation
Aflac Inc
Metro AG
CRH plc
CEPSA SA
Deutsche Boerse AG
Accenture Ltd
Brookfield Asset Management Inc
Aetna Inc
Canadian National Railway
Marks and Spencer plc
DAIICHI SANKYO CO LTD
Sumitomo Corporation
Alltel Corporation
McGraw Hill Companies Inc
Fanuc Ltd
BB&T Corporation
DBS Group Holdings Ltd
Pernod Ricard SA
Danaher Corporation
Mitsubishi Electric Corporation
Christian Dior SA
Shinhan Financial Group Co Ltd
Skandinaviska Enskilda Banken
Mitsubishi Heavy Industries Ltd
PT Telekomunikasi Indonesia Tbk
Woodside Petroleum Ltd
Entergy Corporation
Akzo Nobel NV
Sun Microsystems Inc
State Street Corporation
Public Service Enterprise Group Inc
Fifth Third Bank Corporation
QBE Insurance Group Limited
Boston Scientific Corporation
Toshiba Corporation
Foxconn International Holdings Limited
Sharp Corporation
Grupo ACS
Rogers Communications
Baker-Hughes Inc
FirstEnergy Corporation
Chubb Corporation
Southern Peru Copper Corporation
United Overseas Bank
Bank of Ireland plc
FUJIFILM Corporation
TNT NV
Komatsu Ltd
Sandvik AB
Gas Natural SDG SA
Medco Health Solutions Inc
Sysco Corporation
Sasol Limited
Yahoo Japan Corp
Standard Bank Group Ltd
Emirates Telecommunications Corp Ltd
Atlas Copco AB
Kellogg Company Inc
Man Group plc
PPR SA
Swisscom AG
INPEX Corporation
Legal & General Group plc
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Praxair Inc
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Emaar Properties PJSC
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Nike Inc
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Reliance Communications Ltd
MGM MIRAGE
Land Securities Group plc
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FirstRand Group
Thermo Fisher Scientific Inc
Mobile Telesystems OJSC
Nucor Corporation
Energias de Portugal SA
Abertis Infraestructuras SA
Woori Finance Holdings Co Ltd
Vornado Realty Trust
Alliance Boots plc
Petro-Canada
Oversea-Chinese Banking Corporation Ltd
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VOLKSWAGEN
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More information: www.westpac.com.au/corporateresponsibility

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Full Global FT500 climate change reporting data by named company.

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