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Investment Strategy

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Carbon Leaders; Quality win-win stocks

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Carbon data provided by Trucost

TRUCOST
taking the environment into account

For information on TruCost see Appendix 1

Backing low carbon footprint companies offers win-win idea

Headlines on climate change issues have swamped the public through 2007. The majority of policy makers have accepted that they must take emission mitigating action. Now the priority for investors is to ascertain what the action will be and how companies will be affected. In June the EU set out a stark reminder that 'a swift transition to a global low carbon economy is the central pillar of the EU's integrated climate change and energy policy'. The economic instruments to get to the low carbon framework are taxes, quotas, or both. Backing the carbon leaders by sector is a quality defensive strategy in our view, and reduces investor carbon footprint.

European carbon reduction initiatives to impact all sectors

Why? Because on current measures Europe is not on track to meet Kyoto or voluntary targets. If country emissions continue at the rate of the last year European emissions will be 5.5% below 1990 by 2012 (Kyoto target -8%), and 6.7% below 1990 by 2020 (voluntary target -20%).

Taxes and quotas provide the low carbon economy solution

Economic theory on externalities points to taxes and quotas as solution providers. As early as 1992 the EU looked into the macro implications of a carbon tax; thus it would not be surprising to see further developments on carbon taxes. The EU already has a quota system with the EU Emissions Trading Scheme (EU ETS) and talks surrounding the addition of new industries to be regulated are ongoing but this would not be enforced before the 2012 Kyoto compliance deadline.

All companies (and investors) have a carbon footprint

Policies to date have, rightly, focussed on the heaviest emitters using sensible reduction goals. Yet all companies have a carbon footprint; measured as tonnes of carbon emitted per unit of revenue, which comes from activities like power usage, transport and industrial processes. Thus all companies are potentially exposed to a regulatory mechanism. Our sector analysis shows the carbon footprint of stocks and the financial liability should companies decide to offset carbon emissions. This is an indicator of maximum financial liability, but is not a strategy we advocate because it shifts, not solves, the problem of reducing carbon.

Carbon; tangible proxy for environmental quality

The increasing requirement of carbon disclosure provides a quantifiable proxy for environmental quality. Assumptions can subsequently be applied the cost of carbon, potential impact on earnings, and therefore valuation of stocks. We have selected a list of stocks which are carbon footprint leaders in their sub-sectors, using the DJ Stoxx 600 as a basis for our sample.

Refer to important disclosures on page 60. Analyst Certification on page 59.

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Executive Summary

Acknowledgement of greenhouse gas warming for many years, but now more organisations taking action

As expected, so far 2007 has been a significant year in terms of newsflow catalysts on climate change issues, with the IPCC scientific reports, and concrete conclusions from G8 to discuss a post 2012 framework for greenhouse gases post Kyoto. A shift has occurred in the way that governments, businesses and consumers view the issue. Although greenhouse gas warming has been acknowledged for many years, in 2007 many more organisations have pledged to reduce their carbon[1] emissions on a voluntary basis.

Centre stage for policy makers; EU – swift transition to global low carbon economy a priority

The issue has also become centre stage for policy makers. In the green paper on 'Adaptation to climate change in Europe – options for EU action' published at the end of June, the EU states that **'a swift transition to a global low carbon economy is the central pillar of the EU's integrated climate change and energy policy'**. While the Kyoto protocol has led to the development of the EU Emissions Trading Scheme (EU ETS) to help mitigate emissions, many countries in Europe are not on track to meet their reduction targets under the burden sharing agreement. For many governments, policy creation targeting all companies is at an early stage, but in short, the options are a tax or quota system.

Leaders already thinking more carefully about their own carbon footprint

We believe that policy makers will focus on reducing carbon. In addition, we think that business, investors, and consumers are beginning to think more carefully about reducing their own carbon footprint. Ultimately, we think a regulatory drive will impact all companies across all sectors, not just the heavy emitters.

Difficult to prove the higher environmental ethic, superior returns assertion to date, going forward carbon measurement provides a proxy for environmental quality

The assertion that a higher quality business model exists for proactive environmentally aware companies is difficult to prove. Many would argue that stronger revenues and earnings streams are a result of many other factors, including the phase in the cycle, and ongoing product innovation from changing consumer demand, which occurs irrespective of environmental considerations. While this may have been true in the past, we think that the penalties, both financial and reputational, today, for not minimising environmental impact will become greater. Companies will find it more difficult to hide behind bad habits, as governments impose legislative changes, investors become more involved in engagement and consumers demand more transparency on the supply chain. Going forward, analysing carbon will, we believe, demonstrate that companies with stronger environmental strategies have overall higher quality management teams.

Quantifying carbon has implications for valuation

We expect investors to increasingly take a view on 'off balance sheet' environmental liabilities. Increasingly, companies are required to calculate their carbon footprint, whether to meet Kyoto targets or to inform more pro-active investors. With carbon becoming a quantifiable item, assumptions can be made on the cost, potential impact on earnings, and therefore valuation of stocks.

Backing carbon leaders is a quality defensive strategy

The increasing requirement of carbon disclosure provides a quantifiable proxy for environmental quality. We think that backing the carbon leaders is a quality defensive strategy and we highlight the list of names based purely on carbon data on page 7. Carbon measurement is a relatively immature activity for many companies, and the size of carbon footprints varies across sub-sectors. There is no 'one size fits all' approach, but the carbon footprint measurement provides a good benchmark within sectors.

[1] In this piece we use the term carbon to denote the 6 greenhouse gases regulated by Kyoto, usually measured in tones of carbon dioxide equivalent, or TCO2e.

Moving to a low carbon economy on a macro basis – why Europe won't meet targets

This note looks at the implications across the board of getting to a low carbon economy. On the macro side we demonstrate why we think Europe won't reach Kyoto or voluntary targets with the measures currently in place. We discuss the policy options of taxes and quotas, and highlight the magnitude of revenues already raised by environmental taxes between countries. The EU first studied the potential macro effects from carbon taxes in 1992, so a carbon tax discussion now would not be new to the agenda. The discussion of additional sectors to the EU ETS quota system is also a continued topic. This would take affect on a post 2012 framework basis however, which is not in time to meet the Kyoto compliance deadline.

Individual country positioning discussed from page 19; including companies regulated by the EU ETS

From page 19 we discuss individual country positioning, including emissions regulated by the EU ETS and the companies that are regulated, emissions profile versus GDP and GDP forecasts, and highlight pertinent regulation by country.

Sector exposure from page 33; identifying best and worst companies by carbon footprint

We highlight the sector exposure from page 33, and look at the most and least exposed sectors, but also the carbon footprint within sectors. Our stock sample is based on the constituents of the DJ Stoxx 600 index and we highlight the best and worst stocks based on their carbon footprint by sub-sector.

Ratings, carbon footprint, cost to offset

In each sector we look at the ML covered stocks in more detail, highlighting rating, carbon footprint, the cost to totally offset carbon emissions (i.e. go carbon neutral) and the proportion of EBIT this represents. We do not think that regulation will be severe enough to force companies to go 'carbon neutral', but we think that this is a useful benchmark in a 'worst case scenario' analysis.

Conclusions: Carbon will be more widely quantified; backing the leaders is a win win scenario

With the publication of carbon data, volumes can be quantified and moved from an off balance sheet liability to a cost, and consequent earnings driver. Companies that proactively manage emissions to reduce potential costs are more likely to have a higher overall quality profile. In addition, investors backing those companies will lower their own carbon footprint.

Carbon Methodology & Interpretation

Carbon Data has been supplied by Trucost

All carbon data has been supplied by Trucost, a UK based environmental measurement company. Data is based on environmental disclosures from companies, and from estimates based on an input-output analysis, using sector analysis. More about Trucost methodology is included in Appendix 1. The most recent data for the complete sample of companies in the DJ Stoxx 600 is 2005, and company carbon data is based on publicly available sources like the carbon disclosure project and annual reports, and estimated data based on public disclosure of sector breakdown within companies.[2]

ML Ratings for companies by sector from page 33

The sector analysis from page 33 shows a large volume of carbon data summarised by tables and charts and includes terms common to the rest of the note. Each sector follows a similar layout, namely a margin table with ML covered stocks in the DJ Stoxx 600, their ML rating, (B = Buy, N = Neutral, S = Sell) their carbon footprint and an indication of how much it would cost to go 'carbon neutral' by offsetting total emissions at the current cost of carbon €19.00.

Carbon Footprint

The carbon footprint is the amount of carbon generated in the production of $1m of revenue, i.e. a company with a carbon footprint of 50 produces 50 tonnes of $CO2e^3$ for every $1m of revenues. All carbon footprint data is measured on a tonnes of carbon equivalent basis.

Direct and Indirect emissions

In short, carbon can be measured on a direct and indirect basis. Direct emissions are those that occur as an integral part of the day to day operations of the business. These emissions will of course be more significant to some sectors than to others. Indirect emissions for a company are measured as emissions from the course of producing or using a good or services, and are usually supply chain related. More information on direct versus indirect emissions is given on page 29.

Cost to offset emissions (maximum financial liability)

Cost to offset: for each company we have calculated the cost of offsetting carbon emissions by buying and withdrawing from circulation carbon credits from the EU ETS. The current cost of a 2008 carbon credit trading on the EU ETS is €19.00. We have calculated the cost based on total emissions (i.e. direct and indirect) for a company. It is worth noting that in our view a carbon strategy based purely on offsetting is sub optimal because it does not address the issue of reducing future emissions. As a supplementary measure however, investing in credible offset projects can lower carbon exposure. It is also NOT our view that regulatory drivers will enforce companies to completely offset emissions. This measure does, however, show a maximum financial liability (on 2005 data).

Cost as a % of 2005 EBIT

We have used the ML proprietary iQ Toolkit to calculate the total offset cost as a percentage of 2005 EBIT for ML covered stocks. This gives a more useful indication of the potential (maximum in our view) risk for companies.

Sector commentary includes cost, most and least efficient stocks, companies posting greatest carbon reduction

For each sector table we note the absolute tonnage outstanding by sub-sector, for direct, indirect and total emissions. We have also noted the stocks that are the most and least efficient (measured by carbon footprint) for direct, indirect and total emissions) by sub-sector. For some sectors there is little or no difference between footprints, and in some cases a company may rank the strongest in the sub-sector for direct, but the worst for indirect carbon footprint. There may also be few stocks in the sub-sector.

[2] Source data can be provided for companies on request

[3] TCO2e is the commonly used term to measure the 6 greenhouse gases in their 'carbon dioxide equivalent', since the greenhouse gases have different global warming potentials

Company with highest reduction for direct, indirect and total emissions noted

We also note the company in each sector that posted the greatest reduction in CO2 from 2004 to 2005 in absolute terms. Note that the margin tables are ML coverage within the DJ Stoxx 600, but sector table analysis comprises all the constituents of the DJ Stoxx 600.

Carbon Leaders List

Not one size fits all measurement for sectors

The carbon leaders list identifies stocks based on their 2005 carbon profile and are picked on a sector neutral basis. However, as indicated previously there are pitfalls with carbon data interpretation with no single measurement that automatically determines a carbon leader or a carbon laggard.

Company with large TCO2e reduction is not necessarily a leader

For example, a company may have posted a large TCO2e reduction, but the carbon footprint has increased. At first glance a company that reduces TCO2e on an absolute basis by 20%, the largest reduction in the sector, appears a leader. However closer inspection could reveal that the carbon footprint has increased from 50 to 70, so now the company generates 70 TCO2e per $1m revenues compared to only 50 – revealing a deterioration in carbon efficiency, which would be a negative, or that the structure of the business has changed.

As businesses change, carbon structure changes

The changing structure of a business will distort the carbon figures and in our broad analysis may play a factor that we are unaware of. To try to avoid this we have based our analysis on a predominantly 2005 (the most recent data) basis and looked at the direction of emission reduction rather than focused too heavily on the magnitude.

Variation between stocks in sub-sectors may be narrow, or few stocks

There are several points to take into consideration when evaluating the Carbon Leaders list below. Firstly some sectors only have a few stocks in a tight cluster, so that there is little to differentiate between the best, and possibly three or four worst ranked stocks on the same carbon footprint ranking. (Housebuilders is a good example). The differentiator for the leaders list ideas would be based on the direction of TCO2e from 2004 to 2005. Where the sources are estimates the distribution of sectors between business models may over or under estimate TCO2e[4]. Nevertheless, measuring the carbon footprint provides a strong benchmark indicator within sectors in our view. All the comments in table 1 below are based on a comparison within the subsector.

Stock picking basis for Carbon Leaders List

- Better than sector average carbon footprint ranking for 2005. This is noted in the carbon footprint ranking column and indicates the position of the stock / number of stocks in the sub-sector
- Change in total emissions. We would include companies that have increased emissions if they are from a low base within the sector, and first and foremost, the carbon footprint ranking is among the best in the sector.

The list of stocks is listed below and comments are included for each stock.

[4] ML can provide the source of emissions data (company reports, CDP, estimates) on request

Bloomberg Ticker	ML Ticker	Company	Total Emissions (TCO2e) 2005	Carbon Footprint 2005	Carbon Footprint Ranking	Comment
Oil and Gas						
GA-FR	GOEJF	CGG Veritas	56,966	55.5	1/11	Best carbon footprint
CNE-LN	CRNCF	Cairn Energy	140,168	563.9	2/5	Good carbon footprint, lowest absolute tonnes
NES1V-HE	NTOIF	Neste Oil Corp.	8,479,101	720.7	2/9	Good carbon footprint, lowest absolute tonnes
STL-OS	SLDKF	Statoil	37,527,786	650.7	1/9	Best carbon footprint
TEC-FR	TNHPF	Technip	1,968,632	310.4	4/11	Good carbon footprint, emission reduction
Chemicals						
JMAT-LN	JMPLF	Johnson Matthey	1,946,096	222.0	1/16	Best carbon footprint
Basic Resources						
BUD-VI	NR	Boehler-Uddeholm	1,082,263	351.9	1/9	Best carbon footprint
LMI-LN	LNMIF	Lonmin	487,909	452.5	1/9	Best carbon footprint
Construction						
GEBN-EB	GBERF	Geberit	204,702	164.5	2/16	Good carbon footprint, lowest absolute tonnes
KRX-DB	KGSPF	Kingspan Group	342,311	233.4	4/16	Good improving carbon footprint, emission increase
BBY-LN	NR	Balfour Beatty	633,918	96.2	3/14	Good carbon footprint, lowest absolute tonnes
Industrial Goods & Services						
MEO1V-HE	MXTOF	Metso	523,367	105.1	2/18	Good carbon footprint, emission reduction
WEIR LN		Weir Group Plc	162,987	120.3	1/18	Best carbon footprint, low absolute tonnes
AGFB-BT	NR	Agfa-Gevaert	360,854	92.5	3/8	Good carbon footprint, emission increase
MPI-LN	MPGPF	Michael Page	8,895	9.9	1/15	Best carbon footprint, lowest absolute tonnes
SUN EB	NR	Sulzer	198,078	104.5	1/18	Best carbon footprint
BRI-LB	BDASF	Brisa	55,255	83.6	1/16	Best carbon footprint
CIN-MC	CCIDF	Cintra	76,447	93.1	5/16	Good carbon footprint, low tonnes
Autos						
POR3-FF	PSEPF	Porsche	542,378	67.9	2/7	Good carbon footprint, lowest tonnes
BMW-FF	BAMXF	BMW	3,691,508	67.1	1/7	Best carbon footprint
Food & Beverage						
ULVR-LN	UNLYF	Unilever (Uk)	17,072,625	366.6	2/17	Good carbon footprint, emission reduction
SCTN-LN	SNCWF	Scottish & Newcastle	1,053,408	188.2	2/9	Good carbon footprint, emission reduction
NESN-VX	NSRGF	Nestle	27,010,570	390.9	4/17	Good carbon footprint, emission reduction
Personal & Household Goods						
UHRN-VX	SWGAF	Swatch	206,314	63.4	1/7	Best carbon footprint
OR-FR	LRLCF	L'Oreal	2,037,792	118.9	1/3	Best carbon footprint
RB.-LN	RKBKF	Reckitt Benckiser	891,985	124.3	2/4	Good carbon footprint, emission reduction
Healthcare						
NOVO'B-KO	NONOF	Novo Nordisk 'B'	453,042	84.9	2/17	Good carbon footprint, emission reduction
GN-KO	GGNDF	Gn Store Nord	62,074	59.1	1/7	Best carbon footprint
AZN-LN	AZNCF	Astrazeneca	2,017,774	89.0	3/17	Good carbon footprint, emission reduction
QIA-FF	NR	Qiagen	31,864	83.9	1/17	Best carbon footprint
Retail						
DELB-BT	DHLYF	Delhaize	1,975,155	89.9	2/9	Good carbon footprint, emission reduction
CPW-LN	CRWHF	Carphone Warehouse	327,871	73.7	1/5	Best carbon footprint
Media						
TL5-MC	GETVF	Telecinco	35,218	32.9	1/12	Best carbon footprint
JPR-LN	JHPSF	Johnston Press	45,137	50.5	4/18	Good carbon footprint, emission reduction
Leisure						
AC-FR	ACRFF	Accor	1,124,964	126.1	1/2 (2/26)	Good carbon footprint, emission reduction
Telecoms						
TKA-VI	TKMAF	Telekom Austria	179,121	34.8	4/15	Good carbon footprint, emission reduction
TLSN-SK	TLSNF	Teliasonera	384,866	34.9	2/6	Good carbon footprint, emission reduction
Utilities						
EDF-FR	ECIFF	EDF	33,224,647	551.6	3/18	Good carbon footprint, emission reduction
GAS-MC	NR	Gas Natural	7,942,380	789.6	2/18	Good improving carbon footprint, emission increase
NG.-LN	NR	National Grid	11,575,952	718.9	1/4	Best carbon footprint
KEL-LN	XKELF	Kelda Grp	508,156	352.5	2/6	Good carbon footprint, emission reduction
Financials						
HBOS-LN	HBOOF	Hbos	791,216	18.6	1/60	Best Carbon Footprint
PAS-MC	NR	Banco Pastor	22,795	28.5	17/60	Good carbon footprint, emission reduction
BVA-MC	NR	Banco De Valencia	10,811	28.5	16/60	Good carbon footprint, emission reduction

Bloomberg Ticker	ML Ticker	Company	Total Emissions (TCO2e) 2005	Carbon Footprint 2005	Carbon Footprint Ranking	Comment
POP-MC	NR	Banco Popular Espanol	107,144	28.7	40/60	Low tonnes and reduction in emissions
DBK-FF	XDUSF	Deutsche Bank	984,954	33.1	58/60	Best profile of bulge bracket investment banks
HGI-LN	NR	Henderson Group	7,966	16.0	1/6	Best carbon footprint
III-LN	TIGRF	3I Group	10,036	18.3	1/13	Best carbon footprint
DB1-FF	DBOEF	Deutsche Boerse	101,833	49.5	3/8	Good carbon footprint, emission reduction
Real Estate						
CORA-AE	VBBBF	Corio	44,576	137.0	3/12	Good carbon footprint, emission reduction
FAD-MC	NR	Fadesa Inmobiliaria	60,156	136.0	2/11	Good carbon footprint, emission reduction
Insurance						
AGN-AE	AEGOF	Aegon	381,992	10.2	1/15	Best carbon footprint
AV.-LN	AIVAF	Aviva	779,274	10.9	4/15	Good carbon footprint, emission reduction
Technology						
SAP-FF	SAPGF	Sap	307,411	30.6	2/5	Good carbon footprint, emission reduction
IDR-MC	NR	Indra Sistemas	43,665	30.8	1/5	Good carbon footprint, emission reduction

Source: Replace this text with your content

EU: Good effort, a lot more to do

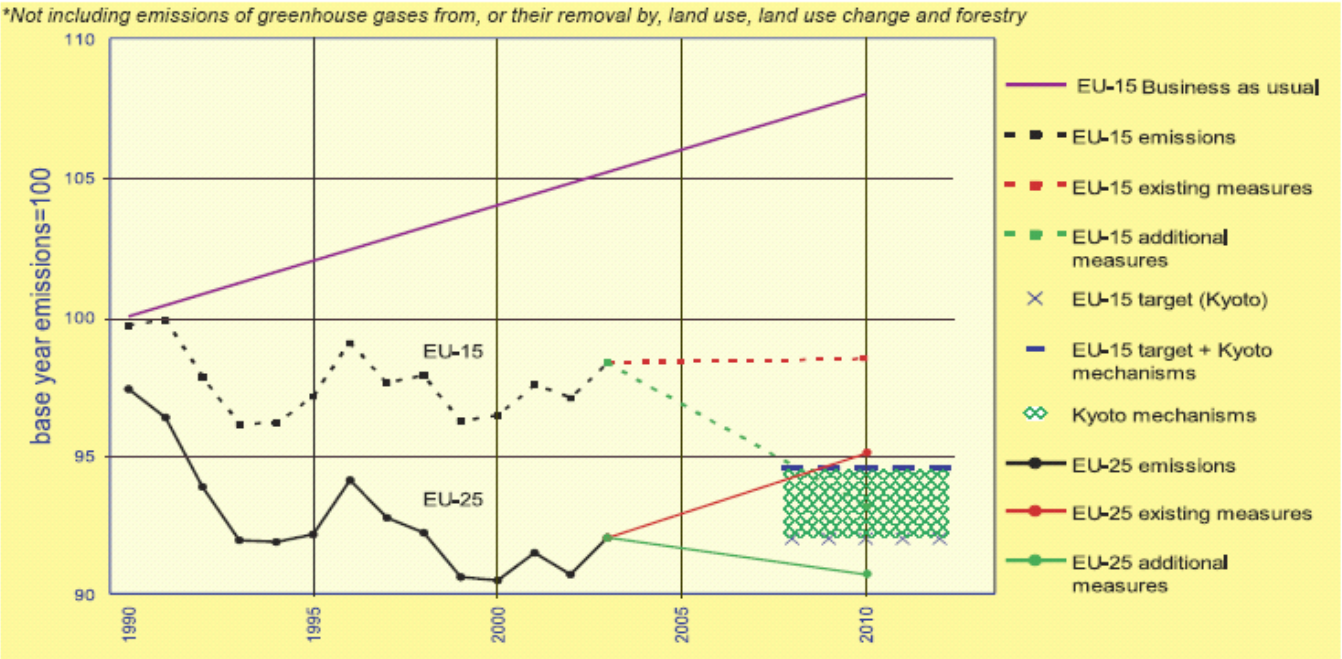
EU targets:
8% reduction below 1990 levels by 2012 (Kyoto)
20% reduction below 1990 levels by 2020 (voluntary commitment, February 2007)

The EU has been particularly vocal on climate change issues through 2007. In February, the EU agreed to cut greenhouse gas emissions to 20% below 1990 levels by 2020. If other developed nations also agreed to cuts the EU would reduce emissions by 30%. In our view these are tough commitments, and are unlikely to be achieved without more intervention than is currently in place.

Chart 1 below shows the current status and forecast of emissions under different scenarios to 2010. The straight rising line indicates the business as usual scenario of carbon emissions that would have been the case without any active countermeasures, and demonstrates that the EU has made good progress towards avoiding that scenario.

However, the chart also shows that for the EU 15 on existing measures the reduction below the base year would be around 2% by 2010, implying that the 8% Kyoto target for 2012 would be tough to reach. With additional measures the reduction increases to over 5%. Whether the EU 15 will reach the 8% Kyoto reduction is by no means clear cut.

Chart 1: EU-15 and EU-25 emissions and projections*



Source: The European Climate Change Programme, EC; http://reports.eea.europa.eu/eea_report_2006_9/en Note the EU 15 are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

The 'existing measures' that are highlighted on the chart are domestic policies and measures taking place within the national boundaries. These may be;

- national legislation in force
- the establishment of one or more voluntary agreements

In addition existing emission measures are deemed to be in place if financial resources have been allocated and human resources have been mobilised. They

also could be official government decisions already made with a clear commitment to proceed with implementation. Hence 'existing measures' are varied between regions, and appear to be non tangible.

Main existing measure is the EU ETS, but this only covers c45% of emissions

The main existing mitigation tool in place is the EU ETS, which has been in operation since 2005, the start of the first phase of Kyoto. We discuss this in more detail under the quotas section on page 10. However, it only covers c45% of emissions on average. Other key implemented policies include behavioural change strategies, including the use of renewable energy and combined heat and power. Efficiency is a key policy area, including buildings and appliances. For more on energy efficiency please see 'A drive to greater energy efficiency – gaining exposure', Asari Efiong July 2007. The promotion of biofuels in transport and reduction of the average carbon dioxide emissions of new passenger cars, recovery of gases from landfills and reduction of fluorinated gases are also key measures.

EEA notes that on existing policies GHG emissions only 0.6.% below 1990 levels by 2010

The European Environment agency estimates that with existing domestic policies and measures total EU 15 greenhouse gas emissions will only be 0.6% below base year levels in 2010[5]. Their report, Greenhouse gas emission trends and projections in Europe 2006, details the progress of countries, which is summarised in the table below. We also show the targets for individual countries required under the European burden sharing agreement in brackets, denoting the reduction or increase from the 1990 base year.

Table 1: Projections of ability to meet targets from EU 15 states (targets from 1990 base in brackets)

Meet targets with existing domestic measures	Meet targets with currently planned additional measures	Miss target
Sweden (+4.0%)	Finland (0%)	Austria (-13.0%)
UK (-12.5%)	France (0%)	Belgium (-7.5%)
	Germany (-21%)	Denmark (-21.0%)
	Greece (+25%)	Ireland (+13.0%)
	Luxembourg (-28%)	Italy (-6.5%)
	Netherlands (0%)	Portugal (+27%)
		Spain (+15.0%)

Source: EEA, Greenhouse gas emission trends and projections in Europe 2006

Additional measures in chart 1 above are 'in discussion with realistic chance of being adopted'

Additional (planned) policies and measures are options under discussion with a realistic chance of being adopted and implemented in time to influence the emissions during the commitment period.

EU 15 only likely to meet Kyoto target if some states exceed their necessary reductions

The European Environment Agency notes that 'if all existing and planned domestic policy measures are implemented and Kyoto mechanisms as well as carbon sinks are used, the EU 15 will reach its Kyoto Protocol target. This projection relies on figures from several Member states which suggest that they will cut emissions by more than is required to meet their national targets'. Even they note that it cannot be taken for granted that the target will be achieved.

[5] Greenhouse gas emission trends and projections in Europe 2006, European Environment Agency December 2006

Table 2: Burden Sharing Agreement Targets

Austria	-13.0%	Italy	-6.5%
Belgium	-7.5%	Luxembourg	-28.0%
Denmark	-21.0%	Netherlands	-6.0%
Finland	0.0%	Portugal	27.0%
France	0.0%	Spain	15.0%
Germany	-21.0%	Sweden	4.0%
Greece	25.0%	UK	-12.5%
Ireland	13.0%	EU - 15	-8.0%

Source: EEA, Greenhouse gas emission trends and projections in Europe 2006

What needs to be done for countries to meet targets?

The EEA report demonstrates that there is not a straightforward case that emissions will be reduced. Indeed table 3 quantifies the progress than needs to be made to get targets, and shows what the 2012 and 2020 reductions will be if we remain on the current trajectory of change.

Table 3 shows that if emissions in the EU 15 changes according to the profile from 2004 to 2005, the overall reduction in emissions by 2008 will be 5.5%, and will fall short of the Kyoto 8% target. If this trajectory is maintained to 2020, the reduction from 1990 will be a mere 6.7% versus the 20% goal. Stocks in bold denote those that are set to meet their burden sharing agreement target. Indeed our forecasts are more optimistic than the EEA; on our forecasts Belgium and Denmark meet targets. In the county pages from page 19 we look more closely at the profile of country emissions, and which companies are regulated by the EU ETS.

Table 3: Projected Emissions targets for EU 15

							2012 Projections		2020 Projections	
Country	Emissions Tonnes (m)		Reduction from 1990 to 2005 (%)	2012 levels implied from burden sharing targets (m)	Change from 2005 required to reach 2012 (%)	Actual Change in emissions 2004-2005 (%)	Projected 2012 level (m)	Change 2012 from 1990 base (%)	Projected 2020 level (m)	Change 2020 from 1990 base (%)
	1990A	2005A	2012E	2012E						
Austria	79.1	93.3	18.0%	69	-26.3%	2.3%	109.4	38.4%	131.3	66.1%
Belgium	**145.8**	**143.8**	-1.3%	**135**	-6.3%	-2.6%	119.8	-17.8%	97.3	-33.3%
Denmark	**69.7**	**64.6**	-7.2%	**55**	-14.8%	-0.5%	542.2	-40.7%	24.8	-64.5%
Finland	**71.1**	**69.2**	-2.7%	**71**	2.7%	-6.2%	41.3	-67.9%	6.4	-90.9%
France	**570.9**	**560.7**	-1.8%	**571**	1.8%	-14.6%	22.9	-5.0%	521.7	-8.6%
Germany	**1,227.9**	**1,001.5**	-18.4%	**970**	-3.1%	-2.3%	851.5	-30.7%	707.4	-42.4%
Greece	111.0	139.2	25.3%	139	-0.2%	0.0%	139.2	25.3%	139.2	25.3%
Ireland	55.4	69.9	26.3%	63	-10.5%	1.9%	79.6	43.8%	92.4	66.9%
Italy	519.5	582.2	12.1%	486	-16.6%	0.3%	594.5	14.4%	608.8	17.2%
Luxembourg	12.7	12.7	0.0%	9.1	-28.0%	-0.7%	12.7	0.1%	12.7	0.1%
Netherlands	**213.0**	**212.1**	-0.4%	**200**	-5.6%	-2.9%	172.8	-18.9%	136.7	-35.8%
Portugal	59.9	85.5	42.8%	76	-11.0%	1.0%	92.0	53.5%	99.9	66.7%
Spain	287.4	440.6	53.3%	330	-25.0%	3.6%	565.4	96.7%	751.7	161.6%
Sweden	72.2	67.0	-7.3%	75	12.1%	-3.9%	50.6	-29.9%	36.7	-49.1%
UK	**771.4**	**657.4**	-14.8%	**675**	2.7%	-0.5%	636.6	-17.5%	613.6	-20.5%
EU 15	4267.0	4199.0	-1.6%	3923.9	-6.6%	-0.9%	4030.4	-5.5%	3981	-6.7%

Source: ML Research, EU

We acknowledge some success, but think more needs to be done to meet targets

Although chart 1 demonstrated that the levels of today are significant improvements on the 'business as usual' steady increase scenario denoted by the purple line, in our view the chart and our analysis gives evidence that increased measures across Europe need to be taken in order to achieve Kyoto, and voluntary, compliance.

Tangible penalties for Kyoto compliance are not severe, the biggest threat to failure is political reputation

Penalties for non compliance of the Kyoto agreement are not particularly severe. If a country misses its targets it would not be authorized to sell any Kyoto unit until it comes back to a compliance situation. In addition 130% of units not surrendered for the 2008-2012 period will need to be surrendered during the following period (i.e. penalty of 30%). However a post 2012 regime has not been agreed. This will be debated at the UNFCCC Conference of the Parties in Bali in December 2007. The biggest deterrent to failure in our view is political humiliation, thus we expect harsher measures to be taken.

Future mitigation policies are taxes, quotas or both

Mitigation policy to be rolled out across broader industries

In our view the analysis above shows that more must be done to achieve Kyoto and voluntary commitments on reducing CO2. In fact the EU is already considering both mitigation and adaptation (strategies to combat the effects of climate change, like flooding and migration) methods, to be communicated by the end of 2008[6]. In this section we focus on the possible policy tools for further emission reduction. So far EU governments have set aside more than €2.7 billion for investments in emission-saving projects under the Kyoto Protocol, which will help EU member states reach their emission targets by 2012 in a cost effective away. However, this is likely to be targeted towards the poorer economies. Most economies will have to finance their own policy measures.

In economic terms, the effects of greenhouse gases on society are defined as externalities. Thus to determine the likely course of further mitigation policy, analysis of the economic theory to tackle externalities is required.

Policy direction determined by the economic theory of externalities

An externality is "an effect of a use of resources on parties that did not have a choice in that use of resource and whose interests were not taken into account. The term refers to situations where human activities generate side effects of some sort that affect the welfare of others in society".[7]

Externalities can be positive and negative

Externalities can be both negative and positive in nature. A positive externality might be education. The more informed an individual, the better choices he or she makes and likely generates a higher positive contribution to society. Greenhouse gases are generally considered negative externalities, since the consensus view is that they are pollutants and the effects of warming from them are indiscriminately damaging. In theory, greenhouse gases could also be a positive externality since warmer temperatures may result in longer crop growing seasons in some regions. However, scientists generally agree that effects are biased towards the negative. The key problem with externalities is that they are an interdependence that occurs outside of the pricing mechanism – i.e. they are not compensated for.

In theory, 3 ways to deal with negative externalities, taxes, quotas and property rights; realistically taxes or quotas

Standard economic theory of externalities talks about three ways of dealing with negative externalities.

- Tax: Emitters face the full social cost of their emissions
- Quota: Regulation to limit the volume of emissions using a allocation and control approach
- Property Rights: Allocation of property rights to underpin bargaining to adopt a polluter pays principle

According to the theory, and as Stern[8] also notes, the price signal (for carbon) should reflect the marginal damage caused by emissions, and rise over time to reflect the increasing damages as the stock of greenhouse gases grow. This could be achieved by taxes or quotas. In theory, the increase in marginal cost

[6] We looked at the green paper in 'EU: Adapting to climate change, 10 July 2007'.

[7] Environmental and Natural Resources Economics: Theory, Policy, and the Sustainable Society, by Steven C Hackett, 1998

[8] The Economics of Climate Change, Nicholas Stern 2006

would encourage emitters to invest in alternative, low carbon technologies, and consumers of GHG-intensive goods and services to change their spending patterns in response to the increase in relative prices. Although likely more expensive than a carbon tax, we look at the financial impact for firms if they offset their carbon emissions by buying and withdrawing carbon credits on the EU ETS from page 40. Below we look at taxes and quotas.

Tax; a price signal to reflect the marginal cost of the externality

Taxes theoretically should be more efficient – allow business to change to new 'optimum' levels

The idea of tax based solutions for externalities is to internalise costs to prompt business to change operations in response to the marginal increase in production cost. Depending on the business the costs may be past on, creating an inflationary impact and possible demand shift from the consumer. In economic terms taxes are considered more efficient because they allow industry to change output to an 'optimal' level and there are limited government costs incurred.

Carbon taxes analysed as early as 1992

The EU considers carbon tax an important instrument to achieve its objective of stabilising CO2 emissions, and as early as May 1992 initial proposals to use a $10/bbl carbon energy tax were evaluated, but not implemented. For the EU as a whole, a paper published in 1996[9] looked at the economic and welfare effects of two energy carbon taxes, a coordinated tax (proposals from 1992) and an uncoordinated energy carbon tax (proposals from 1994). The paper looks at imposition of the tax in Germany only, in a core of Denmark, Germany and the Netherlands, and all EU 12 countries at that time. The assumption was for a tax of $10bbl of energy equivalent.

Analysis considers impacts on the broader economy in the three cases

The report looks at the impact on the broader economy of the carbon tax in the three cases as well as the effects on energy consumption. Although the energy consumption figures would now be redundant, the broader economic implications remain valid. The report finds that across the three scenarios, the gains in environment and employment are the same if the tax is co-ordinated or un-coordinated across countries. However, an un-coordinated approach results in deterioration in the economic backdrop for the country that implements the tax through inflation, lower competitiveness and lower labour productivity. These factors can only be mildly alleviated by a co-ordinated approach. This would indicate that the EU would prefer to implement a EU wide tax system. However, this would be difficult to agree to politically.

Taxation continues to be a consideration

The EU continues to consider possible routes of taxation to reduce carbon, and will prepare a green paper on indirect taxation in 2007 and will subsequently review the Energy Tax Directive in 2008 to facilitate a more targeted and coherent use of energy taxation by integrating energy efficiency considerations and environmental aspects.

Environmental tax as proportion of total tax almost reaches 10% for some countries

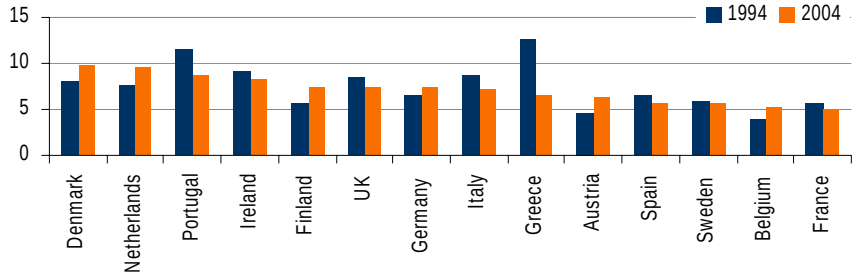
Environmental taxes have already been operation in the EU for many years. Chart 2 below shows the contribution of environmental taxes to total tax revenues. There is an argument to suggest that countries with a higher environmental tax revenue as a proportion of total tax revenues could be more focused on environmental issues and therefore have a lower emission profile. There is no evidence of this however from the chart 2 below.

Denmark and the Netherlands, with environmental taxes representing almost 10% of tax revenues in 2004 are not set to meet their burden sharing agreements

[9] 'Co-ordinated versus unco-ordinated European carbon tax solutions' – Capros et al, published in Economic Aspects of Environmental Policy, 1996

with existing domestic measures. Thus the incidence of tax alone may not be enough to drive an optimal emission reduction strategy, it would nee to have a strong directive. Revenues raised as a percentage of GDP ranges from 2.0% in Spain to 4.8% in Denmark. This would suggest that there is room for some countries to raise more revenues from environmental taxes.

Chart 2: Environmental tax as a percentage of total tax



Source: EEA, OECD; http://www2.oecd.org/ecoinst/queries/index.htmt

Taxes, if implemented effectively, and with transparency on the use of revenues, could be a low cost mechanism to internalise the costs associated with carbon. However, they are politically unpopular and could likely have harmful inflationary side effects.

Quotas; regulating emissions

Quotas restrict quantity of emissions

A quota for emissions would be a regulatory tool by implementing a ceiling on the quantity of emissions. Quotas thus directly restrict the quantities of emissions and in theory indirectly affect prices through the artificial scarcity that the quantity restriction creates. The EU ETS is an example of a quota based system, and illustrates the fundamental difficulty - deriving a realistic and acceptable cap. In Europe there are 11,500 installations covered by the scheme who have been granted allowances for operations, but to meet the allowances must reduce emissions, and use CDM (clean development mechanism and JI (joint implementation) credits from the Kyoto mechanism.[10] The country pages from page 13 show the number of installations that are subject to a cap under the cap and trade scheme of the EU ETS, and which companies are affected by the cap. The volume of installations also illustrates the potential difficulty with monitoring and verifying the scheme.

Producers prefer quotas as they can help define the allowance

Regulated quotas are deemed a less efficient policy tool by economists because even with perfect information there is a cost associated with monitoring and enforcing quotas. Economists tend to favour price adjustments (i.e. tax) rather than regulation because there is greater leeway for the affected parties to respond in an optimising manner to the financial constraints. Producers tend to favour quotas however, as they can often help derive the allowance. However, quotas and taxes can be used in conjunction with each other.

EU Emissions Trading Scheme - Regulates heaviest emitters

Kyoto provides impetus for mitigation, but EU has burden sharing agreement to reach goals facilitated through the EU ETS

To reach the Kyoto targets, the EU opted for a regulated quota system, to place a cap on emissions of the heaviest emitters. The EU ETS was formed to facilitate the trading of carbon credits between heavy emitting installations. A company may have many installations that are regulated.

[10] EU Climate change page http://ec.europa.eu/environment/climat/campaign/internationalaction_en.html

Initial over allocation diminished the value of the scheme

To reach the targets set by the national allocation plan, the country must make reductive measures, but can 'top up' by buying credits through the EU ETS. However, countries must implement emission reduction measures and not simply purchase credits. In economic theory targeting the highest emitters with a quota scheme is credible. However, an initial over allocation of allowances diminished the value of the scheme and led to a collapse in the price of credits.

Table 4 shows the allocation for Phase I and Phase II and shows the country submissions versus the EU grant. It shows that there is some reduction expected from most countries.

Table 4: European Country Emissions and Installation allowance

			NAP		Installation Allocation (Gigatonne)	
	Phase I 2005 - 2007	Verified Emissions 2005	Proposed Cap Phase II 2008 - 2012	Allowed Cap Phase II 2008 - 2012	2005	Percentage of country emissions (2005)
Austria	33	33.4	32.8	30.7	32,415	34.8
Belgium	62.1	55.4	63.3	58.5	58,310	40.5
Denmark	33.5	26.5	24.5		37,304	57.7
Finland	45.5	33.1	39.6		44,666	64.5
France	156.5	131.3	132.8	132.8	150,412	26.8
Germany	499	474	482	453.1	493,534	49.3
Ireland	22.3	22.4	22.6	21.2	19,237	27.5
Italy	232.5	223.1	209		216,150	37.1
Netherlands	95.3	80.3	90.4	85.8	86,452	40.8
Portugal	38.2	36.4	37.9		36,909	43.1
Spain	174.4	182.9	152.7	152.3	172,189	39.1
Sweden	22.9	19.3	25.2	22.8	22,289	33.3
UK	245.3	242.4	246.2	246.2	206,125	31.4

Source: http://ec.europa.eu/environment/ets/welcome.do
http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note a gigatonne = 1000 tonnes

Allocation of property rights not a feasible policy solution because the environment is a fugitive resource

Property Rights – Defining who pays

In theory, a full set of property rights can be allocated among those causing the externalities and / or those affected which can underpin bargaining or trading. The allocation of a property right means that an enforceable authority can undertake particular actions in specific circumstances. However, resources such as air, oceans, groundwater, and fisheries are fugitive resources, meaning that it is difficult or impossible to partition the stock of the resource into individually owned parcels; these resources are less likely to be private property which means there is no one to penalise for the effects on them. Allocation of property rights is not a feasible policy solution.

Policy dilemma: stringent enough penalties to deter emissions but not so high as to threaten economic growth

Conclusions: more to be done

Policy so far for mitigation has been credible from an economic basis, as it has targeted the highest emitters first using a regulated quota based system. However, flaws in allocations led to a surplus, implying that emission reductions have not been as effective as planned. With the EU ETS targeting on average less than 45% of emissions by country, and countries not on track to meet individual targets under the burden sharing agreement, wider measures are necessary.

The economic theories above present straightforward solutions of taxes and/or quotas to address externalities. In reality however greenhouse gases are a global externality, and finding a one size fits all solution is unrealistic. Yet to reach their own targets in Europe, governments are likely to have to adopt one of these two approaches. Below we look at country positioning in more detail. The likely outcome will be for countries to use a combination of quotas and taxes, but the

dilemma for policy makers is to find a penalty that is high enough to invoke the behavioural change towards carbon reduction, but that is not too high too threaten economic growth. Strong governance of the policy is required.

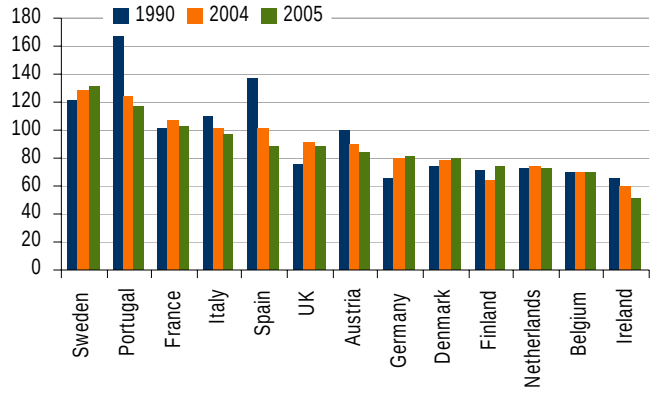
Country progress mixed, not many on target

Carbon Footprint – indicator of the efficiency of emission, measured as tonnes per capita

Average EU Carbon Footprint is 87.7 tonnes

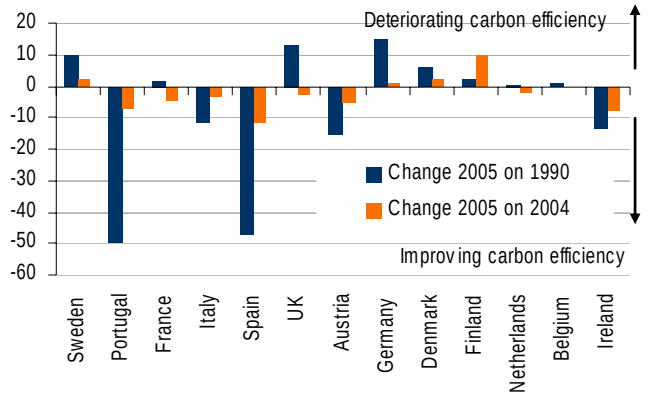
In the above sections we have looked at country profiles under the European burden sharing agreement. However, looking at carbon on a pure absolute basis does not demonstrate the carbon footprint, as measured by carbon per capita of countries, and provides a benchmark to establish which countries may be able to improve on their emissions exposure. Chart 3 below shows countries ranked by their Carbon Footprint for 2005, but including Carbon Footprint for 1990 and 2004. This shows whether countries have become more efficient. It shows that Sweden is the most carbon intensive, emitting 131 tonnes of carbon per capita in 2005. This has been on a deteriorating trend. Chart 4 shows that the carbon efficiency for the country has deteriorated since 1990. The best country is Ireland, where 51.5 tonnes per capita are emitted per year. The average across the countries featured is 87.7 tonnes per capita for 2005. Of the largest economies in Europe, France has the most opportunity for reduction to get towards the EU average, and has posted an improvement from 2004 to 2005.

Chart 3: Carbon Efficiency (TCO2e per capita)



Source:
http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php

Chart 4: Change in carbon efficiency from 1990 and 2004 to 2005



Source:
http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php

From page 19 we highlight data by country. For each country we show the number of installations regulated by the EU ETS and the companies which are impacted by the system. We also show the emissions profile versus GDP and discuss the ranking and efficiency of countries.

Table 5: Summary EU ETS Data

	2005	2006	2007
Installations	199	199	199
Allowance (mt)	32.4	32.7	32.8
No Companies effected	13	17	17

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 6: Companies with regulated installations in Austria

Agrana	Mayr Melnhof	Semperit
BMW	M-Real	Solvay
DSM	Norske Skog	Verbund
EVN	OMV	Voest Alpine
Lafarge	Saint Gobain	Wienerberger
Lenzing	SCA	

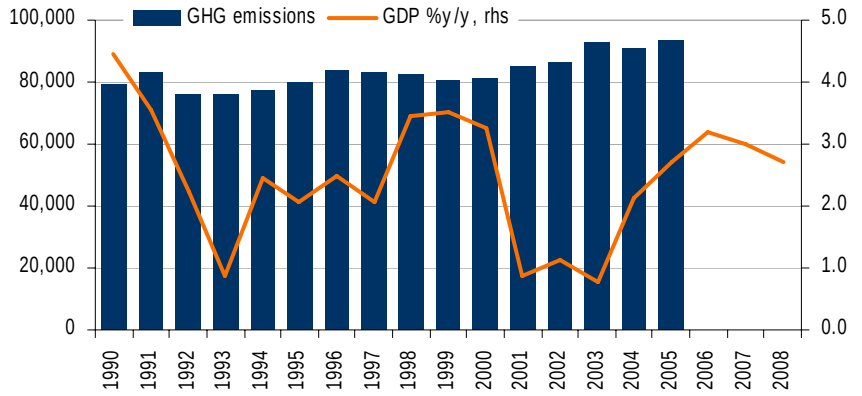
Source: http://ec.europa.eu/environment/ets/welcome.do

Austria – not on track for target reductions

Austria has a population of 8.2m and a GDP per capita of 28,700 at current market prices on a purchasing power standard (pps) basis, which places its economy at the wealthier end of the EU country scale. Table 6 shows the number of installations regulated and amount of allowances given according to the EU ETS, its shows that the allowances have remained broadly constant in the last three years. The EU ETS allowances represent 35% of country emissions. The companies with regulated installations are highlighted in table 7.

Chart 5 below shows the progression of carbon emissions in Austria since 1990, the base year for Kyoto measurement. Emissions (excluding land use, land use change and forestry; LULUCF) have increased by 18% since then. Austria is not on track to meet its -13% target according to the burden sharing agreement, and posted a 2.3% increase in emissions from 2004 to 2005. However, carbon efficiency has improved over the period. Carbon per capita was reduced to 87.9 in 2005 from 103.7 in 1990, which comes against a population increase of 3.8% and positive GDP growth. Chart 5 shows that there is a limited relationship between the stock of emissions and GDP growth.

Chart 5: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Table 7: Summary EU ETS Data

	2005	2006	2007
Installations	322	322	307
Allowance (mt)	58.3	59.9	60.4
No Companies effected	22	22	22

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 8: Companies with regulated installations in Belgium

Agfa-Gevaert	Dow Chemical	Petroplus
Amcor	Esso	Sappi
Atlas Copco	Fortis	SCA
BASF	InBev	St Gobain
Bekaert	Kimberley-Clark	Stora Enso
BP	Lanxess	Total
Corus	Monsanto	Umicore
		Volkswagen

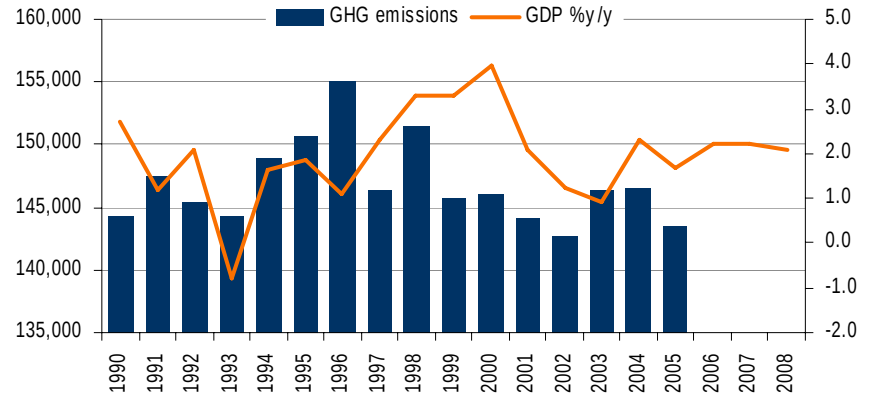
Source: http://ec.europa.eu/environment/ets/welcome.do

Belgium – will miss target

Belgium has a population of 10.4m and an economic GDP per capita of 27,600 at current market prices on a pps basis. Table 7 shows that the number or regulated installations have decreased in 2007 and that allowances have increased slightly in the last three years. Table10 shows the companies with regulated installations. The EU ETS regulates 40.5% of Belgian emissions.

Chart 6 below shows the progression of carbon emissions in Belgium since 1990. Emissions (excluding LULUCF) have fallen by 1.3% since then, but Belgium is not on track to meet its burden sharing agreement reduction of 7.5%. Carbon efficiency has slightly worsened over the period with carbon per capita increasing to 70.2 in 2005 from 69.3 in 1990. However, the level remains good in a European. Chart 8 shows that there is some relationship between the stock of emissions and GDP growth, and levels of emissions have been more volatile than for other regions.

Chart 6: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Denmark – will miss targets

Denmark is a wealthy country with a population of just 5.4m and GDP per capita of 29,100 (pps). Despite almost half the population of Belgium, Table 11 shows that is has more regulated installations, but allowances regulated are half that of Belgium. However, the EU ETS regulates 57.7% of country emissions. The number of installations likely indicates a possibility for a degree of economies of scale between the public installations. Allowances were reduced from 2005 to 2006, but have since remained constant. The companies with regulated installations are highlighted in table 12.

Table 9: Summary EU ETS Data

	2005	2006	2007
Installations	388	388	377
Allowance (mt)	37.3	27.9	27.9
No Companies effected	12	12	12

Source: http://ec.europa.eu/environment/ets/welcome.do

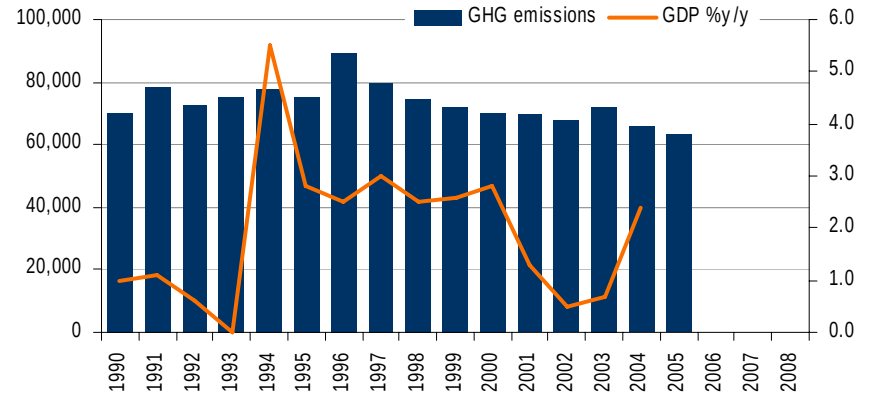
Table 10: Companies with regulated installations in Denmark

Akzo Nobel	Danisco	Saint Gobain
Arla Foods	Lafarge	SCA
BASF	Novo Nordisk	Shell
Carlsberg	Novozymes	Wienerberger

Source: http://ec.europa.eu/environment/ets/welcome.do

Chart 7 below shows the progression of carbon emissions in Denmark since 1990. Emissions (excluding LULUCF) have decreased by 7.2% since then, but efficiency has also decreased. Carbon per capita increased to 80.4 in 2005 from 74.6 in 1990. Chart 11 shows the broadly improving trend towards reducing emissions for Denmark however. Despite the progress, Denmark is not on track to meet its 21% reduction target under the European burden sharing agreement.

Chart 7: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: where detailed, GDP growth is ML forecast data from 2006

Part of the Danish taxation of energy, includes a CO2 and sulphur tax, introduced in 1992, where the tax rate is balanced according to CO2/SO2 emitted during combustion of each fuels. Denmark has the highest proportion of tax revenues coming from environmental tax.

Table 11: Summary EU ETS Data

	2005	2006	2007
Installations	606	606	539
Allowance (mt)	44.7	44.6	44.6
No Companies effected	3	3	3

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 12: Companies with regulated installations in Finland

M-Real	Nokia	Nokian Tyres

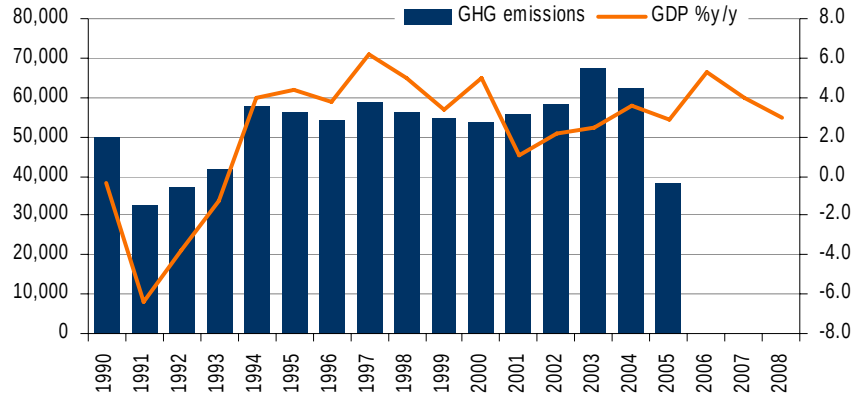
Source: http://ec.europa.eu/environment/ets/welcome.do

Finland - additional measures needed

Finland has a population of 5.1m and an economic GDP per capita of 26,200 (pps). Table 13 shows that despite a smaller populations the country has almost 60% more installations and allowances than Denmark, which has a just a c5% larger population. However the EU ETS regulates the largest proportion of country revenues than for the rest of the EU, at 64.5% of country emissions. There are only three companies that have regulated installations in Finland, as shown in table 14. On our projections the burden sharing agreement target will be met but under the European Environment Agency calculations Finland will only meet its targets with currently planned additional measures.

Chart 8 below shows the progression of carbon emissions in Finland since 1990. Emissions (excluding LULUCF) have decreased by 2.7% since then, with carbon per capita remaining relatively stable at 73.7 in 2005. Chart 8 shows that emissions have been on a broadly rising trend through the 1990's, in line with high rates of GDP growth.

Chart 8: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

In 1990 Finland was the first to impose a carbon-based environment tax, introducing a CO2 tax on fossil fuels. The CO2 tax was replaced in 1994 by a combined CO2 and energy tax on fuels used to produce electricity and heat.

France - additional measures required

Table 13: Summary EU ETS Data

	2005	2006	2007
Installations	1091	1091	1079
Allowance (mt)	150.4	149.9	149.7
No Companies effected			

Source: http://ec.europa.eu/environment/ets/welcome.do

France has a population of 60.6m and GDP per capita of 25,500 (pps). Table 15 shows that it has more than 1000 regulated installations. France has the lowest proportion of emissions represented by the EU ETS, at 26.8%, but table 16 shows that its shows that there are many companies that are regulated. In France the French Environment and Energy Management agency looks at measures to abate air, noise, waste pollution.

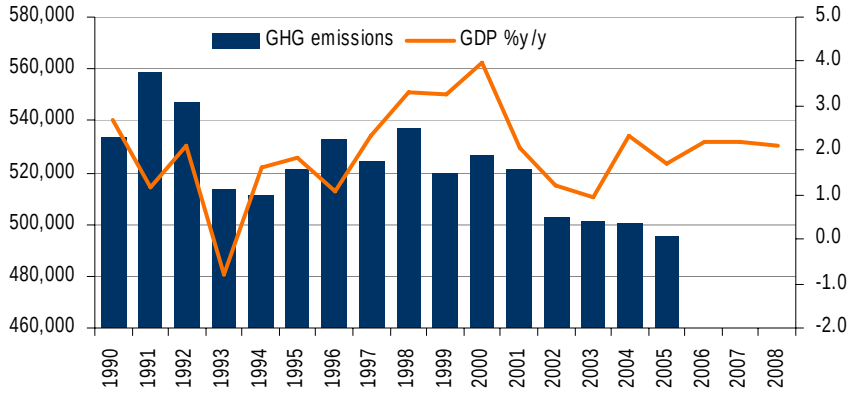
Table 14: Companies with regulated installations

Ahlstrom	Arkema	Caterpillar
Airbus France	Astrazeneca	Clariant
Alstom	BASF	Colgate Palmolive
Aluminium Pechiney	Heineken	Continental
Arc International	Imerys	Danone
Arcelor	Cargill	Degussa
EDF	Faurecia	Henkel
Esso	Gaz de France	Holcim
Exxonmobil	Glaverbel	Huhtamaki
St Gobain	Lanxess	Nestle
Kimberley Clark	Michelin	Norske Skog
Lafarge	M-Real	Peugeot Citroen
Procter & Gamble	Shell	Statoil
Renault	Smurfit	Tate & Lyle
Rhodia	Solvay	Total
UPM	St Microelectronics	Umicore
Wienerberger		

Source: http://ec.europa.eu/environment/ets/welcome.do

Chart 9 below shows the progression of carbon emissions in France since 1990, and reveals a broadly positive trend. Emissions (excluding LULUCF) are down 1.8% since then, and France is on track to meet its burden sharing target of a 0% with currently planned additional measures. Carbon efficiency has nudged upwards to 103.1.

Chart 9: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Table 15: Summary EU ETS Data

	2005	2006	2007
Installations	1866	1866	1823
Allowance (mt)	493.5	495.5	497.3
No Companies effected	4	4	4

Source: http://ec.europa.eu/environment/ets/welcome.do

Germany – additional measures required

Germany has the largest population in the EU of 82.5m and a GDP per capita of 25,500 (pps). Consequently, with tonnage around 1m per year it has the largest emission profile in the EU. Table 17 shows the installations regulated and amount of allowances according to the EU ETS, its shows that the allowances have remained broadly constant in the last three years. In Germany the EU ETS regulates 49.3% of emissions. The companies with regulated installations are highlighted in table 18. The German data given by the EU website lists the installations mostly as numbers, so it is difficult to ascertain the underlying source of the emissions. Thus it appears as though only 4 companies are regulated – this is unlikely to be the case in our view. Germany has a hefty -21% burden sharing agreement, and is on track to meet this if it implements currently planned additional measures.

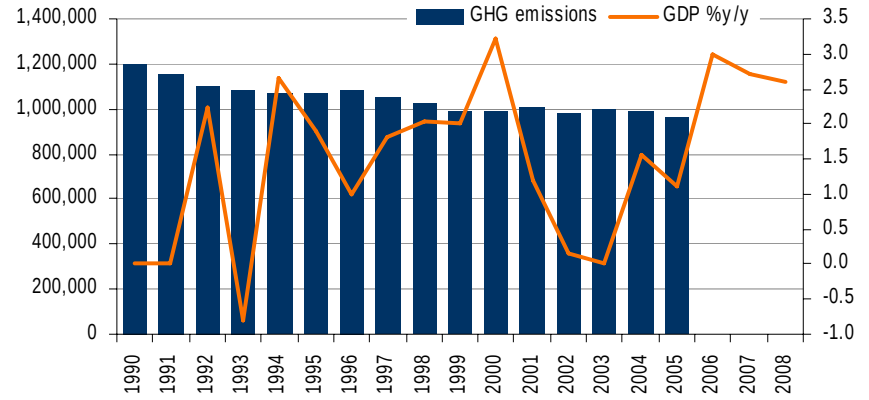
Table 16: Companies with regulated installations in Germany

Bosch
Saint Gobain
Samsung
Schott

Source: http://ec.europa.eu/environment/ets/welcome.do
Note in Germany many installations are given a number rather than a name which disguises the underlying company

Chart 10 below shows a positive progression (i.e. reduction) of carbon emissions in Germany since 1990. Emissions (excluding LULUCF) have decreased by 18.4% since then, which is the largest reduction of the EU 15. However the Carbon Footprint per person has risen from 66.4 tonnes per head to 81.4. Given the absolute levels however, tonnage reduction is encouraging. Chart 20 shows that there is a more consistent downward trend than for other regions, despite erratic GDP growth.

Chart 10: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Ireland – set to miss targets

Ireland has a small population of just 4.1m but after several years of strong economic growth has a GDP per capita of 32,100 (pps) which is the strongest of the EU. Table 19 shows the installations regulated and amount of allowances according to the EU ETS, its shows that the allowances have remained broadly constant in the last three years with the mechanism regulating just 27.5% of country emissions. The companies with regulated installations are highlighted in table 20.

Chart 11 below shows the progression of carbon emissions in Ireland since 1990, with emissions (excluding LULUCF) up 26.3% since then, which appears excessive but economic growth has been particularly strong. In addition carbon efiiciency has improved to 87.9 tonnes per capita in 2005 from 103.7 in 1990. This is encouraging, but on current forecasts the country will not meet its burden sharing agreement of an increase of 13%.

Table 17: Summary EU ETS Data

	2005	2006	2007
Installations	117	117	106
Allowance (mt)	19.2	19.2	19.2
No Companies effected			13

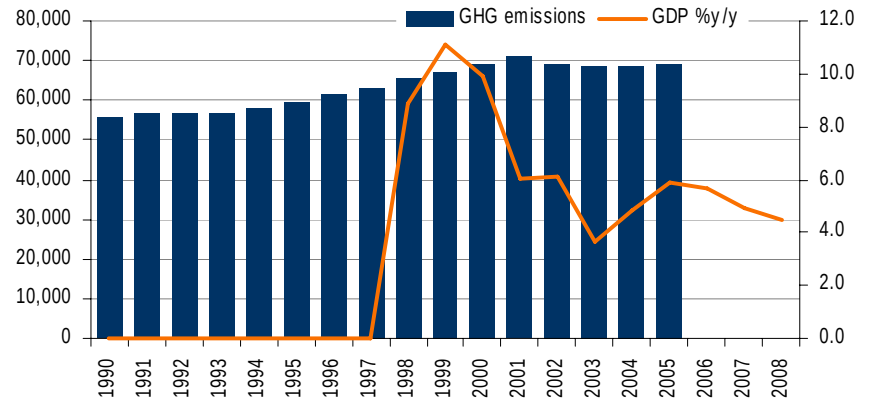
Source: http://ec.europa.eu/environment/ets/welcome.do

Table 18: Companies with regulated installations in Ireland

Abbott Ireland	Golden Vale (Kerry ingredients	Smurfit
Bristol-Myers	Kingscourt Bricks	Wyeth
		Smithkline
Cadbury	Merck	Beecham
ConocoPhillips	Novartis	Genzyme
Eli Lily	Pfizer	Elan
Irish Cement	Schering Plough	

Source: http://ec.europa.eu/environment/ets/welcome.do

Chart 11: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Table 19: Summary EU ETS Data

	2005	2006	2007
Installations	1006	1006	945
Allowance (mt)	216.2	205.1	203.3
No Companies effected	22	22	22

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 20: Companies with regulated installations in Italy

Cementir	Heineken	Saint Gobain
Ciba	Kimberley Clark	Sanofi-Aventis
EniPower	Mondadori	Sasol
ERG	Mondi	SCA
Glaverbel	Parmalat	Smurfit
Glaxo Smithkline	Proctor & Gamble	Solvay
Trelleborg	Unilever	Wyeth
Saras		

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 21: Summary EU ETS Data

	2005	2006	2007
Installations	212	212	207
Allowance (mt)	86.5	86.4	86.4
No Companies effected	32	32	32

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 22: Companies with regulated installations in Holland

Air Liquide	DSM	Fuji Photo
Akzo nobel	E.ON	Gaz de France
		General Electric
Alcoa	Electrabel	Plastics
BP	Essent	Glaverbel
Cargill	Esso	Heineken
DMV	ExxonMobil	Mayr Melnhof
Pechiney	Philips Lighting	Norske Skog
Rexam	Saint Gobain	Sappi
SCA	Shell	Smurfit
Tate & Lyle	Ten Cate	Total
	Petro Canada	Uniqema

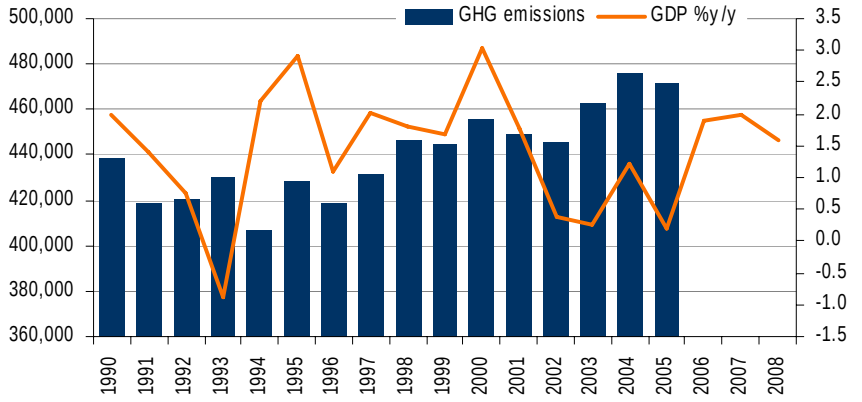
Source: http://ec.europa.eu/environment/ets/welcome.do

Italy - will miss target

Italy has a population of 58.5m and an economic GDP per capita of 24,100 on a pps. Table 21 shows that over 1000 installations are regulated. The EU ETS regulates 37% of country emissions and table 22 shows the regulated companies.

Italy has not made good progress towards its burden sharing agreement, which is 6.5% below 1990 levels. Instead, since 1990 emissions have increased by 12.1%, and consequently Italy is set to miss its target. Chart 12 shows the predominantly increasing trend. Carbon efficiency has improved since 1990, emissions per capita were at 109.3 at that time and have now improved to 97.6. This is still above the 87.7 European average however and would suggest room for improvement.

Chart 12: Absolute CO2 emissions and GDP Growth (MtCO2e)

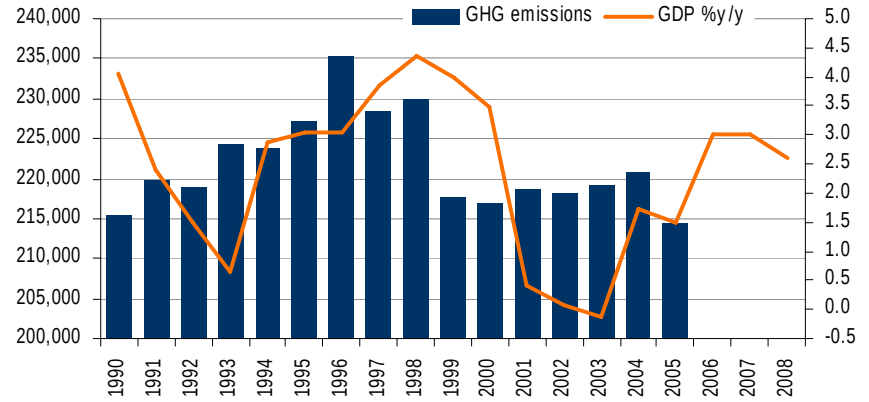


Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

NetherlandsThe Netherlands has a population of 16.3m and an economic GDP per capita of 28,900 at current market prices on a pps basis. Table 23 shows the installations regulated and amount of allowances according to the EU ETS, which regulates 40.8% of country emissions, its shows that the allowances have remained constant in the last three years. Table 23 shows the regulated companies.

Chart 13 shows that emissions increased in the Netherlands from 1990 to 1996, but since then have been on a broadly improving trend. Holland is set to meet its burden sharing 0% target with its currently planned additional measures. Carbon per capita has remained broadly stable since 1990. Then 72.3 tonnes per capita were emitted. In 2005, 72.6 tonnes per capita were emitted. This is far below the European average of 87.7 tonnes.

Chart 13: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Portugal - not on track

Portugal has a population of 10.5m and an economic GDP per capita of 16,700 at current market prices on a pps basis, which places it at the poorer end of the EU country scale. Table 25 shows the installations regulated and amount of allowances according to the EU ETS, its shows that the allowances have remained broadly constant in the last three years. Only four companies are regulated in Portugal, but the entire system regulates 43.1% of country emissions. Portugal has increased emissions by 42.8% since the 1990 base year. Its burden sharing agreement is an increase of 27%, but it is likely to miss this target. Chart 35 shows the steady increase since 1990.

Table 23: Summary EU ETS Data

	2005	2006	2007
Installations	255	255	244
Allowance (mt)	36.9	36.9	36.9
No Companies effected	4	4	4

Source: http://ec.europa.eu/environment/ets/welcome.do

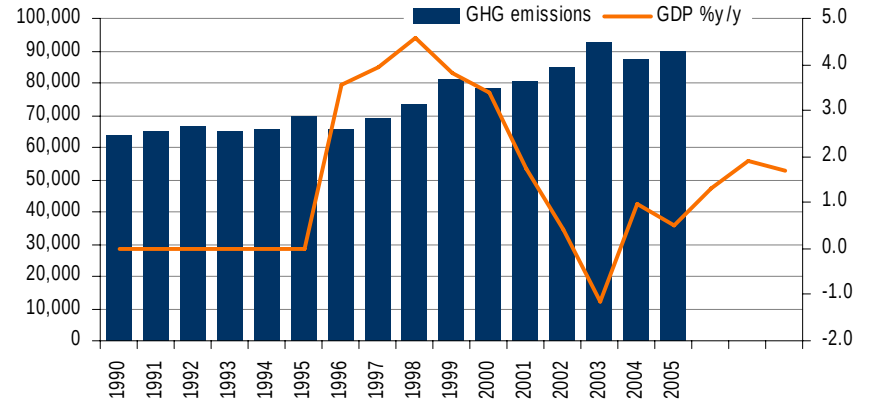
Table 24: Companies with regulated installations in Portugal

Continental
Emrpesa
Portucel
Soporcel

Source: http://ec.europa.eu/environment/ets/welcome.do
Note many installations are numbered, this analysis could under estimate the installations

Portugal has made significant progress in Carbon Footprint since 1990. At that time emissions per capita stood at 167 tonnes. In 2005 however, that level had reduced to 116.9 tonnes. This level versus the European average of 87.7 suggests that there is still some way to improve on a per capita basis.

Chart 14: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Table 25: Summary EU ETS Data

	2005	2006	2007
Installations	1026	1026	997
Allowance (mt)	172.2	166.3	159.8
No Companies effected	26	26	26

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 26: Companies with regulated installations in Spain

Arcelor	Johnson Mattey	Volkswagen
BASF	Kimberly Clark	BPB
Bayer	Michelin	Bunge
Bridgestone	Nestle	
Cargill	Nissan	
Cemex	Pirelli	
Daimler Chrysler	Peugeot Citroen	BP in 05 06 not 07
Dow Chemical	Puleva	
Enagas	Renault	
General Electric	Repsol	
Empresarial	Saint Gobain	
Heineken	Solvay	
Heinz	Unilever	
Henkel	Uralita	

Source: http://ec.europa.eu/environment/ets/welcome.do

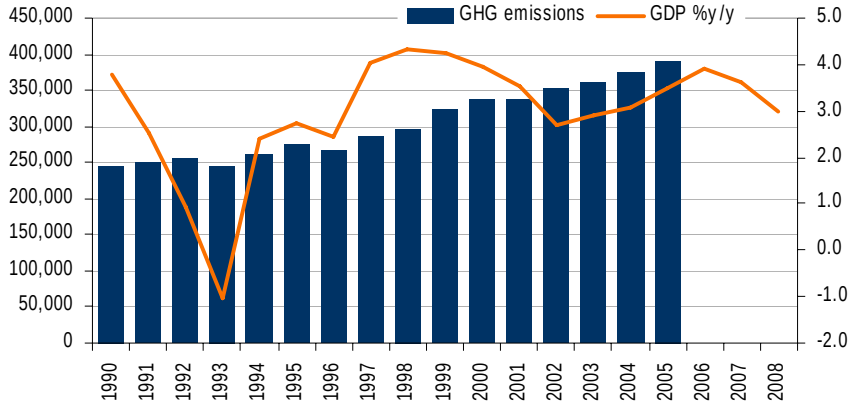
Spain – not on track

Spain has a population of 43m and an economic GDP per capita of 23,100 at current market prices on a pps basis. Table 27 shows that over 1000 installations are regulated, which represent some 39.1% of country emissions. Table 28 shows the regulated companies.

Chart 15 below shows the steadily increasing progression of carbon emissions in Spain since 1990. Emissions (excluding LULUCF) have increased by 53%, the highest level in the EU since then. Spain is one of the countries with an increase pencilled in for its burden sharing agreement – of 15%, but it is not on track to meet this increase, and to get to this level, would have to post a reduction of 25% to 2012.

Spanish carbon efficiency however, is almost at the EU average level (87.7tonnes), it currently stands at 89.2 having decreased from 136.8 tonnes per capita in 1990.

Chart 15: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Table 27: Summary EU ETS Data

	2005	2006	2007
Installations	736	736	705
Allowance (mt)	22.3	22.5	22.8
No Companies effected			

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 28: Companies with regulated installations in Sweden

ABB	Rottneros	Swedish Match
AstraZeneca	Saab	Volvo
Billerud	Saint Gobain	Wallenstam
Holmen	SCA	
M-Real	SSAB	
Rexam	Stora Enso	

Source: http://ec.europa.eu/environment/ets/welcome.do

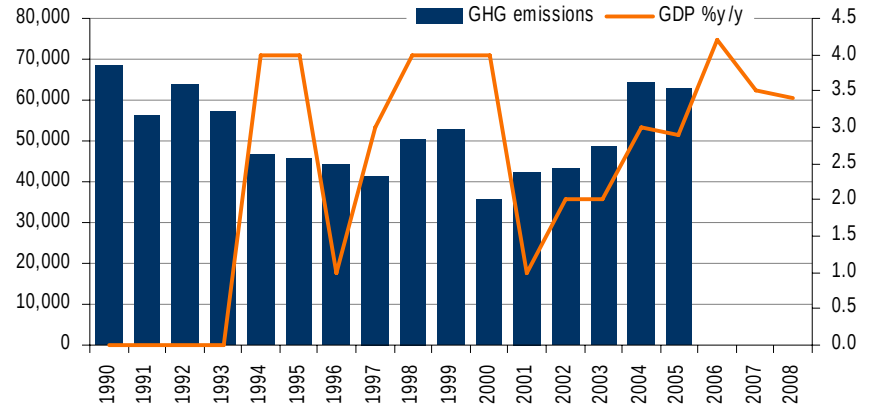
Sweden – one of two on track

Sweden has a population of 9m and an economic GDP per capita of 26,900 on a pps basis, which places it at the wealthier end of the EU country scale. Sweden has a high amount of installations for its level of population, but the scheme only regulates 33.3% of country emissions. This could indicate a potential for economies of scale for installations. Sweden is one of only two countries (the other is the UK) that is set to meet its burden sharing agreement of 4%. Since 1990 it has reduced emissions by -7.3%. The companies with regulated installations are highlighted in table 29.

Chart 16 demonstrates volatile swings in carbon however. In addition, carbon efficiency has deteriorated since 1990. At that time, tonnes per capita were 121.9 However, has carbon efficiency improved over the period. Carbon per capita has reduced to 87.9 in 2005 from 103.7 in 1990. Chart 4 shows that there is a limited relationship between the stock of emissions and GDP growth.

In 1991 Sweden introduced a CO2 tax levied as a specific tax on all fossil fuels (but with lower rates for manufacturing industries and horticulture) and a sulphur tax (SO). In 1992 a nitrogen oxide tax (NOx), was introduced. All taxes are lower for industries, agriculture, forestry and fisheries for improving the competitiveness of these Swedish sectors.

Chart 16: Absolute CO2 emissions and GDP Growth (MtCO2e)



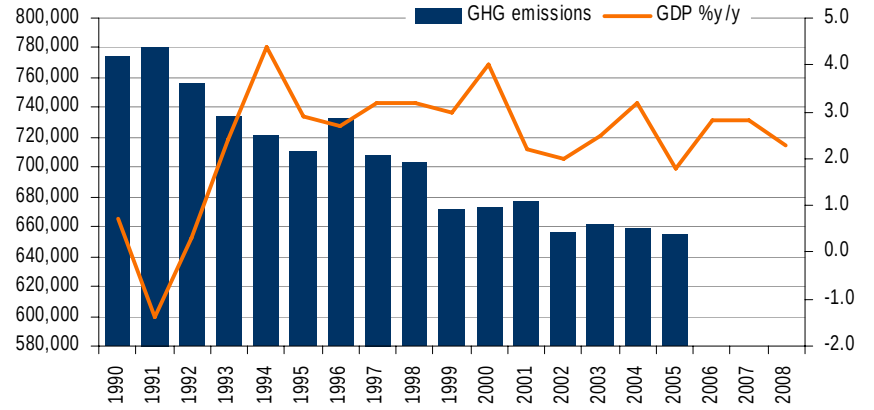
Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

United Kingdom – on track for targets

The UK has a population of 60m and an economic GDP per capita of 27,300 at current market prices on a pps basis, which places it at the wealthier end of the EU country scale. Table 31 shows the installations regulated and amount of allowances according to the EU ETS, its shows that the allowances have remained broadly constant in the last three years. The companies with regulated installations are highlighted in table 32.

Chart 17 below shows the progression of carbon emissions in the UK since 1990. Emissions (excluding LULUCF) have decreased by -14.8% since then.

Chart 17: Absolute CO2 emissions and GDP Growth (MtCO2e)



Source: ML Economic Research; http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3929.php
Note: GDP growth is ML forecast data from 2006

Table 29: Summary EU ETS Data

	2005	2006	2007
Installations	797	797	732
Allowance (mt)	206.1	206.1	215.9

Source: http://ec.europa.eu/environment/ets/welcome.do

Table 30: Companies with regulated installations in the UK

Alba	Glaxo Smithkline
BAE	Kemira
Bayer	Peugeot
BMW	Lafarge
BP	Rhodia
British Airways	Rolls Royce
BAT	ScottishPower
Ciba	Shell
ConcoPhillips	Smith & Nephew
Corus	Syngenta
Croda	Tate & Lyle
Dairy Crest	Toyota
Diageo	Tullow Oil
Drax	UPM Kymmene
DSM	
EDF	
Esso	

Source: http://ec.europa.eu/environment/ets/welcome.do

Companies - All have a carbon footprint

Carbon footprint measurement possible for companies and individuals

All companies (and individuals) can measure their carbon foot print, by analysing the activities that emit CO2. Through 2007 more companies have started to commit to carbon reduction initiatives in their annual reports or separate sustainability reports. The main guidelines of carbon measurement are set out under the Greenhouse Gas Protocol.

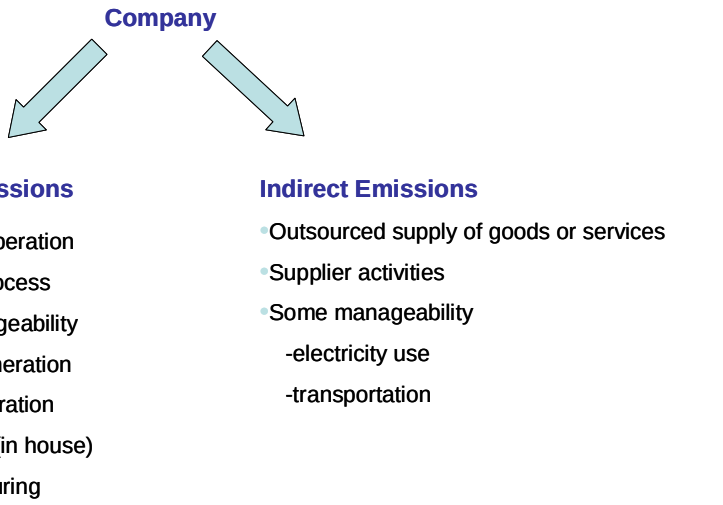
Direct emissions come from industrial processes generally integral to the business

In short, carbon can be measured on a direct and indirect basis. Direct emissions are those that occur as an integral part of the day to day operations of the business, and are emissions generated from industrial processes. These are embedded across more sectors than may be first thought and the sector tables below show the magnitude of emissions by sector. However, these emissions will of course be more significant to some sectors than to others. The businesses that are most effected are those with a high level of industrial processes.

Indirect emissions are those where the company pays for the supply of a good or service

Indirect emissions for a company are measured as those that are emitted in the course of producing a good or services that is supplied to the company. The main ones for most companies are electricity usage (buying power from the grid) or business travel (buying the service from the airline). Indirect emissions tend to have a greater potential for management, since companies can change suppliers or find economies of scale.

Chart 18: Break down of emissions



Source: TruCost

Example for Beverages

Brewing installations regulated under the EU ETS

Beverages businesses may have installations that are regulated by the EU ETS. Indeed Heineken and Carlsberg both have regulated installations. Emissions from these installations are captured within the direct calculation. Other processes captured in the direct calculation would be CO2 as a by-product of the fermentation process.

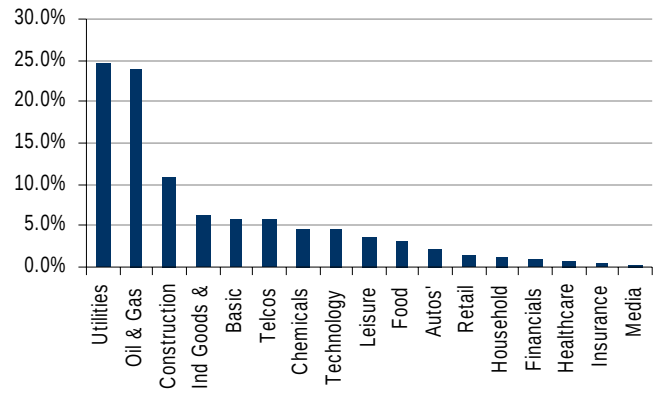
Pitfalls to measurement even within sectors because of outsourcing versus in house

There are pitfalls however, as to how different parts of the operational process may be counted. For example, transport costs may be direct, indirect, or not included at all. If the company owns a fleet of lorries which it uses for distribution, the emissions from transportation would be counted as direct. If however, it uses a logistics company, these emissions are counted as indirect for the beverage company (and direct for the logistics company). If the product is sold to a wholesaler before it leaves the warehouse, the transportation emissions are not counted. To reduce indirect emissions business can improve efficiencies, or switch to suppliers that are more efficient or that use a higher proportion of renewable energy if possible. Another area that could have varied (either direct or indirect) methodology for beverages could be the packaging process – i.e. it could be outsourced of manufactured in house.

Sector representation of emissions

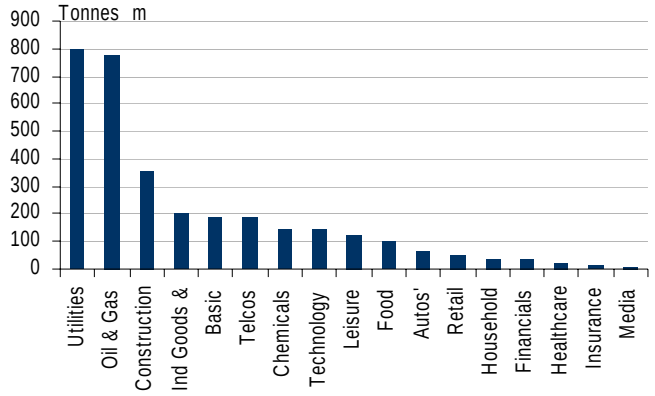
We noted above that sector emissions vary from direct emissions intensive to more indirect emission intensive. Chart below shows the representation of direct + indirect emissions for sectors according to the DJ Stoxx 600.

Chart 19: Proportion of emissions by sector



Source: TruCost

Chart 20: Absolute tonnes by sector



Source: TruCost

The oil and gas and utilities sectors represent almost half of the emissions in the DJ Stoxx 600, compared with 16% of the market cap weighting in the sector.

Carbon exposure as a liability

EU policy to move to low carbon economy

Earlier, we noted that it is central to EU policy to move to a low carbon economy, and highlighted that to do so points towards wider measures than currently implemented by the EU ETS. In our view this means that all companies will be impacted.

Investors starting to question risks associated with carbon liability

Companies can benefit from pre-empting policy decisions, and indeed market mechanisms may have shifted in favour of pro-activism. Carbon exposure is an off-balance sheet liability which investors are increasingly viewing as higher risk, and hence valuing that risk. In the tightening of credit markets riskier (higher off balance sheet liability) companies could be subject to a higher cost of capital.

Carbon liability capped at the cost of offsetting

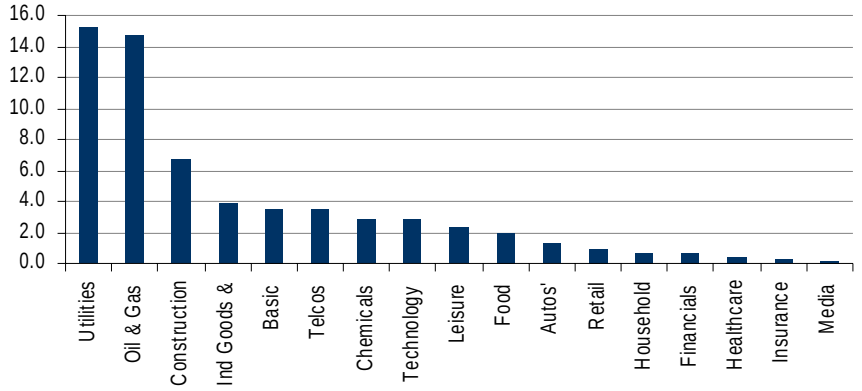
For companies the carbon liability is capped at the cost to offset total emissions. This is not a credible strategy however, and should only be used in addition to carbon reduction policies, not instead of since offsetting simply shifts, not solves, the carbon problem. A company could invest in regulated offset programmes under the clean development mechanism or joint implementation programmes of the Kyoto Protocol[11], or by buying and withdrawing credits from the EU ETS.

[11] For more details on the Kyoto Protocool please refer to 'Combating Climate Chage – Opportunities and Risks'

Cost if all emissions were offset shows maximum liability

Chart 49 below shows the costs per sector if all emissions (direct and indirect) were offset at the current carbon price which is €19.00 for 2008 delivery. This calculation overstates the financial exposure to companies since they would likely implement efficiency changes to reduce carbon, but nevertheless it is an interesting cap. In utilities and oils, the cap would be €15bn and €14bn respectively. At the bottom end, the least impacted media sector would have a bill of €154m if all companies offset their emissions (at 2005 levels) in their entirety.

Chart 21: Total financial liability by sector



Source: Trucost, ML Research

Carbon exposure as an opportunity

Most carbon efficient companies offer stock opportunity

Investors can also look at carbon exposure as an opportunity, namely by identifying the most carbon efficient companies. Not only do these companies have the lowest financial exposure within sectors if a regulation for offsetting was implemented (we do not think this will be the case), but by taking a pro-active stance to a carbon strategy they are demonstrating overall management quality.

Historically difficult to isolate environmental factors as earnings drivers

Historically it has been difficult to measure if companies with higher overall environmental values post superior share price returns, because of the difficulty in isolating environmental issues in earnings drivers. Indeed, there could be a view that it is more expensive to be green, and hence this is damaging to earnings. In our view, the risks are moving towards the expense of not being green, both in financial and reputational terms.

The regulatory driver to 'internalise' externality costs will likely bring carbon on balance sheet

Our earlier analysis showed that Europe is not on target to meeting reduction targets with existing measures, and this is even admitted by the European Environment Agency. The economic tools to fix this problem are taxes and quotas, which could be implemented. However, behavioural change from corporates will also help to shape policy, reduce emissions, and generate cost savings. If carbon costs are internalised for companies, they will become an earnings driver, and thus the more efficient companies are with carbon emitting processes, the lower the cost implication will be. Indeed investors are already requesting more transparent reporting of carbon from companies.

Investors – Carbon Disclosure Project 5

Merrill Lynch sponsors of CDP 5

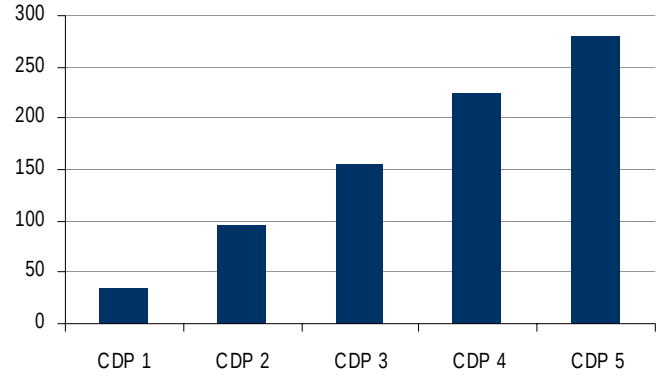
The Carbon Disclosure Project (CDP) is a collaboration of institutional investors to efficiently gain access to information on corporate GHG emissions on a global scale. Investors collectively sign a single request for data which is sent to

companies for completion. The aims of the project are to inform investors of the risks and opportunities presented by climate change and to inform company management of the serious concerns of their shareholders regarding the impact of these issues on company value.

CDP 5: 280 investors, $41trn AUM request carbon emissions information request from 2400 companies

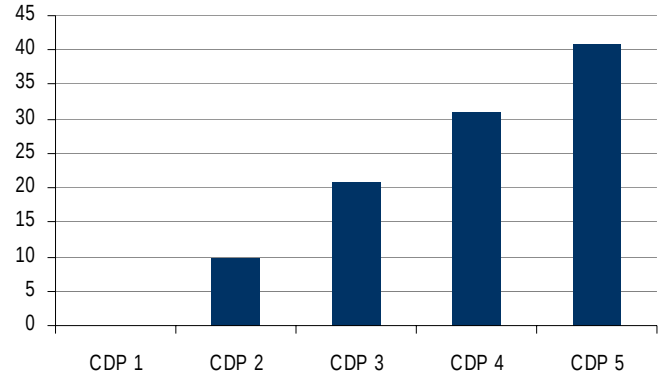
So far four CDP's have been completed. The first questionnaire was sent out in May 2002 to the FT 500 largest companies, backed by 35 investors. The request for data for CDP 5, which was issued in February 2007, was backed by 280 institutional investors, with assets under management of $41trn. The charts below show the evolution of the project in terms of numbers of investor signatories and their total assets under management. The results of the requests for information are freely available at http://www.cdproject.net/search.asp

Chart 22: Number of Institutional Investor Signatories



Source: Client Disclosure Project

Chart 23: Assets under management $ trillion



Source: Client Disclosure Project

CDP 5 results due in September 2007

The results of CDP 5 are due to be launched in September 2007. The CDP is a global initiative, but data can be presented by both country and sector. The carbon disclosure project has made huge progress in raising awareness of climate change related issues among both investors and corporates, and has become a high quality resource for checking companies' attitudes to emissions. (The website details all the companies that have been questioned, and notes if they declined to participate). With the media coverage that has already been attached to climate change this year and newsflow catalysts set to continue, CDP 5 should achieve a much higher response rate.

Table 31: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to offset (€m)	% of 2005 EBIT
Oil Equipment & Services				
Acergy	B	581	15.8	10.2
Aker Kvaerner	B	469	56.1	29.8
CGG Veritas	B	56	1.1	1.5
Pet Geo Serv.	N	693	15.5	11.4
Saipem	B	276	28.4	7.8
Seadrill	N	636	0.1	-ve EBIT
Technip	N	310	38.5	17.0
Exploration & Production				
Cairn Energy	B	517	2.5	4.8
Lundin Petroleum	N	566	5.6	2.7
Norsk Hydro	B	538	270.6	4.2
Petroplus	B	937	135.9	nm
Tullow Oil	B	752	11.2	3.9
Integrated Oil & Gas				
BG Group	B	906	170.6	4.1
BP	N	781	3,605.7	15.0
ENI	B	1,046	1,776.8	10.6
Neste Oil	N	721	165.8	20.0
OMV	B	846	303.8	15.2
Repsol	N	855	973.0	15.5
RD Shell	B	818	4,629.9	13.5
Statoil	B	645	727.0	6.2
Total	N	769	2,173.6	9.0

Source: DJ Stoxx, ML Research, Trucost

Oil and Gas

Oil and gas has the second largest proportion of GHG emissions in the DJ Stoxx 600 after utilities, representing 24% of index emissions. The weight of the sector in the DJ index is 8.3%. Companies in the sector already have regulated installations under the EU ETS, but if total emissions for the sector were offset at the current market price of carbon the cost implication would be €14.9bn. Cost to offset ranges between 1.5% and almost 30% of 2005 EBIT.

Table 33 shows that there are high levels of emissions per $1m of revenue for most companies in the sector, as measured by Carbon Footprint. Only ENI breaks the 1000 tonnes per $1m level however. Most companies have improved their carbon efficiency from 2004 to 2005.

Table 4 below shows the most and least efficient companies in each subsector for direct, indirect and total emissions as measured by Carbon Footprint. There are no overall clear leaders, but Statoil features well for integrated.

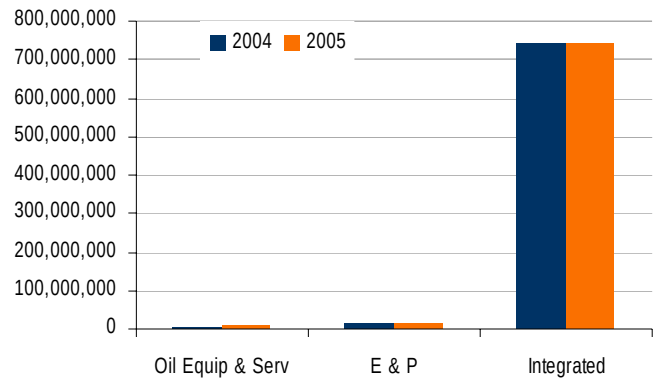
Table 32: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Oil Equipment and Services	6,861,766	3,763,179	10,624,944
Exploration & Production	12,125,328	7,153,712	19,279,041
Integrated Oil & Gas	367,102,774	387,215,019	754,317,793
Most Efficient Company			
Oil Equipment and Services	CGG Veritas	Prosafe	CGG Veritas
Exploration & Production	Norske Hydro	Lundin Petroleum	Cairn Energy
Integrated Oil & Gas	Statoil	BG	Statoil
Least Efficient Company			
Oil Equipment and Services	Bourbon	Technip	Bourbon
Exploration & Production	Tullow Oil	Petroplus	Petroplus
Integrated Oil & Gas	BG	Neste Oil	ENI
Greatest total CO2e improvement	Prosafe	Prosafe	Prosafe

Source: Trucost, DJ Stoxx, ML SRI Research, note most and least efficient carbon companies are calculated on the carbon per revenue basis.

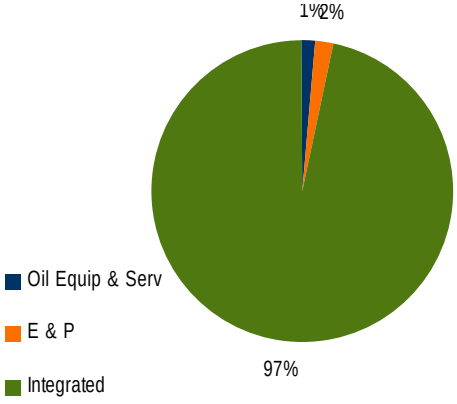
Only the integrated subsector in oils has posted an improvement in emissions, and this low at just 1.9%.

Chart 24: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 25: Sector breakdown of emissions (%)



Source: Trucost

Table 33: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
General Mining				
Anglo American				
Antofagasta	S	710	32.1	2.6
Bhp Billiton	N	824	459.1	6.2
Rio Tinto	B	1,083	381.4	6.4
Vedanta Resources	B	688	25.8	8.6
Xstrata Plc	N	1,307	194.7	6.1
Platinum & Precious Metals				
Lonmin	B	384	8.1	3.4
Steel				
Arcelor Mittal		1,145	599.9	
Outokumpu		424	54.3	

Source: DJ Stoxx, ML Research, Trucost

Basic Industries

The emissions from the basic resources sector represent some 5.6% of those in the DJ stoxx 600. The weight of the sector in the index is 4.3%. The sector has a heavy exposure to its direct emissions, with an indirect to direct ratio of 0.47 for mining, 0.32 for paper and 0.6 for steel. The cost of offsetting at the current carbon price would be c€3.5bn, leaving the sector at the upper end of the cost liability scale.

Cost as a percentage of 2005 EBIT of offsetting for individual stocks ranges between 2.6% (Antofagasta) and 8.6% (Vedanta). Carbon footprint is high across the sector, but there is also a wide spread in the footprint (table 35). Table 36 shows that some companies can be the most efficient in one set of emissions but the least in another. For example Stora Enso has the best profile when it comes to indirect emissions, but is worst for direct, possibly indicating efficiency in supply chain, but that there could be a potential replacement cycle for more efficient equipment.

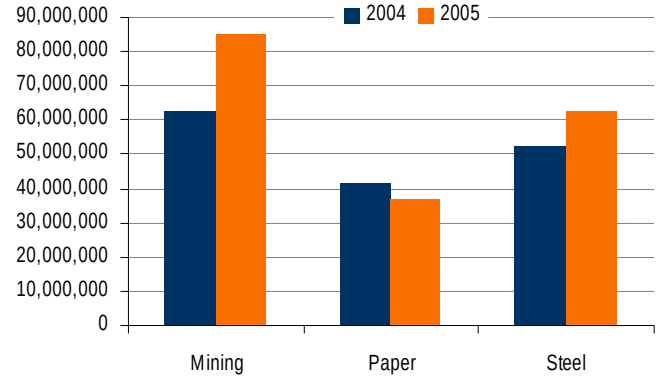
Table 34: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
General Mining	58,235,841	22,944,018	81,179,859
Paper	28,002,512	10,297,371	38,299,883
Steel	39,163,884	24,027,350	63,191,234
Most Efficient Company			
General Mining	Lonmin	Anglo American	Lonmin
Paper	Norske Skog	Stora Enso	Norske Skog
Steel	Outokumpo	Rautaruukki	Boehler Uddeholm
Least Efficient Company			
General Mining	Xstrata	Little variation	Xstrata
Paper	Stora Enso	Norske Skog	Stora Enso
Steel	Rautaruukki	Arcelor / Tenaris	Rautaruukki
Greatest CO2e improvement	BHP Billiton	Rautruukki	Outokumpo

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis; note for general mining, four companies tie for least efficient..

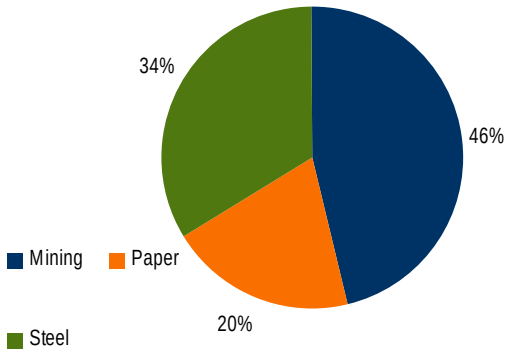
Most of the indirect emissions for companies come from utility usage, indicating that some carbon reduction could be made from switching energy suppliers to those with a higher renewable supply. Chart 28 below shows that emissions for the mining and steel sectors have increased from 2004 to 2005 but that for paper there is an improving trend. Within basic resources the mining sector represents the largest proportion of emissions at 46%.

Chart 26: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 27: Sector breakdown of emissions (%)



Source: Trucost

Table 35: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Specialty Chemicals				
Bayer	B	283	178.9	7.1
Ciba Splty.Chems	N	348	38.3	15.0
Clariant	N	437	53.1	22.4
Givaudan	N	477	19.6	5.9
Johnson Matthey	N	222	69.5	3.9
Solvay	S	315	38.0	13.3
Syngenta	B	442	62.2	11.2
Umicore	N	293	66.4	9.6
Yara International	S	3,342	44.3	27.4
Commodity Chemicals				
Air Liquide	N	940	226.3	14.6
Basf	N	835	823.2	14.1
Lanxess	B	262	43.1	-ve EBIT
Linde	N	421	92.3	10.2
Wacker Chemie	B	193	12.2	4.7

Source: DJ Stoxx, ML Research, Trucost

Chemicals

The chemicals sector represents 4.8% of total emissions in the DJ Stoxx 600, and comprises 2.5% of the market cap weight. Companies in the sector are already regulated under the EU ETS mechanism, and Table 9 shows that Bayer is one of the most efficient stocks in specialty chemicals as measured by total Carbon Footprint. BASF however is not in the top rankings for commodity chemicals. For chemicals as a whole the total cost of offsetting would be €2.9bn at the current cost of carbon (€19). For the individual companies listed in table 37, the cost represents between 3.9% (Johnson Matthey) and 27% (Yara) of 2005 EBIT.

The table below shows that Johnson Matthey has the best profile overall for its total emissions, emitting 222 tonnes per $1m of revenue, and has posted the highest reduction in its indirect emissions. Syngenta has made the largest carbon reduction from 2004 to 2005 however. Chemicals are a sector where the Indirect to direct ratio is less than 1 – indicating lower opportunity for the business to manage supply chain emissions than for other sectors.

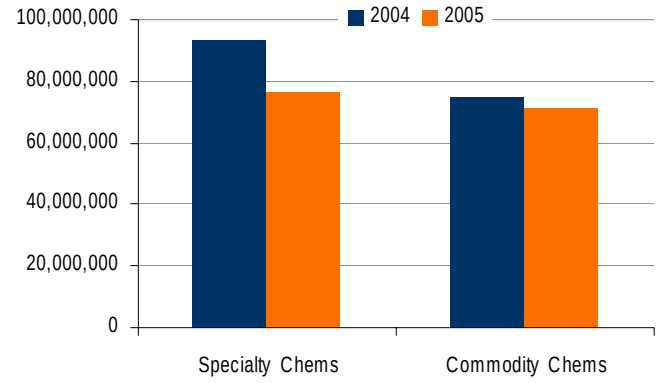
Table 36: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Specialty Chemicals	43,960,301	39,719,314	83,679,615
Commodity Chemicals	43,370,217	28,479,866	71,850,082
Most Efficient Company			
Specialty Chemicals	Umicore	Altana	Johnson Matthey
Commodity Chemicals	Wacker Chemie	Wacker Chemie	Wacker Chemie
Least Efficient Company			
Specialty Chemicals	Yara International	Givaudan	Yara International
Commodity Chemicals	Arkema	BASF	Arkema
Greatest CO2e improvement	Syngenta	Johnson Matthey	Syngenta

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

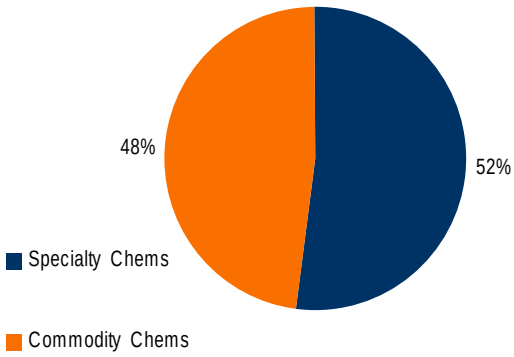
Most of the indirect emissions come from power sources for the sector. Both subsectors have made progress towards reducing emissions as shown in chart 10, although specialty chemicals have made an almost 18% reduction compared to just 5% for commodities. Chart 31 shows the breakdown of emissions.

Chart 28: Sector Emissions (Total Emissions (TCO2e))



Source: : Trucost

Chart 29: Sector breakdown of emissions (%)



Source: Trucost

Table 37: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Building Materials & Fixtures				
CRH	B	988	329	23.7
Hanson		1,555	193	na
Holcim 'R'	B	5,734	1,571	71.2
Italcementi	N	7,216	832	106.1
Kingspan Group	B	233	6.7	4.6
Lafarge	B	4,437	1,634	69.3
Saint Gobain	B	479	387	15.2
Titan Cement	N	6,040	186	58.7
Wienerberger	B	1,180	53.2	17.9
Heavy Construction				
ACS	B	117	32.6	4.0
Bilfinger Berger	B	122	17.5	15.2
Eiffage	N	140	27.4	6.5
Ferrovial	B	89	18.3	2.1
Hochtief	B	114	35.8	12.8
Sacyr Vallehermoso	N	137	13.2	2.1
Vinci	B	123	61.1	3.9
Yit-Yhtyma Corp.	B	197	13.7	6.2

Source: DJ Stoxx, ML Research, Trucost

Construction

Stocks in the construction sector represents 11% of emissions but comprise only 3.5% of the DJ stoxx 600 index. The GHG intensities in table 12 show the high amount of carbon emitted per $1m of revenue for the cement sector, and companies are regulated under the EU ETS. In fact the cement companies have the highest amount of carbon footprint for all sectors in the index, and their maximum liability in terms of offsetting represents a high level of EBIT. The sector cost exposure if all carbon emissions were offset using the EU ETS would be some €6.7bn.

The worst hit companies in ML coverage if offsetting were necessary would be Holcim, Italcementi, Lafarge and Titan Cement as shown in table 39. There is an industry wide initiative to improve cement practises under the 'Cement sustainability initiative' however.

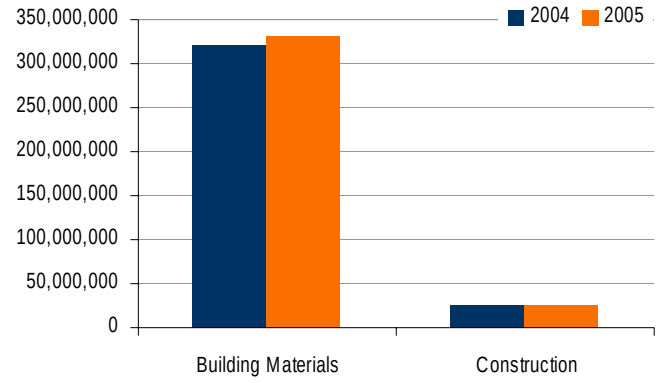
Table 38: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Building Materials	293,841,220	38,058,459	331,899,679
Heavy Construction	7,522,202	18,263,428	25,785,629
Most Efficient Company			
Building Materials	Geberit	Assa Abloy	Assa Abloy
Heavy Construction	Hochtief	BAM	Ferrovial
Least Efficient Company			
Building Materials	Cimpor	Little variation in cement	Cimpor
Heavy Construction	Acciona	Yit-Yhtyma	Acciona
Greatest CO2e improvement	ACS	FL Smidth & Co	FL Smidth & Co

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

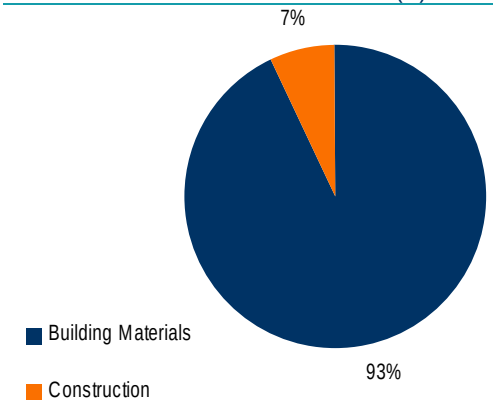
Chart 32 below highlights the difference between the two sub-sectors in volume of tonnes. Emissions in the building materials sector went up by 3.3% from 2004 to 2005.

Chart 30: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 31: Sector breakdown of emissions (%)



Source: Trucost

Industrial Goods and Services

In total, the industrial goods and services sector represents 6.3% of the emissions of the DJ Stoxx 600 and is 9.5% of the index weight. However, there is a broad diversity of subsectors, ranging from the carbon intense industrial vehicles sector and the carbon light support services. Within the sector, industrial machinery, electrical equipment, support services and aerospace and defence have high indirect exposure.. Across the board, the cost to offset total emissions at today's prices would be €3.8bn.

Table 39: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Industrial Machinery	2,160,200	12,049,068	14,209,269
Electrical Equipment	1,796,977	16,365,721	18,162,698
Support Services	833,723	4,105,921	4,939,644
Aerospace	2,014,453	7,520,852	9,535,305
Industrials	17,092,850	15,752,595	32,845,445
Vehicles	108,416,806	17,999,772	126,416,579
Most Efficient Company			
Industrial Machinery	Vestas	Atlas Copco / Weir	Sulzer
Electrical Equipment	Schneider	Agfa – Gevaert	Invensys
Support Services	Michael Page	All staffing agencies	Michael Page
Aerospace	Safran	Safran	Safran
Industrials	Electrocomponents	Wolseley, SIG, Electro. Hagemeyer	Electrocomponents
Vehicles	Scania	Deutsche Post	Cintra
Least Efficient Company			
Industrial Machinery	Vallourec	Vallourec	Vallourec
Electrical Equipment	ABB	Nexans	Nexans
Support Services	Bunzl	Serco	Serco
Aerospace	Cobham	Zodiac	Cobham
Industrials	Thyssenkrupp	Thyssenkrupp	Thyssenkrupp
Vehicles	AP Moeller Maersk	BBA Aviation	AP Moeller Maersk
Greatest CO2e improvement			

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

Table 40: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Industrial Machinery				
Alstom	N	122	42.4	48.7
Atlas Copco	B	137	17.7	1.8
Gamesa	B	120	4.8	2.1
Heidelb. Druck	N	110	9.4	6.0
Imi	N	175	9.3	8.6
Metso	B	105	10.2	3.1
Sandvik	B	175	27.3	2.7
SKF	N	193	23.4	4.1
Weir Group	B	120	3.2	5.2
Vestas Windsystems	N	110	9.1	-ve EBIT
Vallourec	N	516	51.2	5.3
Electrical Equipment				
ABB	B	149	62.2	4.4
Siemens	B	96	171.0	4.4
Schneider Electric	B	112	30.2	1.9
Support Services				
Aggreko	B	74	1.0	1.2
Capita Group	N	39	1.9	0.8
Intertek Group	B	40	0.8	1.0
Rentokil Initial	B	79	6.1	1.7
Securitas 'B'	N	90	14.5	3.9
Serco Group	N	141	10.7	7.5
Sgs 'N'	B	44	2.1	0.7
Adecco 'R'	B	11	4.5	0.7
Hays	N	11	0.6	0.2
Michael Page Intl.	N	10	0.2	0.2
Randstad Holding	N	11	1.6	0.6
Vedior Nv	N	11	1.7	0.7
Aero & Defence				
Eads (Par)	N	79	62.5	2.3
Mtu Aero Engines	N	90	4.5	3.8
Rolls-Royce Group	B	132	29.2	2.9
Safran	N	57	11.5	-4.0
Zodiac Sa	N	146	6.4	3.3
Bae Systems	B	64	23.7	1.7
Finmeccanica	B	83	21.0	2.9
Thales (Ex Thomson-Csf)	B	67	15.8	2.8
Industrials				
Tomkins	N	164	18.3	4.2
Travis Perkins	B	91	8.0	2.1
Wolseley Plc	N	118	45.8	4.5
Vehicles				
Man	B	91	30.8	4.8
Abertis	N	100	4.2	0.5
Brisa	N	84	1.1	0.4
Cintra	B	74	1.2	0.5

Source: DJ Stoxx, ML Research, Trucost

In terms of carbon efficiency the industrial machinery sector fares reasonably well within a market context. The DJ stoxx average intensity is 326 tonnes per $1m revenues, whereas the average in the total industrial machinery sector is 156. This is less than some perceived lower carbon sectors, such as food producers, where the average carbon footprint is 523[12]. Table 44 below shows that in terms of carbon footprint, Sulzer is the most carbon efficient company in industrial machinery, with 104 tonnes emitted per $1m revenues. Table 42 shows that indirect emission sources are some 6x direct, which is high (e.g. transport infrastructure) could reduce carbon in the sector.

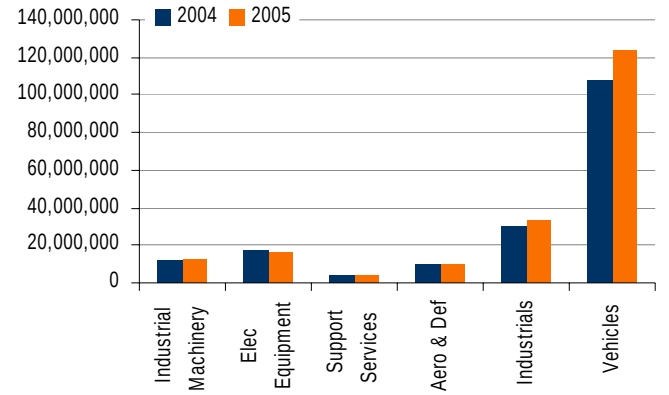
Emissions from the vehicles subsector comprise more than the rest of the industrial goods and services sectors put together.

The cost of offsetting obviously depends on the carbon intensity across the sector, but for industrials, with the exception of Alstom it is less htan 10%. For the support services sector most companies would have to spend less than 1% of EBIT to offset, the exceptions are Rentokil, Securitas and Serco.

Chart 35 shows that industrial machinery represents some 45% of emissions and forms the bulk of the sector.

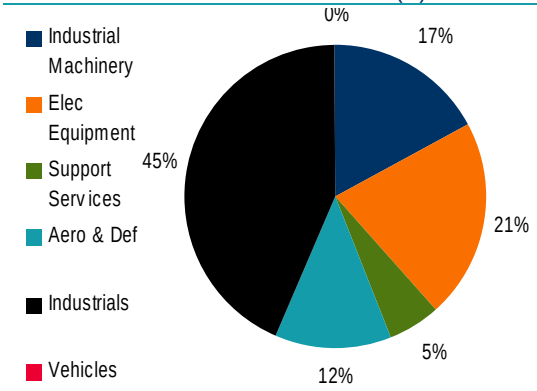
[12] Excludes Marine Harvest

Chart 32: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 33: Sector breakdown of emissions (%)



Source: Trucost

Table 41: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to offset (€m)	% 2005 EBIT
Clothing & Accessories				
Bulgari	N	232	4.8	3.4
Burberry Group	B	80	2.1	0.9
Hermes Intl.	N	163	5.4	1.4
Luxottica	B	437	44.1	7.3
Lvmh	B	107	34.3	1.3
Richemont	N	362	34.0	6.1
Swatch	B	63	4.0	0.8
Housebuilding				
Barratt Developments	B	160	14.1	2.4
Bellway	B	153	6.2	1.8
Berkeley	N	158	6.3	2.0
Bovis Homes	N	160	2.8	1.5
Persimmon	B	160	12.3	1.6
Other				
Adidas	B	152	23.3	3.3
Puma		72	2.9	
Tobacco				
BAT	B	166	52.0	1.5
Swedish Match	B	204	6.7	2.2
Personal Products				
Beiersdorf	B	182	20.0	3.8
HH Products				
Reckitt Benckiser	B	136	19.0	1.4

Source: DJ Stoxx, ML Research, Trucost

Household Goods

The household goods, another diverse sector comprising sub categories such as luxury goods and housebuilders sector represents just 1.1% of the emissions from the index. Its sector weight is c4%. If all emissions were offset, the cost for the sector would be a €685m. In most cases if emissions were to be totally offset by buying carbon credits, the cost exposure is less than 2.0% of EBIT. The exceptions are Luxottica and Richemont, where the bill would be 7.3% and 6.1% respectively. Within the sector SCA, BAT and Swedish Match have regulated installations under the EU ETS.

Stocks in the sector generally have a greater carbon exposure from their indirect rather than direct sources. In some cases in the sub sectors there are few companies, and the intensities have a narrow range. The housebuilders, for example have little between them in terms of their Carbon Footprint, which means there is a narrow spread between most and least efficient in the table below.

Table 42: Summary Carbon Data for Stoxx 600

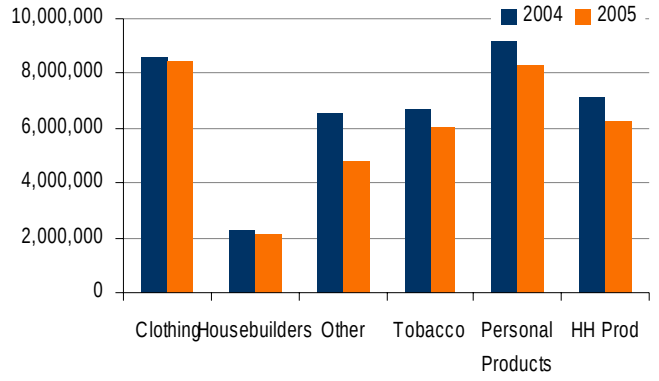
	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Luxury Clothing and Accessories	2,949,871	5,621,608	8,571,479
Housebuilders	141,071	2,114,409	2,255,480
Other	726,017	4,950,454	5,676,471
Tobacco	609,153	5,755,777	6,364,931
Personal / Household Products	4,102,835	12,023,464	16,126,299
Most Efficient Company			
Luxury Clothing and Accessories	Christian Dior	Swatch	Swatch
Housebuilders	Bellway	Berkeley	Bellway
Other	Puma	Puma	Puma
Tobacco	Altadis	Swedish Match	Altadis
Personal / Household Products	L'Oreal	Reckitt Benckiser	L'Oreal
Least Efficient Company			
Luxury Clothing and Accessories	Luxottica	Hermes	Luxottica
Housebuilders	Berkeley	Little variation	Barratt/Bovis/Persimmon
Other	Adidas	Adidas	Adidas
Tobacco	Swedish Match	BAT, Imp Tob, Altadis	Swedish Match
Personal / Household Products	SCA	SCA	SCA
Greatest CO2e improvement	Puma (check)	Puma	Puma

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

Chart 36 below shows that all the subsectors have posted an improvement in

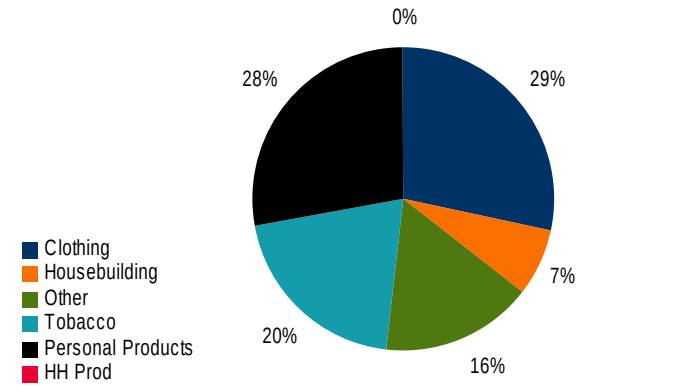
emissions from 2004 to 2005. Chart 37 shows that the clothing sector marginally represents the heaviest emitting sector closely followed by personal products.

Chart 34: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 35: Sector breakdown of emissions (%)



Source: Trucost

Table 43: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to offset (€m)	% of 2005 EBIT
Pharmaceutical & Biotech				
Astrazeneca	N	89	39.4	0.8
Glaxosmithkline	S	111	80.8	0.8
Merck Kgaa	N	94	12.7	1.3
Novartis	N	144	86.2	1.5
Novo Nordisk	B	85	8.9	0.8
Roche Holdings	N	94	49.3	0.9
Sanofi-Aventis	N	89	56.2	0.6
Shire				1.4
Ucb	N	107	5.0	2.4
Stada Arzneimittel A	B	111	2.6	1.1
Actelion	N	107	1.1	1.5
Novozymes		124	2.4	
Qiagen		84	0.6	
Healthcare Providers				
Fresenius Med.Care	B	84	10.6	1.6
Fresenius Pref.	B	89	16.3	1.9
Rhoen-Klinikum Ag	B	83	2.7	1.1
Essilor Intl.	N	79	4.4	
Medical Equipment				
Gn Store Nord	B	84	0.9	0.5
Nobel Biocare	B	84	0.9	1.1
Phonak	B	83	3.9	1.1
Smith & Nephew	B	84	3.2	0.6
Synthes	B	86	1.3	0.8
William Demant	N	89	39.4	0.8

Source: DJ Stoxx, ML Research, Trucost

Healthcare

For healthcare, the representation of its emissions in the index is low at 0.6% in contrast to the index weight, which is 6.5%. Hence, If all emissions were offset at the current market price for carbon the cost would be just shy of €400m, a drop in the ocean for the sector. On a stock by stock basis, for most cases this would represent less than 2.0% of revenues across the sector. The sector is also efficient in terms of its carbon footprint, and for the larger companies this is improving. Many companies have installations which are regulated by the EU ETS.

The table below shows which companies are most and least efficient in direct, indirect and total emissions. Novartis in particular is a negative outlier in its indirect emissions efficiency. For other companies in pharma the spread in intensity is narrow, with Glaxo marginally beating the rest.

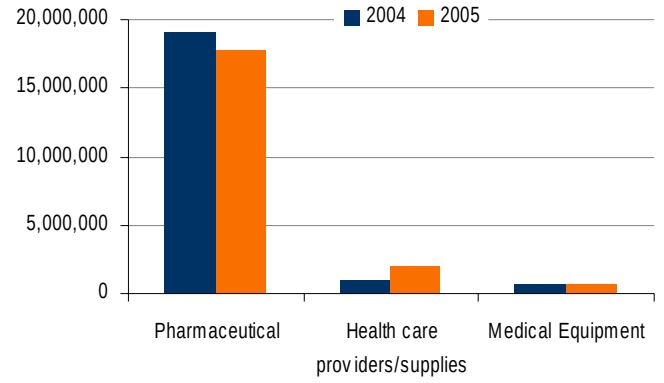
Table 44: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Pharmaceutical & Biotech	3,926,398	14,044,817	17,971,215
Healthcare providers	267,963	1,558,921	1,826,885
Medical Equipment	108,107	662,498	770,605
Most Efficient Company			
Pharmaceutical	Qiagen	GlaxoSmithkline	Qiagen
Healthcare providers	Essilor	Rhoen Klinikum	Essilor
Medical Equipment	Little variation	GN Store Nord	GN Store Nord
Least Efficient Company			
Pharmaceutical	Novozymes	Novartis	Novartis
Healthcare providers	Rhoen-Klinikum	No variation	Fresenius
Medical Equipment	Getinge	Getinge	Getinge
Greatest CO2e improvement	Fresenius	UCB	UCB

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

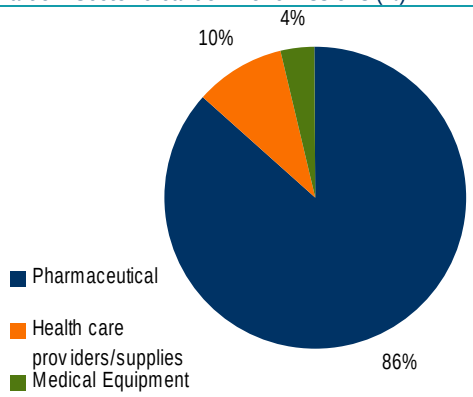
Chart 38 below shows that pharma is the only subsector in the group that has posted an improvement in emissions from 2004 to 2005. Chart 17 highlights the dominance of pharma in sector emissions distribution.

Chart 36: Sector Emissions (Total Emissions (TCO2e))



Source: : Trucost

Chart 37: Sector breakdown of emissions (%)



Source: Trucost

Table 45: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Publishing				
Independent N & M	N	68	2.5	0.9
Johnston Press	N	51	0.9	0.3
Lagardere Groupe	N	137	41.2	7.7
Pearson	B	52	7.2	0.9
Reed Elsevier (Ams)	N	50	4.6	0.4
Reed Elsevier Nv	N	50	4.1	0.3
Reuters Group	N	54	4.4	1.2
Trinity Mirror	N	72	2.7	0.8
Informa Plc	B	62	1.5	1.1
Yell Group Plc	B	58	2.8	0.8
Media Agencies				
Aegis Group	B	69	2.0	1.3
JC Decaux	B	34	1.4	0.5
Publicis Groupe	N	34	3.3	0.5
Broadcasting				
British Sky Bcast	B	35	4.9	0.4
Emi Group	N	106	7.6	3.2
Itv	N	36	2.6	0.5
M6-Metropole Tv	N	34	1.0	0.4
Mediaset	N	34	2.9	0.2
Prosieben Sat 1 Pf.	B	34	1.6	0.4
Telecinco	N	33	0.7	0.2
Tf1 (Tv.Fse.1)	N	36	2.4	0.7
Vivendi Inc	N	42	18.9	0.5

Source: DJ Stoxx, ML Research, Trucost

Media

Emissions from the media sector have the lowest representation in the DJ Stoxx 600 at just 0.3%. The sector weight is 2.8%. Consequently, it has the lowest cost exposure to its off balance sheet environmental liability. It would cost €154m to buy credits to offset the sector emissions at current carbon prices. For most of the stocks in the sector the cost implication of offsetting represents less than 1.0% of EBIT. The exceptions are Lagadare, (7.7%) and Reuters (1.12%). Interestingly, within the media companies Mondadori has an installation in Italy regulated by the EU ETS. Carbon reduction is unlikely to be a priority for business as it is at such low levels.

Within the sector the publishers have the highest carbon footprint, which comes from their printing operations, but this is low in the context of the index, where the average Carbon Footprint is 367. There is a reasonably wide spread between the best and worst companies in direct emissions however, the best and worst companies are noted below. For the two other subsectors, there is little spread between the best and worst performers in terms of footprint.

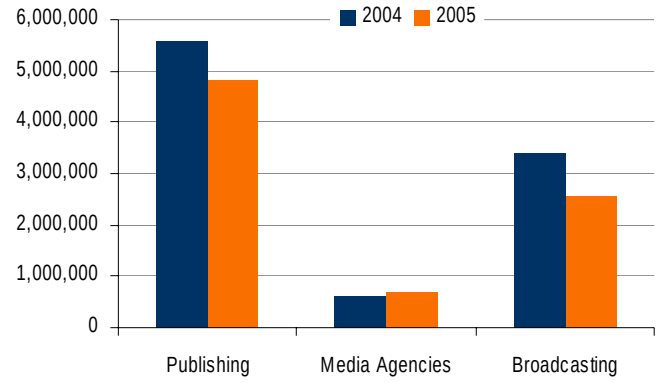
Table 46: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Publishing	832,171	4,429,235	5,261,406
Media Agencies	90,880	575,029	665,909
Broadcasting	178,500	2,901,982	3,080,483
Most Efficient Company			
Publishing	Wolters Kluwer	Independent News	Wolters Kluwer
Media Agencies	JC Decaux / Publicis	JC Decaux / Publicis	Publicis / JC Decaux
Broadcasting	Little variation	Little variation	Telecinco
Least Efficient Company			
Publishing	Pages Jaune / UBM	Lagardere	Lagardere Group
Media Agencies	Aegis	Aegis	Aegis
Broadcasting	Thomson	EMI	EMI
Greatest CO2e improvement	Reed Elsevier	Thomson	Johnston Press

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

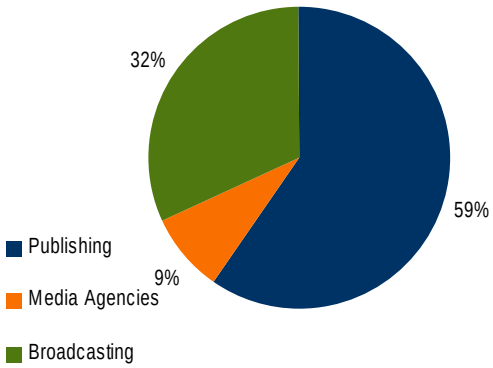
Chart 40 shows that while publishing and broadcasting have improved their footprint, media agencies have increased slightly. The chart shows the much lower base for the agencies however. Chart 41 reiterates the fact that publishing generates the highest proportion of emissions within media at 60%.

Chart 38: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 39: Sector breakdown of emissions (%)



Source: Trucost

Table 47: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Travel & Tourism				
Arriva	N	914	49.9	27.8
First Choice Hols.	B	380	33.9	19.7
First Group	B	326	32.4	10.8
Tui	N	440	198.9	33.7
Restaurants & Bars				
Compass Group	B	168	73.7	10.2
Greene King	B	167	4.6	1.9
Marston's	N	157	3.2	1.7
Punch Taverns	B	168	4.5	0.8
Sodexho Alliance		165	46.3	
Hotels				
Accor	N	126	22.0	3.2
Gambling				
Lottomatica	N	123	1.6	0.8
Opap	N	133	11.3	1.7
William Hill Plc	N	133	48.0	15.0
Airlines				
Air France-Klm	B	1,113	539.7	97.6
British Airways	B	1,158	334.4	33.5
Deutsche Lufthansa	N	1,072	446.5	-
Iberia	B	1,172	128.6	33.8
Ryanair	B	1,792	60.9	18.6

Source: DJ Stoxx, ML Research, Trucost

Leisure

The leisure sector is responsible for almost 4% of the index emissions as a result of the airlines and travel companies, but the weight in the index is just 1.8%. It would cost €2.3bn for the sector as a whole to offset its carbon exposure by buying carbon credits on the EU ETS. The impact on individual companies is widely spread however.

Restaurants and bars and gambling should be able to achieve efficiencies in the Carbon Footprint. The ratio of indirect to direct emissions, at 4.3 for restaurants and 2.7 for gambling is quite high for a service sector. This should mean a relative low tonnage per $1m revenues for restaurants and gambling, this is not the case however, as shown in table 49. In other service based sectors, like department stores within retail for example, the indirect to direct ratio is broadly similar at 5x, but carbon footprint averages at just 87 tonnes per $1m revenues across the sector, compared with 131 for gambling and 164 for restaurants and bars. The table below shows that First Group is consistently the strongest across travel, and that Lufthansa is consistently strong across airlines.

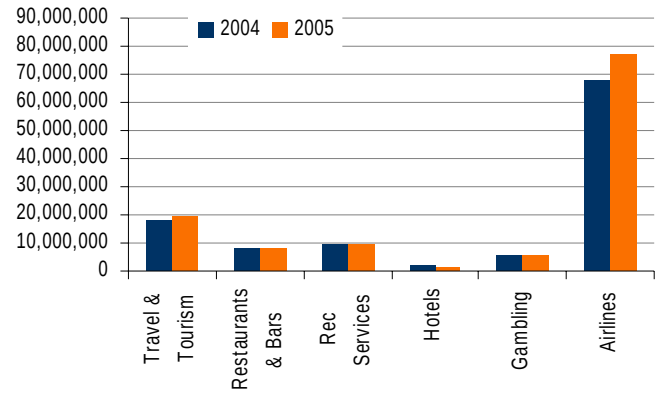
Table 48: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Travel & Tourism	15,957,267	4,349,549	20,306,816
Restaurants & Bars	1,516,879	6,295,942	7,812,821
Recreation and Hotels	8,897,182	1,572,194	10,469,376
Gambling	1,560,861	4,187,279	5,748,140
Airlines	72,184,828	5,057,301	77,242,130
Most Efficient Company			
Travel & Tourism	First Group	First Group	First Group
Restaurants & Bars	Enterprise Inns	Marston's	Compass
Recreation and Hotels	Accor	Carnnival	Accor
Gambling	Lottomatica	Lottomatica	Ladbrokes
Airlines	Lufthansa	Lufthansa	Lufthansa
Least Efficient Company			
Travel & Tourism	Arriva	First Choice Holidays	Arriva
Restaurants & Bars	Marston's	Compass / M & B / Punch	Whitbread
Recreation and Hotels	Carnival	Accor	Carnival
Gambling	Little variation	Little variation	Little variation
Airlines	Ryanair	Air France	Ryanair
Greatest CO2e improvement			

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

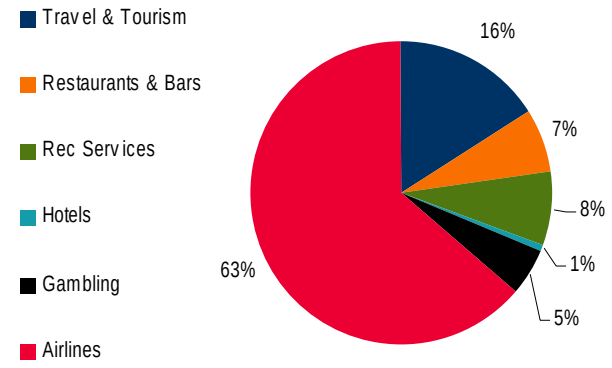
Chart 42 shows that the sector has not made much progress in reducing carbon from 2004 to 2005. Chart 43 shows that in the leisure sector the airlines have the largest exposure to the cost of carbon, representing 63% of the sector, indeed there are discussions surrounding inclusion of airlines in the EU ETS.

Chart 40: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 41: Sector breakdown of emissions (%)



Source: Trucost

Table 49: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Automobiles				
BMW	B	67	72.2	1.9
Daimlerchrysler	N	97	333.6	10.4
Peugeot	N	147	190.9	9.8
Renault	B	80	76.6	3.8
Auto Parts				
GKN	N	150	18.4	11.6
Valeo Sa	B	111	25.4	8.0
Tires				
Continental	B	349	111.2	7.4
Michelin	B	349	125.3	8.0
Nokian Renkaat	N	342	5.4	4.7

Source: DJ Stoxx, ML Research, Trucost

Autos

Interestingly, the auto sector itself represents just 0.8% of the index, with a sector weight of 2.7%. The maximum liability to the sector if all emissions were offset at the current price of carbon would be €467m. In terms of individual companies the cost exposure is less than 12% of ebit across the sector. Auto companies are already regulated under the EU ETS.

Table 50: Summary Carbon Data for Stoxx 600

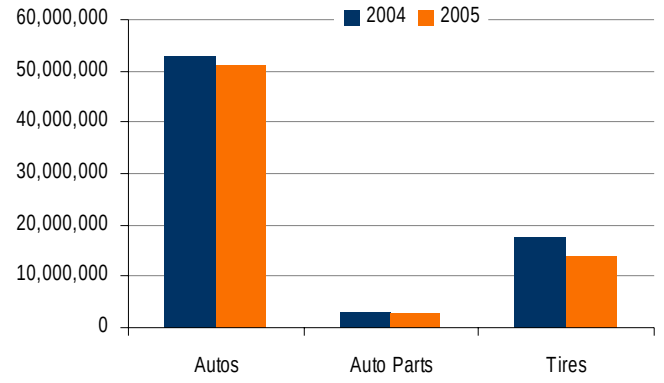
	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Automobiles	7,573,281	44,927,012	52,500,293
Auto Parts	163,934	2,880,414	3,044,347
Tires	6,394,729	9,764,299	16,159,028
Most Efficient Company			
Automobiles	Porsche	BMW	BMW
Auto Parts	Valeo	Valeo	Valeo
Tires	Pirelli	Pirelli	Pirelli
Least Efficient Company			
Automobiles	Fiat	Peugeot	Peugeot
Auto Parts	Rheinmetall	GKN	GKN
Tires	Michelin/Continental	Michelin/Continental	Michelin/Continental
Greatest CO2e improvement	Valeo (check)	Pirelli	Pirelli

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

Auto manufacturers in Europe have already signed up to a voluntary agreement to reduce carbon emissions per kilometre, and are under regulatory drivers such as the EU ETS and renewable targets. There are few companies in each sub-sector and the range of carbon footprint in the sector is relatively narrow, with the exception of Peugeot, which is less than half as efficient as BMW in its emission level per $1m of revenues.

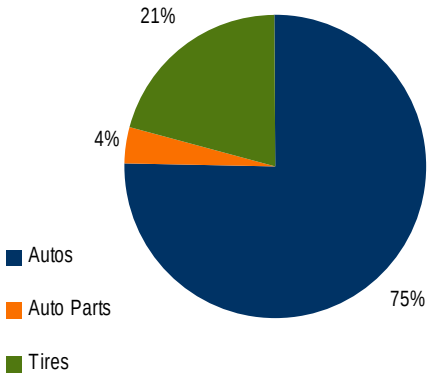
Chart 44 below shows that the autos manufacturers have made progress in reducing emissions from 2004 to 2005. Likewise, the tyre manufacturers have also posted a 20% reduction from 2004.

Chart 42: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 43: Sector breakdown of emissions (%)



Source: Trucost

Table 51: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset €m	% of 2005 EBIT
Food Retailers & Wholesalers				
Ahold Kon.	N	90	124.2	9.8
Carrefour	B	90	154.4	4.9
Casino Guichard-	N	78	41.2	6.0
Colruyt	N	97	11.3	3.8
Delhaize	B	90	38.6	4.3
Morrison(Wm)	B	90	40.2	7.2
Sainsbury (J)	N	123	70.1	14.7
Tesco	B	90	115.0	4.0
Specialty Retail				
Kingfisher	N	87	24.5	2.5
Carphone Warehouse	B	49	4.2	3.5
Dsg International	N	90	23.4	5.2
Kesa Electricals	B	90	13.1	4.5
Apparel				
Inditex	N	86	12.4	1.3
Next	B	84	8.9	1.4
Signet Group Plc	N	90	5.4	1.7
Broadline				
Debenhams	B	90	5.1	1.6
Marks & Spencer	S	86	24.4	2.4
PPR	N	78	31.8	3.0
Celesio	N	110	52.0	8.0

Source: DJ Stoxx, ML Research, Trucost

Retail

Emissions from the retail sector represent 1.5% of the total emissions of the DJ Stoxx 600 index. The weight of the sector is 3.4%. For the sector as a whole, the cost to offset emissions at current carbon prices would be c€900m. On an individual company basis this represents between c1.5% and 15% of revenues.

For the non-food retailers, EBIT margins range from low single digits for the hardline retailers to low double digits for the softline companies. Margins have held up despite differential inflation (prices deflating but costs generally rising faster than organic sales growth) thanks to a combination of dollar sourcing gains and improved supply chain efficiencies.

The major costs of rent and wages (each generally accounting for around 10% of sales for a "typical" retailer) are showing moderating growth as slowing demand and industry consolidation has reduced the appetite for new space, and the impact of above-RPI increases in minimum wage rates fade. Further dollar weakness has helped protect gross margins despite increasing competition from the supermarkets in general merchandise. If the cost of distance sourcing rises (and underlying Chinese cost inflation is already starting to reduce the value gap) apparel retailers have some flexibility in moving their sourcing mix back towards Eastern Europe and/or the Mediterranean basin for example. For hard goods retailers, particularly those with heavy branded exposure there is less flexibility - pricing power is key for these companies.

In terms of the carbon footprint levels however, the retail sector is at the lower end of the market spectrum, with an average for the sector as a whole of 89tonnes per $1m revenue, and, for the most part, there is a narrow intensity range for the subsectors. This compares with an efficiency level of 326 for the DJ 600 companies. Despite the already good efficiency levels in retail, most companies also improved efficiency from 2004 to 2005, this likely comes from cost control.

The indirect to direct ratios are high for the sector. For food the ratio is 5.1x, for apparel, it is 15x; in both sectors the source of indirect emissions is mainly transport.

Kesko, Carphone Warehouse and Hennes & Mauritz are the leaders in the sector in terms of their Carbon Footprint; Carphone Warehouse emits just 49 tonnes of

carbon per $1m of revenues. Despite appearing among the least efficient companies, Sainsbury has posted the most impressive CO2 improvement.

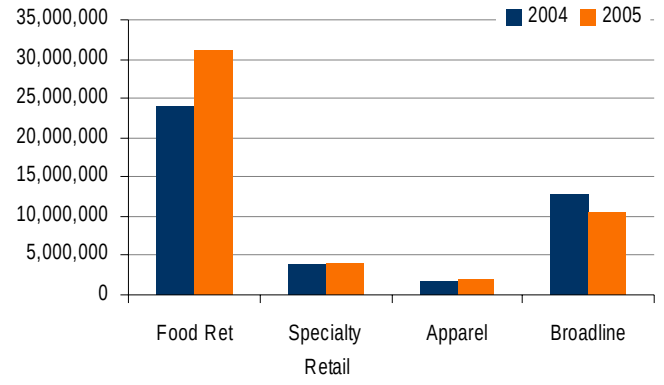
Table 52: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Food Retail & Wholesale	5,098,892	26,338,327	31,437,220
Specialty Retail	676,036	3,149,808	3,825,845
Apparel	119,264	1,708,251	1,827,515
Broadline	1,867,394	10,700,313	12,567,707
Most Efficient Company			
Food Retail & Wholesale	Kesko	Casino	Kesko
Specialty Retail	Kingfisher	Carphone Warehouse	Carphone Warehouse
Apparel	Hennes & Mauritz	Next	Hennes & Mauritz
Broadline	PPR	Celesio	Metro
Least Efficient Company			
Food Retail & Wholesale	Sainsbury	Most on same rating	Sainsbury
Specialty Retail	Inchcape	Kingfisher / Kesa	Inchcape
Apparel	Signet	Inditex	Signet
Broadline	Celesio	Debenhams / M&S	Celesio
Greatest CO2e improvement	Metro	PPR	Sainsbury

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

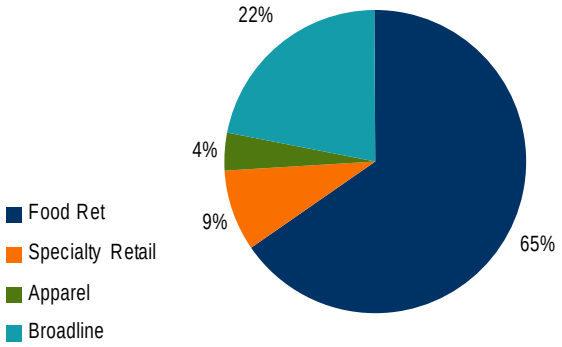
Chart 44 below shows that emissions have increased in the food retail sector. However, this belies a positive trend in carbon efficiency, as the GHG intensities have mostly improved (the exceptions are Casino, Colruyt and Sainsbury).

Chart 44: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 45: Sector breakdown of emissions (%)



Source: Trucost

Table 53: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to offset (€m)	% of 2005 EBIT
Food Products				
Associated Brit.Foods	N	637	123.8	17.0
Cadbury Schweppes	N	391	98.8	6.5
Danisco	N	779	47.1	17.5
Danone	N	429	128.8	7.6
Nestle 'R'	B	391	528.1	8.4
Numico (Kon.)	N	580	26.6	7.3
Premier Foods	B	584	15.5	11.1
Tate & Lyle	B	602	66.7	19.8
Drinks				
Carlsberg 'B'	N	231	22.7	5.4
Heineken	N	226	57.4	4.5
Inbev	B	378	60.8	2.8
Sabmiller	B	201	80.0	3.7
Diageo	B	251	47.3	1.7
Pernod-Ricard	N	259	21.8	2.9
Coca-Cola Hlc.Bt.	B	637	28.6	6.2

Source: DJ Stoxx, ML Research, Trucost

Food & Beverages

Emissions in the food and beverage sector represent 3.1% of DJ 600 constituent emissions. The sector weight in the index is 4.9%. Table 55 shows that food producers and beverages have a high carbon footprint. In fact, at an average of 409 tonnes per $1m revenues, the Carbon Footprint is higher for the food and drink sector than for the autos sector. Indeed, if all emissions were to be offset at the current price of carbon, the bill would be €1.8bn for the sector as a whole. The cost implications as a percentage of EBIT are slightly less for beverages at less than 1% of revenues than for the food manufacturing companies, where Tate & Lyle has the highest exposure at 19.8% of EBIT. Food producers are regulated under the EU ETS.

Table 56 shows the highest and lowest carbon footprint companies. Most companies in the sector have improved their carbon footprint from 2004 to 2005.

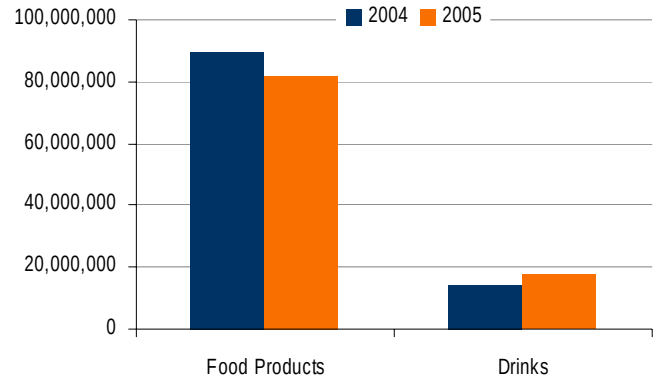
Table 54: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Food Products	14,875,907	71,737,719	86,613,626
Drinks	6,434,105	11,150,887	17,584,992
Most Efficient Company			
Food Products	Nestle	Orkla	Orkla
Drinks	Scottish & Newcastle	C&C Group	C&C Group
Least Efficient Company			
Food Products	Marine Harvest	Marine Harvest	Marine Harvest
Drinks	SAB Miller	Little variation	SAB Miller
Greatest CO2e improvement	Cadbury Schweppes	CSM	CSM

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

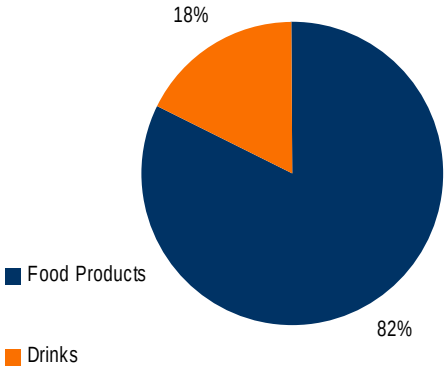
Chart 48 below shows that the food products sector has reduced emissions, by 8.1%, but for beverages emissions have increased by 4.2% (but from a relatively low base. Chart 29 shows that most of the emissions in the sector are from food products.

Chart 46: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 47: Sector breakdown of emissions (%)



Source: Trucost

Table 55: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset €m	% of 2005 EBIT
Telecom Equipment				
Alcatel	-	64	23.8	2.0
Ericsson	-	40	31.4	0.7
Nokia	-	23	0.5	0.7
Software				
Dassault Systemes	N	32	0.7	0.3
Misys	B	37	1.2	0.9
Sage Group	N	31	0.8	0.3
Sap	B	31	6.0	0.3
Computer Services				
Logicacmg	B	37	2.3	1.3
Wincor Nixdorf Ag	N	70	2.9	2.6
Semiconductors				
Arm Holdings	N	74	0.6	0.8
Asml Holding	N	104	6.1	1.4
Infineon Technologies	N	86	13.7	-ve EBIT
Stmicroelectronics	B	195	32.2	16.6
Other				
Logitech	B	60	1.8	1.3
Neopost	B	100	1.9	1.1

Source: DJ Stoxx, ML Research, Trucost

Technology

The technology sectors produce 4.6% of index emissions, which compares with their capitalisation weight of 3.2%. The cost exposure of a total offset for the sector stretches to at €2.8bn, the same amount as for the chemicals sector. On an individual basis the exposure mostly represents less than 2.0% of EBIT, the exceptions are ST Microelectronics, at 16.6% and Wincor Nixdorf at 2.6%. Nokia has a regulated installation under EU ETS.

The semiconductor sector highlights a good example of where care should be taken in interpreting the data. At first glance ST Microelectronics has a much higher carbon footprint than the others in the subsector. However, this is because it outsources relatively little manufacturing to Asia. The have a high ethic of environmental reporting and have a target of going carbon neutral by 2010.

Table 58 and chart 50 show that the bulk of emissions in the sector come from telecom equipment and semiconductors, where the main source is heat. However, in terms of Carbon Footprint, the technology sector is a strong performer in the market context, emitting on average only 63 tonnes of carbon per $1m of revenues generated. (In the chemicals sector, for example, where the maximum offset liability is the same as for technology the average carbon footprint for the sector is 665).

Table 56: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Telecom Equipment	447,943	3,769,892	4,217,836
Software	78,225	424,811	503,036
Computer Services	96,695	700,056	796,751
Semiconductors	954,553	2,195,224	3,149,777
Other	18,564	164,081	182,645
Most Efficient Company			
Telecom Equipment	Nokia	SES Global	SES Global
Software	Business Objects	Business Objects	Business Objects
Computer Services	Indra	Cap G / Indra / Logicacmg / Tietoenator	Indra
Semiconductors	XXXX	Arm / Infineon	Arm
Other	Neopost	United Internet	United Internet
Least Efficient Company			
Telecom Equipment	Eriksson	Alcatel Lucent	Alcatel Lucent
Software	Dassault / Misys / Sage	Misys	Misys

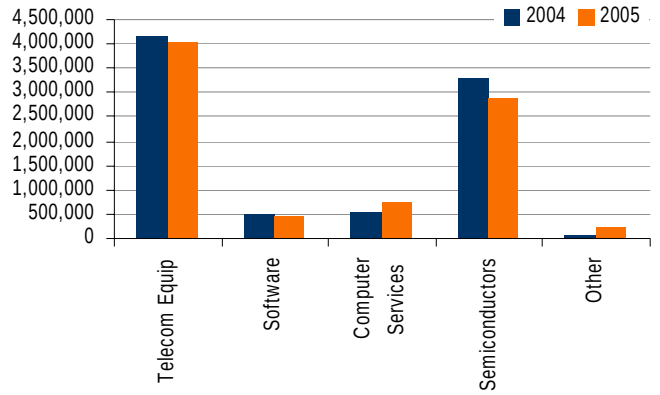
Table 56: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Computer Services	Wincor Nixdorf	Wincor Nixdorf	Wincor Nixdorf
Semiconductors	ST Microelectronics	OC Oerlikon	ST Microelectronics
Other	Logitech	Neopost	Neopost
Greatest CO2e improvement	Neopost Check	OC Oerlikon	Neopost

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

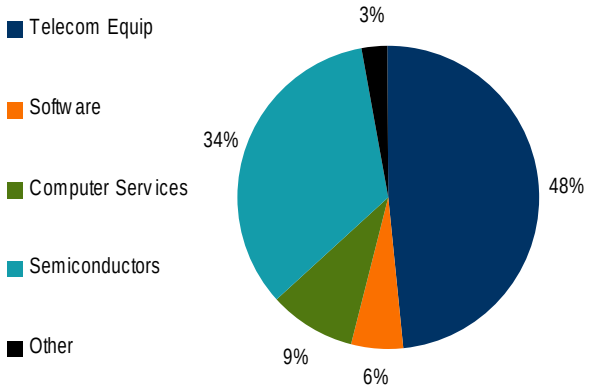
Chart 50 shows that the heavier emitting subsectors of telecom equipment and semiconductors have reduced emissions by -4.7% and -11.3% respectively.

Chart 48: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 49: Sector breakdown of emissions (%)



Source: Trucost

Table 57: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Fixed Line Telecommunications				
Belgacom	S	40	4.9	0.3
Bt Group	B	39	27.1	0.6
Cable & Wireless	N	37	4.2	1.2
Deutsche Telekom	S	34	47.0	0.5
Elisa	B	37	1.2	0.5
Fastweb	N	37	0.8	-ve
France Telecom	N	36	40.6	0.4
Kpn Kon	N	36	9.7	0.4
Ote-Hellenic Telc.	B	37	4.7	nm
Portugal Telecom	B	34	5.0	0.4
Swisscom 'R'	B	37	5.4	0.3
Tele2 'B'	B	37	4.6	1.3
Telecom Italia	B	37	25.2	0.3
Telefonica	B	35	30.3	0.4
Telekom Austria	N	35	3.5	0.6
Mobile Telecommunications				
Cosmote	B	36	1.5	0.3
Inmarsat	B	37	0.3	0.3
Mobistar	N	37	1.3	0.3
Telenor	B	36	7.1	0.4
Teliasonera	N	35	7.5	0.4
Vodafone Group	B	34	42.4	0.3

Source: DJ Stoxx, ML Research, Trucost

Telecoms

Emissions in the telecoms sector, which, on a direct basis come mostly from heat and transport, and on an indirect basis come mainly from utilities and industrials, represent 5.8% of those in the overall index. The sector is the eighth largest in the DJS 600 representing 5.2% of the index. This translates into a €3.5bn financial liability for the sector if it was forced to offset all emissions. For individual stocks however, this represents less than 1.0% of EBIT.

In terms of carbon footprint however, telecoms is one of the most efficient sectors in the market as shown by the Carbon Footprint ratings in table 30. In addition for most companies this has improved from 2004 to 2005. The company with the lowest carbon footprint in the sector is Vodafone, which emits just 34 tonnes of carbon per $1m of revenues. This compares with a DJ Stoxx average of 326.

Table 60 below shows that most of the tonnes of carbon for the sector come from indirect sources, that is electricity and industrials. This would suggest there is opportunity to reduce emissions, through increasing energy efficiency, or changing to renewable power, or both.

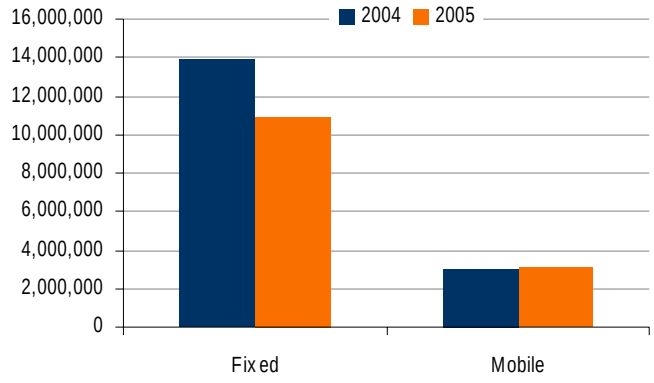
Table 58: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Fixed Line	1,180,935	11,023,847	12,204,781
Mobile	193,644	2,833,874	3,027,518
Most Efficient Company			
Fixed Line	Telefonica	Little variation	Portugal Telecom
Mobile	Vodafone	Little variation	Vodafone
Least Efficient Company			
Fixed Line	Elisa / Fastweb / OTE / Tele2	Little variation	Belgacom
Mobile	Inmarsat / Mobistar	Little vvariation	Inmarsat / Mobistar
Greatest CO2e improvement	Telenor	Telecom Italia	Tele 2

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

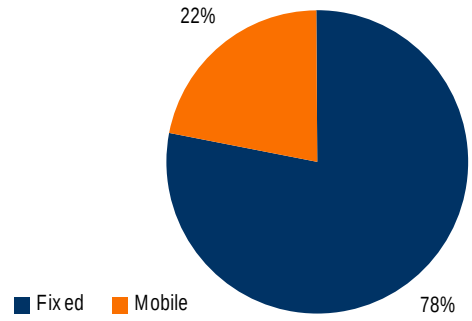
Chart 52 shows the profile of carbon in the last two year, in the fixed line space there has been a 21% reduction, but for mobile, albeit from a low base, a 3.1% increase has occurred.

Chart 50: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 51: Sector breakdown of emissions (%)



Source: Trucost

Table 59: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 EBIT
Electricity				
EDF	N	552	649.5	8.1
Fortum Corp.	N	1,650	147.5	10.7
Iberdrola	B	1,812	490.4	21.4
Public Power	N	10,816	1,070.2	nm
Red Electrica	B	238	4.7	22.8
Renewable Energy	B	86	0.6	0.8
Scot.& Southern	B	2,020	554.1	44.5
Terna	N	4,542	107.2	19.6
Union Fenosa	N	3,629	510.4	54.4
SolarWorld	N	122	1.0	1.1
Gas Distribution				
Centrica	B	1,385	625.3	28.3
Enagas	N	851	29.7	8.9
Gaz de France	B	595	307.4	10.2
Multiutilities				
E ON	B	2,204	2,635.4	36.1
RWE	B	3,427	3,202.1	67.6
Water				
Pennon	N	2,372	48.6	22.0
Severn Trent	B	619	47.6	8.1
Northumbrian Water.	S	1,984	42.4	13.8
United Utilities	S	140	11.7	1.2
Veolia Env	N	1,478	860.6	45.3

Source: DJ Stoxx, ML Research, Trucost

Utilities

The utilities sector is the most carbon intensive sector in the DJ Stoxx 600 representing 25% of emissions. The sector weight is the fourth largest at 7.7%. Installations are regulated by the EU ETS, and hence are already subject to regulatory measures. The total cost of offsetting for the sector would be some €15.2bn. For individual stocks this is a much greater expense than for most other sectors, with an costs reaching in excess of 50% of EBIT in some cases (table 61). However, the comparison is not like with like and utilities should be considered on a separate basis. Nevertheless, it is worth looking at the carbon footprint as shown in table 61 between stocks and whether improvements have been made.

Of the electricity companies, EDF has the lowest carbon footprint of the non renewable names, emitting 552 tonnes per $1m of revenue, this is a reduction from 721 tonees per $1m in 2004 and is among best in class. The other leaders by sector are Gaz de France, National Grid and United Utilities, as shown in table 62. It also shows that EDF has posted the greatest CO2 improvement in the sector as a whole.

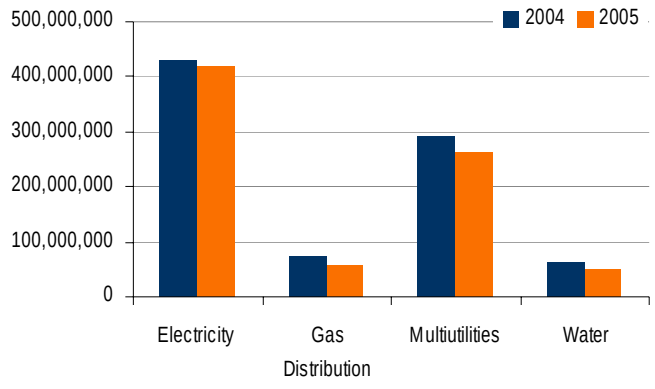
Table 60: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Electricity	382,234,079	49,325,599	431,559,678
Gas Distribution	34,604,687	28,706,067	63,310,754
Multi utilities	240,315,362	27,611,240	267,926,602
Water	45,446,828	7,427,856	52,874,684
Most Efficient Company			
Electricity	Renewable Energy	Renewable Energy	Renewable Energy
Gas Distribution	Gaz de France	Gas Natural	Gaz de France
Multi utilities	National Grid	Suez	National Grid
Water	United Utilities	Severn Trent	United Utilities
Least Efficient Company			
Electricity	International Power	AEM	International Power
Gas Distribution	Centrica	Enagas / GdF / Snam Rete	Centrica
Multi utilities	RWE	National Grid	RWE
Water	Pennon	Veolia	Pennon
Greatest CO2e improvement	Red Electrica (Check)	Fortum	EDF

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

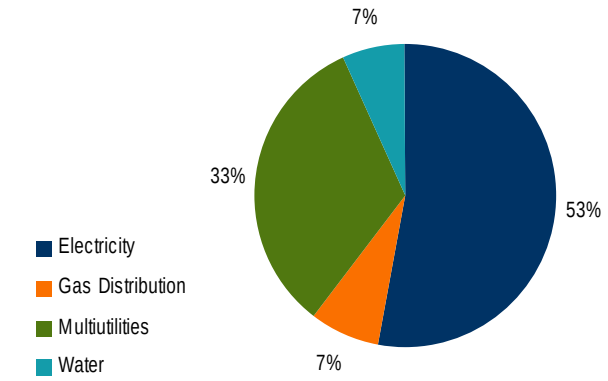
Chart 79 shows that all sub sectors have posted a carbon reduction from 2004 to 2005.

Chart 52: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 53: Sector breakdown of emissions (%)



Source: Trucost

Table 61: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	% of 2005 PTPP income
Banks				
Alliance & Leicester	N	29	1.4	0.2
Allied Irish Banks	B	34	2.9	0.2
Alpha Bank	B	28	1.1	0.1
Banca Popolare Milano	N	30	1.3	0.1
Banco Bpi	N	30	1.8	
Bank Of Ireland	N	27	2.3	0.2
Bnp Paribas	B	29	56.9	0.7
Bradford & Bingley	N	29	0.6	0.1
Commerzbank	N	37	6.2	0.4
Credit Agricole	N	28	22.2	0.5
Credit Suisse 'R'	B	28	25.4	0.4
Danske Bank	B	27	6.1	0.3
Deutsche Bank	N	33	19.3	0.3
Dexia	N	27	6.4	0.3
Dnb Nor	N	28	3.5	0.2
Efg Eurobank Ergasias	N	28	1.3	0.1
Erste Bank	B	28	3.1	0.2
Hsbc Hdg. (Ord $0.50)	S	33	38.4	0.2
Intesa Sanpaolo	B	28	6.9	-!
Kbc Groupe	N	23	6.6	0.2
Lloyds Tsb Group	B	25	15.2	0.2
Mediobanca	B	28	0.8	0.1
National Bk.Of Greece	B	27	1.8	0.2
Nordea Bank	N	31	8.5	0.3
Societe Generale	N	28	24.6	0.4
Svenska Handbkn. 'A'	N	29	2.0	0.1
Swedbank 'A'	N	28	2.0	0.1
Ubs 'R'	N	51	40.5	0.5
Unicredito Italiano	B	28	8.0	0.1
Raiffeisen Internati	B	28	1.4	0.2
Standard Chartered P	B	28	3.7	0.1
Northern Rock Plc	B	29	0.9	0.1
Other				
Hypo Real Estate Hldg.	N	28	0.6	0.1
Schroders	N	51	1.5	0.5
Cattles	B	34	0.7	0.4
Specialty Finance				
3I Group	B	18	0.2	0.0
Intermediate Capital Group	N	28	0.2	0.1
Investment Services				
Close Brothers Group	N	32	0.5	0.3
Deutsche Boerse	N	49	2.0	0.3
ICAP	N	52	1.5	0.8
Bolsas Y Mercados	N	52	0.3	0.2

Source: DJ Stoxx, ML Research, Trucost

Financials and Real Estate

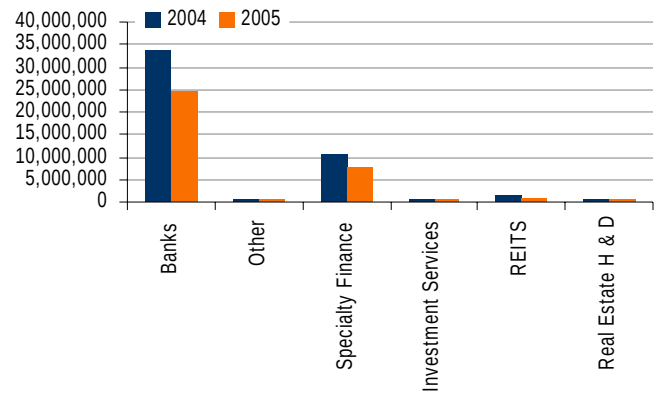
Banks represent 17.6% of the DJ Stoxx 600 index. In a carbon context the sector has a low footprint and there is little to differentiate between stocks. We have consequently not provided a best and worst. For stocks within the sector offsetting costs are low.

Table 62: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Banks	1,457,790	19,889,038	21,346,829
Other	23,908	281,438	305,346
Specialty Finance	4,569,754	7,139,719	11,709,473
Investment Services	27,979	289,224	317,203
Real Estate	150,170	803,225	953,394

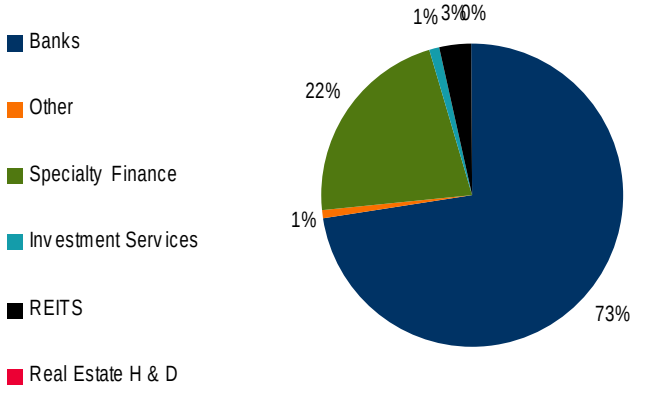
Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

Chart 54: Sector Emissions (Total Emissions (TCO2e)



Source: Trucost

Chart 55: Sector breakdown of emissions (%)



Source: Trucost

Table 63: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to Offset (€m)	
Real Estate				
British Land	B	142	1.4	0.2
Corio	N	137	0.9	0.3
Gecina	N	137	1.7	0.4
Hammerson	B	142	0.7	0.3
Lkepierre	N	137	1.2	0.3
Land Securities	B	158	8.5	1.1
Liberty International	N	159	1.4	0.3
Unibail-Rodamco	N	137	2.4	0.6
Wereldhave NV	N	137	0.5	0.4
Castellum	B	160	0.6	0.5
Derwent London	B	137	0.1	0.2
Fabege	N	137	1.0	0.6
Immofinanz im anlage	N	139	0.7	0.8
JM	N	159	3.9	2.9
Metrovacesa	S	137	1.6	0.3
PSP Swiss Property	N	137	0.4	0.3

Source: DJ Stoxx, ML Research, Trucost

Table 64: ML Coverage in DJ Stoxx 600

Company	Rating	Carbon Footprint (2005)	Cost to offset (€m)	% of 2005 EBIT
Life Insurance				
Alleanza	N	11	3.1	0.5
Aviva	N	11	15.2	0.4
Friends Provident	-	10	2.7	0.3
ING Groep	B	13	33.8	0.4
Legal & General	N	35	36.7	2.3
Mediolanum	N	14	1.1	0.4
Old Mutual	B	14	5.5	0.3
Prudential	B	13	17.3	0.7
Resolution	-	11	0.5	0.4
Storebrand	B	12	1.1	0.6
Standard Life Plc	B		4.6	0.8
Prop & Casualty				
Sampo 'A'	N		2.0	0.2
Full Line				
Allianz	B	12	30.4	0.4
Generali	N	12	21.1	0.6
Royal & Sun All. Ins	N	14	2.4	0.2
Zurich Finl Services	B	11	17.3	0.5
Reinsurance				
Hannover Ruck.	N	10	2.0	#N/A
Muenchener Ruck.	N	10	11.1	1.7
Swiss Re 'R'	B	12	6.3	0.3
Ins Brokers				
Admiral Group Plc	B	11	0.1	

Source: DJ Stoxx, ML Research, Trucost

Insurance

The insurance sector is the second smallest in terms of its contribution to emissions in the DJ Stoxxx 600, representing 0.4%. The sector is the sixth largest in market cap terms however at 5.9%. The sector has a low cost exposure to offsetting, namely €258m, or for individual companies, less than 1.0% of EBIT, with the exception of legal and general.

In terms of carbon footprint, most companies emit around 12 tonnes of carbon for every $1m of revenue, which is the lowest in the market as shown in chart 69. There is little to differentiate between stocks in terms of carbon footprint. The main theme for the sector is the scale of indirect exposure the average ratio of indirect to direct emissions is 23.4x, which mostly comes from utility usage. This indicates a degree of opportunity for further reduction.

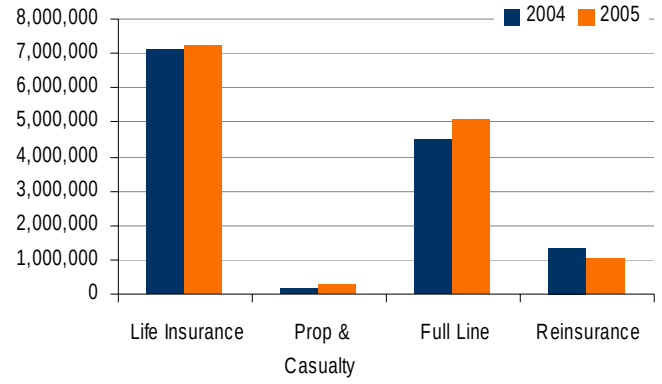
Table 65: Summary Carbon Data for Stoxx 600

	Direct GHG	Indirect GHG	Total GHG
Carbon Absolute (TCO2e)			
Life Insurance	369,687	6,368,627	6,738,315
Property & Casualty	30,256	154,696	184,951
Full Line	355,365	5,208,196	5,563,561
Re-insurance	15,220	1,334,327	1,349,547
Insurance Brokers	563	4,091	4,654
Most Efficient Company			
Life Insurance	Aegon	Alleanza / Cattolica / CNP Assurances / Resolution	Aegon
Property & Casualty	Sampo – narrow range	Narrow range	Narrow range
Full Line	Allianz	R & SA	R & SA / Mapfre
Re-insurance	Hannover R / Munchener R	Conv / Hannover R / Scor	Hannover Ruck
Insurance Brokers			1 Company – Admiral
Least Efficient Company			
Life Insurance	Prudential	Legal & General	Standard Life
Property & Casualty	Narrow range	Sampo	TopDanmark
Full Line	R & SA	Zurich Financial Services	Allianz
Re-insurance	Convarium / Scor	Swiss Re	Swiss Re
Insurance Brokers			1 Company – Admiral
Greatest CO2e improvement	Munchener Ruck (check)	Convarium	Convarium

Source: Trucost, DJ Stoxx, ML SRI Research; note most and least efficient carbon companies are calculated on the carbon per revenue basis.

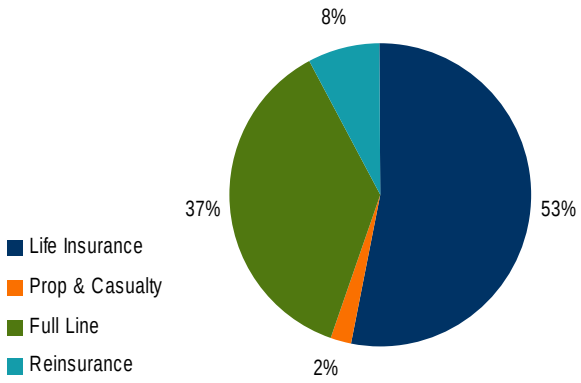
Chart 58 shows that emissions have edged up in most subsectors.

Chart 56: Sector Emissions (Total Emissions (TCO2e)



Source: : Trucost

Chart 57: Sector breakdown of emissions (%)



Source: Trucost

Sector conclusions

The sector analysis shows that there is significant variation between carbon footprints, and thus the maximum cost of offsetting total carbon emissions. The analysis provides a simple benchmarking exercise, as a starting point for country carbon positioning.

Appendix 1: Trucost Methodology*

- Trucost is an environmental research company, which helps companies and investors understand the environmental impacts of business activities in quantitative and financial terms.
- Trucost provides data, analysis and advice for institutional investors, corporations and government.
- Trucost has standardised comparable data on over 4,000 companies globally.
- Trucost's comprehensive coverage and sophisticated proprietary modelling processes ensure that all companies in an index are included, not just those that disclose environmental information.
- Further information on Trucost is available from www.trucost.com
- Trucost has the support of an International Advisory Panel of nine leading academics in the fields of economics and the environment, who lend their considerable expertise to the specialist research staff.

Methodology

Trucost has the world's largest database of Greenhouse Gas disclosures with up to 8 years of historic data. However there are many companies that do not disclose their carbon impacts. To calculate the Carbon Footprint of companies considered for the Carbon Leaders fund, Trucost reviews company Annual Reports and Accounts, environmental/ sustainability reports, public disclosures and corporate websites. Where there is no public disclosure, Trucost employs its environmental profiling system. Trucost's proprietary Input-Output model makes it possible to calculate levels of environmental emissions and resource use resulting from the activities of any company.

*Source: Trucost

Table of companies mentioned

ML ticker	Company	Currency	Price	Investment Opinion
ACGYF	Acergy SA	NOK	145.5	C-1-7
AKKVF	Aker Kvaerner	NOK	139.75	C-1-7
GEOJF	CGG-Veritas	EUR	181.47	C-1-9
PGEJF	Petroleum Geo	NOK	131.25	C-2-9
SAPMF	Saipem	EUR	27.29	B-1-7
SDRLF	SeaDrill	NOK	108	C-2-9
TNHPF	Technip	EUR	56.96	B-2-7
CRNCF	Cairn Energy	GBP	1724	B-1-9
LNDNF	Lundin Petroleum	SEK	65.5	C-2-9
NHYKF	Norsk Hydro	NOK	207.5	B-1-7
PEPFF	Petroplus	CHF	106.8	C-1-9
TUWLF	Tullow Oil	GBP	482.5	B-1-7
BRGXF	BG Group	GBP	750	A-1-7
BPAQF	BP plc	GBP	542.5	A-2-7
EIPAF	Eni	EUR	24.59	A-1-7
NTOIF	Neste Oil	EUR	24.72	C-2-7
OMVJF	OMV	EUR	43.9	B-1-7
REPYF	Repsol-YPF	EUR	25.82	A-2-7
RYDBF	Royal Dtch Shell	GBP	1858	A-1-7
SLDKF	Statoil	NOK	159.5	B-1-7
TTFNF	Total	EUR	53.02	A-2-7
BAYZF	Bayer	EUR	55.78	B-1-7
CSPCF	Ciba Sp Chems	CHF	64.7	A-2-7
CLZNF	Clariant	CHF	15.8	B-2-7
GVDBF	Givaudan	CHF	1061	A-2-7
ITYBF	Imperial Tobacco	GBP	2135	RSTR**
JMPLF	Johnson Matthey	GBP	1565	A-2-7
RHADF	Rhodia	EUR	28.24	C-1-9
SVYSF	Solvay	EUR	105.21	A-3-7
SYENF	Syngenta	CHF	220.1	A-1-7
UMICF	Umicore	EUR	164.02	B-2-7
YRAIF	Yara	NOK	152.75	C-3-7
AIQUF	Air Liquide	EUR	90.73	A-2-7
BFASF	BASF	EUR	94.03	A-2-7
LNXSF	Lanxess	EUR	35.1	B-1-9
LNAGF	Linde	EUR	84.3	A-2-7
WKCMF	Wacker	EUR	151.65	C-1-7
ANFGF	Antofagasta	GBP	692	B-3-7
BHPBF	BHP Billiton PLC	GBP	1390	B-2-7
RTPPF	Rio Tinto Plc	GBP	3255	B-1-7
VDNRF	Vedanta	GBP	1655	C-1-7
XSRAF	Xstrata Plc	GBP	2812	C-2-7
LNMIF	Lonmin	GBP	3012	B-1-7
MTTFF	Arcelor Mittal	EUR	46.48	B-1-7
CRHCF	CRH	EUR	31.64	B-1-7
HCMLF	Holcim	CHF	124.8	A-1-7
ITABF	Italcementi Ord	EUR	17.83	A-2-7
GBERF	Geberit	CHF	173	A-2-7
KGSPF	Kingspan	EUR	17.3	B-1-7
LFGEF	Lafarge	EUR	111.6	A-1-7
CODGF	Saint Gobain	EUR	78.4	A-1-7
TITCF	Titan Cement	EUR	35.92	B-2-7
WBRBF	Wienerberger	EUR	50.9	B-1-7
ACSAF	ACS	EUR	40	A-1-7
BFLBF	Bilfinger & Berger	EUR	58.49	B-1-7
FGLLF	Eiffage	EUR	88.67	C-2-7
GRFRF	Ferrovial	EUR	63.6	B-1-7
HOCFF	Hochtief AG	EUR	71.63	B-1-7
SYRVF	Sacyr	EUR	27.8	B-2-7
VCISF	Vinci	EUR	50.75	A-1-7
YITYF	YIT OYJ	EUR	22.25	B-1-7
AOMFF	Alstom	EUR	129.02	C-2-7

Table of companies mentioned

ML ticker	Company	Currency	Price	Investment Opinion
ATLKF	Atlas Copco	SEK	111.5	B-1-7
GCTAF	Gamesa	EUR	28.14	B-1-8
HBGRF	Heidelberg	EUR	31.37	B-2-7
IMIAF	IMI	GBP	549	A-2-7
MXTOF	Metso	EUR	45.85	B-1-7
SDVKF	Sandvik	SEK	134.75	B-1-7
SKUFF	SKF	SEK	135.75	B-2-7
WEIGF	Weir Group	GBP	777.5	B-1-7
VWSYF	Vestas	DKK	357.5	C-2-9
VLOUF	Vallourec	EUR	192.84	B-2-7
ABLZF	ABB Ltd.	CHF	28.65	B-1-7
SMAWF	Siemens	EUR	88.13	B-1-7
SBGSF	Schneider	EUR	94.15	A-1-7
ARGKF	Aggreko	GBP	492	B-1-7
CTAGF	Capita Group	GBP	743	B-2-7
IKTSF	Intertek Group	GBP	957	B-1-7
RKLIF	Rentokil Initial	GBP	167.6	A-1-7
SCTBF	Securitas	SEK	87	B-2-7
SECCF	Serco	GBP	401	B-2-7
SGSSF	SGS	CHF	1380	A-1-7
AHEXF	Adecco	CHF	77.15	B-1-7
HAYPF	Hays	GBP	154.5	B-2-7
MPGPF	Michael Page	GBP	462.5	B-2-7
RANJF	Randstad	EUR	40.26	B-2-7
VDNVF	Vedior N.V.	EUR	16.29	B-2-7
EADSF	EADS	EUR	21.3	C-2-7
MEGGF	Meggitt	GBP	297.75	B-2-7
MTUAF	MTU Aero Engines	EUR	45.22	C-2-7
RYCEF	Rolls Royce	GBP	496.75	B-1-7
SAFRF	Safran SA	EUR	17.52	B-2-7
ZODFF	Zodiac	EUR	52.22	A-2-7
BAESF	BAE SYSTEMS	GBP	450.5	B-1-7
FINMF	Finmeccanica	EUR	21.1	A-1-7
THLEF	THALES	EUR	40.6	A-1-7
TOMKF	Tomkins	GBP	231	B-2-7
TVPKF	Travis Perkins	GBP	1740	B-1-7
WOSLF	Wolseley	GBP	1015	B-2-7
MAGOF	Man	EUR	101.78	B-1-7
ABFOF	Abertis	EUR	21.57	A-2-7
BDASF	Brisa Auto	EUR	9.4	A-2-7
CCIDF	Cintra	EUR	11.29	B-1-7
BAMXF	BMW	EUR	43.45	A-1-7
DCXGF	DaimlerChrysler	EUR	63.57	A-2-7
PEUGF	Peugeot	EUR	60.7	B-2-7
PSEPF	Porsche	EUR	1297.5	REVIEW
RNSDF	Renault	EUR	97	A-1-7
GKNCF	GKN	GBP	355.5	B-2-7
VLEEF	Valeo	EUR	34.81	B-1-7
CTTAF	Continental AG	EUR	92.59	B-1-7
MGDDF	Michelin	EUR	91.3	B-1-7
NKRKF	Nokian Renkaat	EUR	24.95	B-2-7
ASBFF	Assoc Brit Foods	GBP	836	A-2-7
CSGWF	Cadbury Schweppe	GBP	576.5	A-2-7
DNSOF	Danisco	DKK	405	A-2-7
GPDNF	Groupe Danone	EUR	54.41	A-2-7
NSRGF	Nestle (Reg)	CHF	515	A-1-7
KNUMF	Numico	EUR	53.82	B-2-7
XPPEF	Premier	GBP	234.25	B-1-7
TATYF	Tate & Lyle	GBP	547.5	B-1-7
UNLYF	Unilever	GBP	1524	A-2-7
CABJF	Carlsberg	DKK	715	B-2-7
HINKF	Heineken	EUR	44.42	A-2-7

Table of companies mentioned

ML ticker	Company	Currency	Price	Investment Opinion
INBVF	InBev	EUR	58.2	A-1-7
SBMRF	SABMiller Plc	GBP	1281	B-1-7
DGEAF	Diageo	GBP	1018	A-1-7
PDRDF	Pernod Ricard	EUR	151.36	A-2-7
SNCWF	Scottish & Newc.	GBP	599.5	A-1-7
CCHBF	Coca-Cola HBC	EUR	34.22	B-1-7
BULIF	Bulgari	EUR	9.994	B-2-7
BBRYF	Burberry	GBP	580	B-1-7
HESAF	Hermes	EUR	77.45	B-2-7
LUXGF	Luxottica Group	EUR	24.55	A-1-7
LVMHF	LVMH	EUR	78.99	A-1-7
LRLCF	L'Oreal	EUR	83.19	A-2-7
CFRUF	Richemont	CHF	71.2	B-2-7
SWGAF	Swatch Group	CHF	346.25	A-1-7
BTDPF	Barratt Dev.	GBP	905	B-1-7
BLWYF	Bellway	GBP	1248	B-1-7
BKGFF	Berkeley Group	GBP	1570	B-2-9
BVHMF	Bovis	GBP	744	B-2-7
PSMMF	Persimmon	GBP	1155	B-1-7
ADDDF	adidas Group	EUR	41.85	B-1-7
ADDDF	adidas Group	EUR	41.85	B-1-7
PMMAF	Puma	EUR	285.71	
BTAFF	Brit American	GBP	1601	A-1-7
SWMAF	Swedish Match	SEK	127.25	A-1-7
BDRFF	Beiersdorf	EUR	47.51	A-1-7
RKBKF	Reckitt Benck	GBP	2595	A-1-7
AZNCF	AstraZeneca	GBP	2391	B-2-7
GLAXF	GlaxoSmithKline	GBP	1273	A-3-7
MKGAF	Merck KGaA	EUR	90.74	B-2-7
NVSEF	Novartis (Reg.)	CHF	63	A-2-7
NONOF	Novo Nordisk	DKK	601	A-1-7
RHHBF	Roche Holdings	CHF	208.2	B-2-7
SNYNF	Sanofi	EUR	58.64	A-2-7
SNYNF	Sanofi	EUR	58.64	A-2-7
UCBJF	UCB	EUR	40.91	A-2-7
STDAF	Stada Group	EUR	45.84	B-1-7
ALIOF	Actelion	CHF	64.7	B-2-9
NVZMF	Novozymes	DKK	635	REVIEW
FMCQF	Fresenius Med	USD	15.26	B-1-7
FSNPF	Fresenius AG	EUR	35.65	B-1-7
RHKJF	Rhoen-Klinikum	EUR	52.1	B-1-7
ESLOF	Essilor	EUR	22.58	A-2-7
GGNDF	GN Store Nord	EUR	45.39	B-2-8
NBCHF	Nobel Biocare AB	DKK	51	B-1-7
PHKKF	Sonova	CHF	322.25	B-1-7
SNNUF	Smith & Nephew	CHF	104.5	B-1-7
XYSTF	SYNTHES	GBP	575.5	A-1-7
WILLF	William Demant	CHF	135.8	A-2-9
AHODF	Ahold	DKK	467	B-2-9
CRERF	Carrefour	EUR	9.23	A-1-7
CGUIF	Casino Guichard	EUR	52.14	A-2-7
CUYTF	Colruyt	EUR	74.2	A-2-7
DHLYF	Delhaize	EUR	152.88	B-1-7
MRWSF	Morrison Wm	EUR	69	B-1-7
JSNSF	Sainsbury	GBP	272.75	A-2-7
TSCDF	Tesco	GBP	540	A-1-7
KGFHF	Kingfisher	GBP	412	A-2-7
CRWHF	Carphone	GBP	207.5	B-1-7
DSITF	DSG International	GBP	335.5	B-2-7
KESAF	KESA	GBP	157.3	B-1-7
IDEXF	Inditex	GBP	303	A-2-7
NXGPF	Next	EUR	42.62	A-1-7

Table of companies mentioned

ML ticker	Company	Currency	Price	Investment Opinion
SIGYF	Signet	GBP	1904	B-2-7
XEBHF	Debenhams PLC	GBP	95.25	C-1-7
MAKSF	Marks & Spencer	GBP	120.5	A-3-7
PPRUF	PPR	GBP	615.5	B-2-7
CAKFF	Celesio	EUR	119.81	A-2-7
INNZF	Independent News	EUR	44.75	B-2-7
JHPSF	Johnston Press	EUR	3.32	A-2-7
LGDDF	Lagardere	GBP	370.75	A-2-7
PSORF	Pearson	EUR	59.09	B-1-7
RUKEF	Reed Elsevier	GBP	736	A-2-7
RENLF	Reed Elsevier NV	GBP	590.5	A-2-7
RTRSF	Reuters Group	EUR	13.09	B-2-7
GETVF	Telecinco	GBP	627	A-2-7
TNMRF	Trinity	EUR	19.27	A-2-7
XRMMF	Informa	GBP	461.5	B-1-7
YELGF	Yell Group Plc	GBP	541	B-1-7
AEGSF	Aegis	GBP	439.75	B-1-7
JCDXF	JCDecaux	GBP	126.75	A-1-7
PGPEF	Publicis Groupe	EUR	22.64	B-2-7
BSYBF	BSkyB	EUR	31.23	A-1-7
EMIPF	EMI Group	GBP	664.5	B-2-9
ITVPF	ITV Plc	GBP	267	B-2-7
MYVPF	M6	GBP	108.2	A-2-7
MDIEF	Mediaset	EUR	21.46	A-2-7
PBSMF	ProSieben	EUR	7.775	C-1-7
GETVF	Telecinco	EUR	24	A-2-7
TVFCF	TF1	EUR	19.27	A-2-7
VIVEF	VivendiUniversal	EUR	20.55	B-2-7
ARRVF	Arriva Plc	EUR	30.17	A-2-7
FCHHF	First Choice H.	GBP	715	B-1-7
FGROF	FirstGroup Plc	GBP	276.75	A-1-7
TUIFF	TUI	GBP	619	B-2-7
CMPGF	Compass Group	EUR	18.56	A-1-7
GRKGF	Greene King	GBP	318.75	A-1-7
WODBF	Marston's	GBP	981.5	A-2-7
PCTVF	Punch	GBP	353	B-1-7
ACRFF	Accor	GBP	1054	A-2-7
LTOMF	Lottomatica	EUR	62.91	C-2-8
OPAPF	OPAP	EUR	25.92	B-2-7
WIMHF	William Hill	EUR	26.5	B-2-7
AFRAF	Air France KLM	GBP	604	B-1-7
BABWF	British Airways	EUR	28.93	B-1-9
DLAKF	Lufthansa	GBP	415.5	B-2-7
IBRLF	Iberia	EUR	21.24	B-1-8
XRYNF	Ryanair	EUR	3.28	B-1-9
BGAOF	Belgacom	EUR	5.095	B-3-7
BTGOF	BT	EUR	30.8	A-1-7
CWPUF	Cable & Wireless	GBP	310	C-2-7
DTLSF	Deutsche Telekom	GBP	166.7	B-3-7
ELMUF	Elisa	EUR	13.46	B-1-7
FSWBF	FASTWEB	EUR	20.05	B-2-7
FNCTF	France Telecom	EUR	36.99	B-2-7
KKPNF	KPN	EUR	21.85	A-2-7
OTEFF	OTE	EUR	11.46	B-1-9
PTGXF	Portugal Telecom	EUR	23.4	A-1-7
SWZCF	Swisscom	EUR	9.93	A-1-7
TLTZF	Tele2 AB	CHF	416.25	B-1-7
TIAOF	Telecom Italia	SEK	122	A-1-8
TEFOF	Telefonica	EUR	2.043	A-1-7
TKMAF	Telekom Austria	EUR	17.66	B-2-7
CZMTF	Cosmote Mobile	EUR	18.88	A-1-8
IMASF	Inmarsat PLC	EUR	22.74	B-1-7

Table of companies mentioned

ML ticker	Company	Currency	Price	Investment Opinion
MBSRF	Mobistar	GBP	394.25	B-2-7
TELNF	Telenor	EUR	58.17	B-1-7
TLSNF	TeliaSonera	NOK	104	B-2-7
VODPF	Vodafone Group	SEK	51.25	B-1-7
ECIFF	EDF	GBP	157.1	B-2-7
FOJCF	Fortum	EUR	73.9	B-2-7
IBDRF	Iberdrola	EUR	24.04	A-1-7
PUPOF	Public Power Cor	EUR	39.44	A-2-7
RDEIF	Red Electrica	EUR	22.4	A-1-7
RNWEF	Renewable Energy	EUR	32.12	C-1-9
SSEZF	Scottish & Sthrn	NOK	204.5	A-1-7
TERRF	Terna	GBP	1387	B-2-7
UELFF	Union Fenosa	EUR	2.52	A-2-7
SRWRF	Solarworld AG	EUR	39.11	C-2-7
CPYYF	Centrica	EUR	34.05	A-1-7
ENGGF	Enagas	GBP	375.5	A-2-7
GZFCF	Gaz de France	EUR	16.41	B-1-7
EONAF	E.ON	EUR	34.09	B-1-7
RWNFF	RWE	EUR	118.51	B-1-7
XKELF	Kelda Group	EUR	80.31	A-1-7
PEGRF	Pennon	GBP	852	A-2-7
XSVRF	Severn Trent	GBP	575	A-1-7
NWGPF	NWG	GBP	1342	B-3-9
UUTPF	United Utilities	GBP	320.25	A-3-8
VEOEF	Veolia	GBP	673	B-2-7
AANCF	Alliance & Leic	EUR	54.42	A-2-7
AIBSF	Allied Irish Bks	GBP	1014	A-1-7
ACDTF	Alpha Bank	EUR	18.614	B-1-7
XBBPF	Banco Popolare	EUR	23.18	A-2-7
IRLBF	Bank Of Ireland	EUR	17.95	A-2-7
BNPQF	BNP Paribas	EUR	9.25	A-1-7
BDBYF	Bradford	EUR	13.15	B-2-7
CRZBF	Commerzbank	EUR	76.04	B-2-7
CRARF	Credit Agricole	GBP	372.75	A-2-7
CSGKF	CS Group	EUR	29.38	B-1-7
DNSKF	Danske Bank	EUR	26.89	A-1-7
XDUSF	Deutsche Bank	CHF	78.3	A-2-7
DXBGF	Dexia	DKK	220.25	B-2-7
DNBHF	DnB NOR	EUR	90.05	B-2-7
EXGBF	Eurobank	EUR	19.56	B-2-7
EBKOF	Erste Bank	NOK	79.2	B-1-7
HBCYF	HSBC	EUR	24.6	A-3-7
IITSF	Intesa	EUR	52.5	A-1-7
HBOOF	HBOS	GBP	882.5	A-2-7
KBCSF	KBC Group	EUR	5.505	A-2-7
LLDTF	Lloyds TSB Group	GBP	863	A-1-7
MDIBF	Mediobanca	EUR	91.46	A-1-7
NBGIF	Natl Bank Greece	GBP	534	B-1-7
NRDEF	Nordea AB	EUR	15.62	A-2-7
SCGLF	SocGen	EUR	42.8	A-2-7
SVNLF	Svenska Hbank	EUR	11.26	A-2-7
SWDBF	Swedbank	EUR	116.42	A-2-7
UBSRF	UBS	SEK	190	B-2-7
UNCFF	Unicredit	SEK	230	A-1-7
RAIFF	Raiffeisen Inter	CHF	62.65	C-1-7
SCBFF	StanChart	EUR	6.192	B-1-7
NHRKF	Northern Rock	EUR	102.85	A-1-7
HREHF	Hypo Real Estate	GBP	1464	B-2-7
SHNWF	Schroders	GBP	720.5	B-2-7
CHOXF	Cattles	EUR	40.06	B-1-7
TIGRF	3i	GBP	1305	B-1-7
ICGUF	Interm. Capital	GBP	351	B-2-7

Table of companies mentioned

ML ticker	Company	Currency	Price	Investment Opinion
CBGPF	Close Bros	GBP	1044	B-2-7
DBOEF	Deutsche Borse	GBP	1474	B-2-7
IAPLF	ICAP	GBP	737	B-2-7
SOHMF	Bolsas y Mercado	EUR	79.6	C-2-7
BRLAF	British Land	GBP	484.75	A-1-7
VBBBF	Corio	EUR	40.4	A-2-7
GECFF	Gecina	GBP	1275	A-2-7
HMSNF	Hammerson	EUR	56.54	A-1-7
KLPEF	Klepierre	EUR	114.62	A-2-7
LSGOF	Land Securities	GBP	1297	A-1-7
LBYIF	Liberty Intl	EUR	113.04	A-2-7
UNBLF	Unibail	GBP	1775	A-2-7
WRDEF	Wereldhave	GBP	1137	A-2-7
CWQXF	Castellum	EUR	178.59	B-1-7
DWVYF	Derwent London	EUR	86.77	A-1-7
FBGBF	Fabege	SEK	84.5	B-2-8
IMMZF	Immofinanz Immob	GBP	1712	A-2-7
JMAOF	JM AB	SEK	74.75	B-2-7
MEVCF	Metrovacesa	EUR	8.82	B-3-7
PSPSF	PSP	SEK	185.5	A-2-7
AEGOF	Aegon	EUR	77.95	B-2-7
AANZF	Alleanza	CHF	65.25	A-2-7
AIVAF	Aviva plc	EUR	13.06	B-2-7
FRDPF	Friends	EUR	9.33	RSTR**
INGVF	ING	GBP	698	B-1-7
LGGNF	Legal & General	GBP	176	B-2-7
MDLAF	Mediolanum	EUR	28.94	B-2-7
ODMTF	Old Mutual	GBP	137.9	B-1-7
PUKPF	Prudential PLC	EUR	5.25	B-1-7
BPNIF	Resolution	GBP	153.5	RSTR**
SREDF	Storebrand	GBP	678	C-2-7
SLFPF	Standard Life	GBP	614.5	B-1-7
SAXPF	Sampo plc	NOK	86.5	A-2-7
ALIZF	Allianz	GBP	290.5	B-1-7
ARZGF	Generali	EUR	20.73	A-2-7
RSANF	Royal & Sun	EUR	154.1	B-2-7
ZFSVF	Zurich Financial	EUR	29.44	B-1-7
HVRRF	Hannover Re	GBP	139	B-2-8
MURGF	Munich Re	CHF	341.5	B-2-7
SWCEF	Swiss Re	EUR	32.9	B-1-7
AMIGF	Admiral	EUR	125.55	C-1-7
ALAFP	Alcatel-Lucent	CHF	100.2	XRVW
ERIXF	Ericsson L.M.	GBP	801.5	XRVW
NOKBF	Nokia (A)	EUR	7.93	XRVW
DASTF	Dassault Systeme	SEK	24.68	C-2-7
MUSJF	Misys	EUR	23.31	B-1-7
SGGEF	Sage Group	EUR	30.8	B-1-7
SAPGF	SAP A.G.	EUR	42.18	B-1-7
LGIAF	LogicaCMG	GBP	229.25	B-1-7
WNXDF	Wincor	GBP	231	C-2-7
ARMHF	ARM	EUR	38.48	B-2-7
ASMLF	ASML	GBP	156	B-2-9
IFNNF	Infineon	EUR	60.96	B-2-9
STMEF	STMicroelectroni	GBP	140.75	B-1-7
XLGKF	Logitech Intl-R	EUR	21.15	B-1-9
NPACF	Neopost SA	EUR	10.69	A-1-7

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