

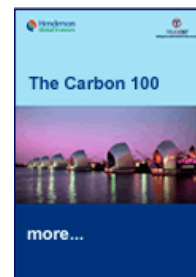
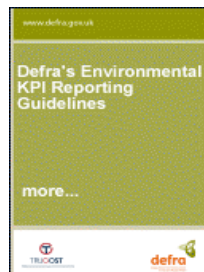
Trucost Plc

- **About Trucost**
- **Environment & Economic Costs**
 - **Relevance for Investors**
- **Company Reporting**
 - **Addressing Data Gaps**
- **Data uses**
 - **Engagement**
 - **Portfolio Analysis**
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About Trucost



- A globally recognised environmental research company with 8 years experience
- 40+ staff including 17 research analysts
- Clients include UBS, Deutsche Bank, Merrill Lynch, Fortis Investments, GLG Partners, Department for Environment (UK), Virgin Money, Credit Agricole Asset Management, BNP Cortol Consors, Euronext NYSE, Henderson Global Investors, Hermes
- Authors of the UK Government's Guidelines on Environmental reporting for companies
- Quantitative research approach to environmental performance measurement
- Proprietary input/output model calculates emissions in absence of adequate corporate disclosure - Methodology supported by Academic Advisory Panel
- World's largest global database of environmental disclosures



Social costs

Private costs

Externalities

Direct and supply chain impacts

Tragedy of the commons

Environment & Economic Costs



Value added – US electric power companies, 2004

Company	NOPAT \$m	EVA \$m	TRUEVA \$m	ROC %	TRU ROC %
Allegheny Energy	341.716	-13.456	-1,525.960	4.137	-14.175
Alliant Energy	323.209	18.815	-449.540	4.831	-2.170
Ameren	790.415	97.185	-1,458.370	5.496	-5.320
American Electric Power	1,429.582	134.994	-4,853.359	4.958	-12.343
Centerpoint Energy	617.131	-159.328	-1,162.770	3.386	-2.119
Cinergy	568.262	11.156	-1,987.005	4.825	-12.140
Consolidated Edison	763.240	-42.136	-101.309	4.539	4.187
DPL	218.166	53.555	-429.240	6.256	-7.588
DTE Energy	652.383	-90.258	-1,139.762	3.953	-2.406
Duquesne Light Holdings	106.029	9.424	9.424	5.235	5.235
Edison International	1,511.968	403.366	-882.726	5.919	0.884
Energy	1,093.428	114.785	-634.187	5.307	1.672
Exelon	2,285.552	542.397	224.534	6.162	5.305
Firstenergy	1,620.799	309.470	-882.234	5.513	1.459
FPL Group	991.320	-15.767	-1,140.436	4.636	-0.624
Great Plains Energy	217.207	95.052	-394.450	8.624	-10.811
Hawaiian Electric Inds	240.720	28.594	-119.725	5.084	1.951
Idacorp	57.129	-42.048	-182.196	2.667	-3.876
Northeast Utilities	267.471	-125.714	-306.197	2.952	0.960
Nstar	336.382	60.106	58.717	5.564	5.541
Pepco Holdings	537.856	92.083	-206.956	5.345	2.373
PG&E	1,501.360	507.895	497.362	6.725	6.678
Pinnacle West Capital	348.573	-56.742	-368.069	3.956	0.423
PNM Resources	103.676	-62.713	-226.831	2.810	-1.638
PPL	893.759	247.623	-660.077	6.391	-0.100
Progress Energy	953.079	-34.062	-1,567.562	4.451	-2.711
Reliant Energy	125.587	-419.521	-1,316.605	1.000	-6.142
Sierra Pacific Resources	250.582	5.849	-143.835	4.362	1.756
Southern	1,779.665	410.977	-3,353.323	6.319	-7.047
Teco Energy	210.150	-140.033	-466.863	2.653	-1.473
Unisource Energy	157.418	59.932	-204.959	6.927	-4.730
Westar Energy	203.152	48.226	-641.954	5.809	-13.926
Xcel Energy	680.189	-135.492	-2,231.211	3.711	-7.723

Environment & Economic Costs



Utility Index vs True ROC Index

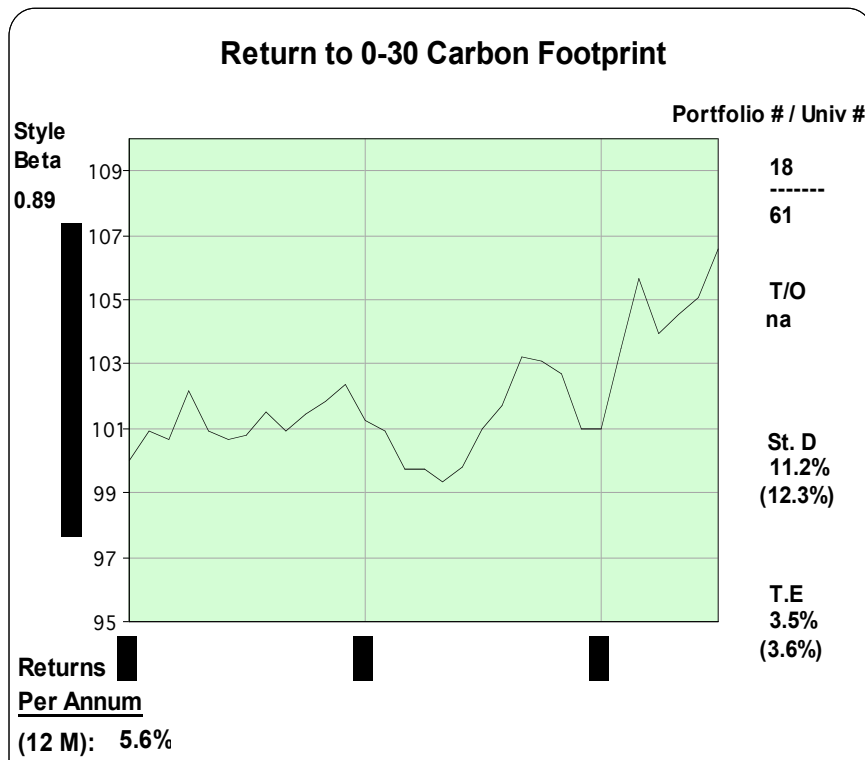


Environment & Economic Costs

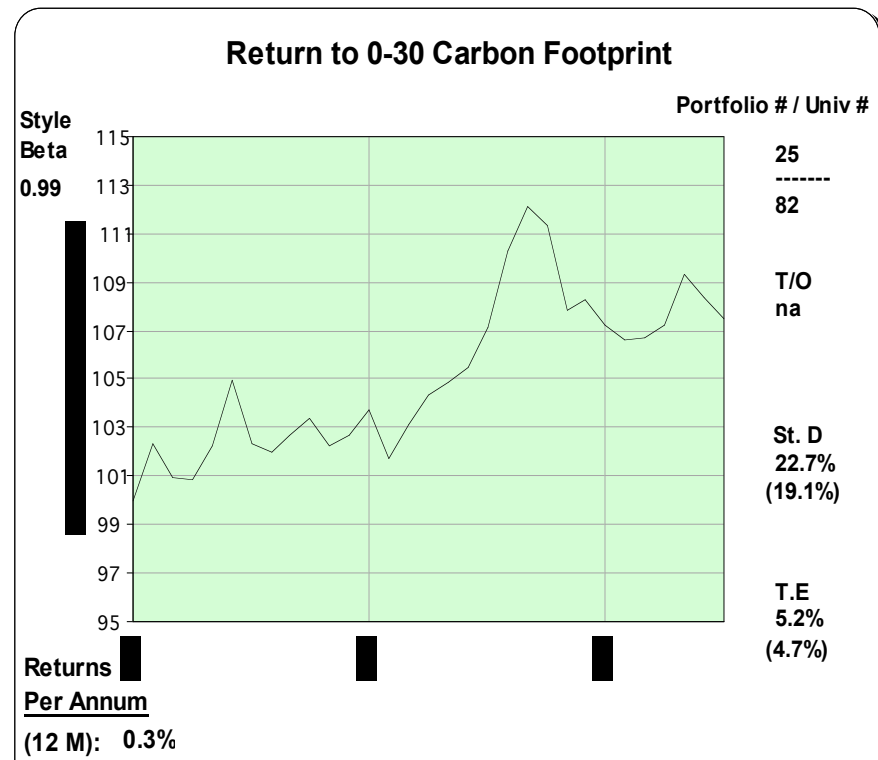


US Stocks Equally Weighted

Energy



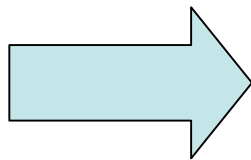
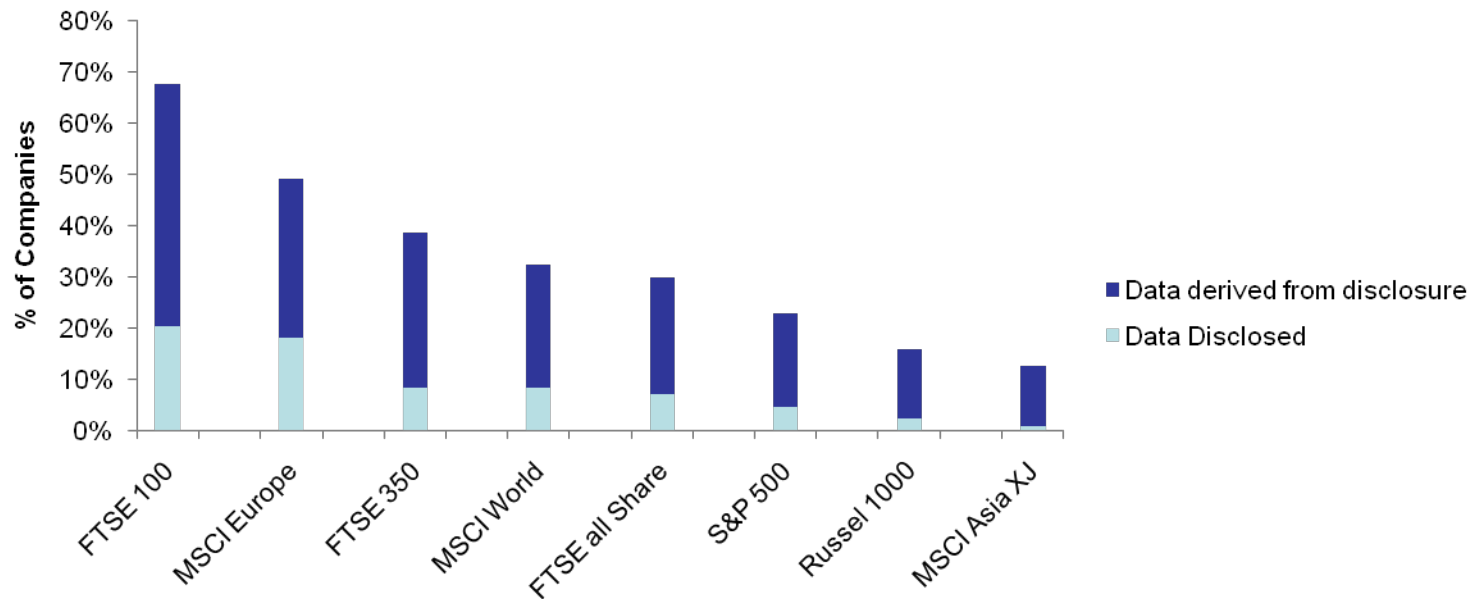
Utilities



Company Reporting

Poor Disclosure by companies & some geographies worse than others

Quantitative CO2 Disclosure Levels



DATA GAP

Lack of standardisation or inaccurate data when companies do report

Case Study – International Power

Environment

ENVIRONMENTAL DATA - Presented on a net ownership basis

	Global Data	
	2005	2006
Environment		
Indicator		
SO ₂ Emissions (kg/kWh) equivalent	0.00109	0.00101
NO _x Emissions (kg/kWh) equivalent	0.00104	0.00088
CO ₂ Emissions (kg/kWh) equivalent	0.73553	0.71468
Particulates (dust) Emissions (kg/kWh) equivalent	0.00009	0.00008
<hr/>		
Electricity Sent Out (GWh)	67,581	80,653
<hr/>		
SO ₂ Emissions (ktonnes)	77	87
NO _x Emissions (ktonnes)	74	75
CO ₂ Emissions (ktonnes)	52,294	61,206

Reported to CDP4

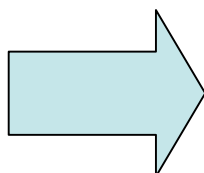
84,430,200 tonnes Co2

Reported to Trucost

68,530,000 tonnes Co2

International Power website

52,000,000 tonnes Co2



DATA GAP - incomparable

Case Study – Scottish and Southern Energy

ENVIRONMENT

CO ₂ from SSE's power stations – mte		
2006	25.34	+34.1%
2005	18.90	

Waste produced – tonnes		
2006	28,378	-1.4%
2005	28,776	

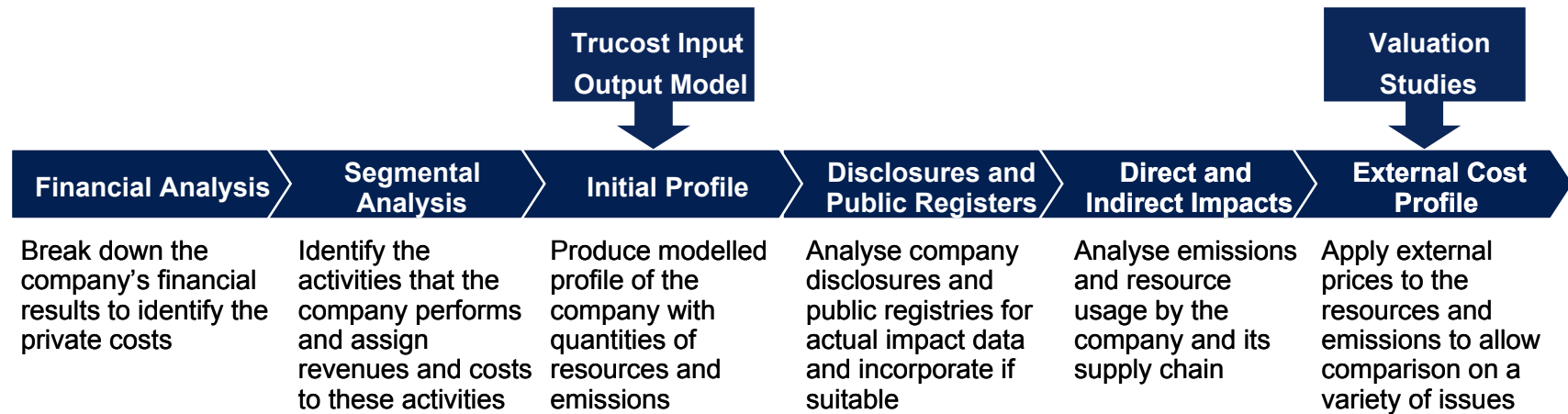
Non-power station CO ₂ emissions – mte		
2006	16,865	-3.4%
2005	17,460	

Waste sent to landfill – tonnes		
2006	10,215	-9.4%
2005	11,281	

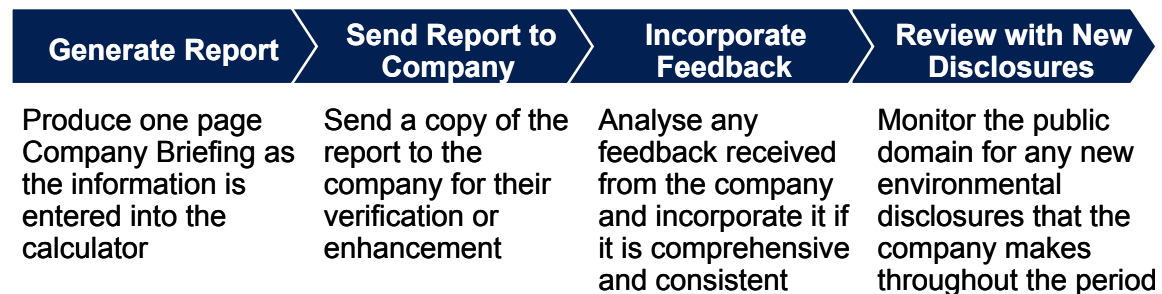
CO ₂ from electricity supplied – kg/kWh		
2006	617	+40.2%
2005	440	

Water consumption at power stations – cubic metres		
2006	3,485,992	-25.2%
2005	4,659,768	

Filling in gaps in absence of disclosure



Company Verification Process



How clients are using Trucost analysis



- Understanding environmental risk
- Incorporating environmental data into the investment process
- Creating financial products and marketing low impact funds



Footprint case studies



- Carbon Footprints of externally managed equity portfolios
 - Looking for clearer quantitative understanding of carbon impacts
 - Taking Footprint analysis to external fund managers
 - Considering implications for future investments and strategy



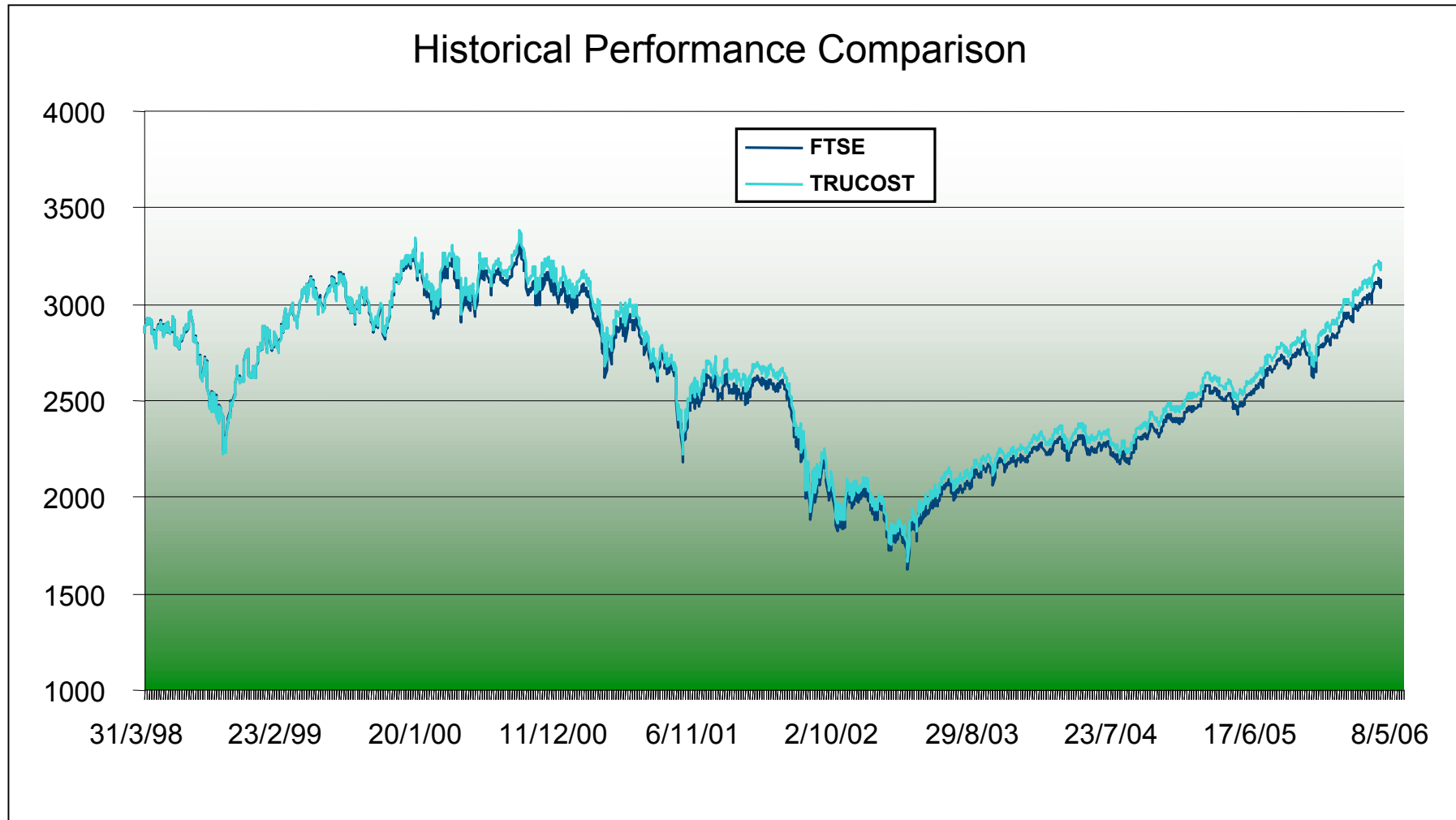
- Environmental footprint & carbon intensity of investment portfolio
 - Annual Footprint analysis
 - Published report on carbon impact & disclosures of S&P ASX 200



- Environment Agency Pension Fund
 - 14% less intensive than MSCI World
 - Request Footprints from external managers

Carbon & Environmentally Optimized Investment Products

Results: Performance



Volatility and Returns match the index because no sectors are excluded

The graph shows the daily performance of the reconstructed FTSE350 benchmark and the tilted Trucost index rebased to the value of the FTSE350 by applying the ratio of the real FTSE to the calculated one. This additional divisor is applied symmetrically to the Trucost index.

- GLG launched an Environment Fund at the start of March 2007
- GLG uses Trucost to provide data for a 'green filter' used to help select stocks for the fund
- The fund's environmental footprint was 57% lighter than the index at the end of June 2008.

"Our strategy focuses principally on those companies that, in addition to meeting GLG's very strict stock selection criteria, also have a lighter environmental footprint"

Virgin Climate Change Leaders Fund



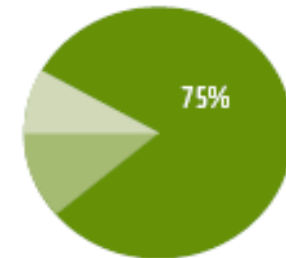
1 75% – 100% IN LIGHTER FOOTPRINT COMPANIES

Companies from Europe and other regions

Green filter

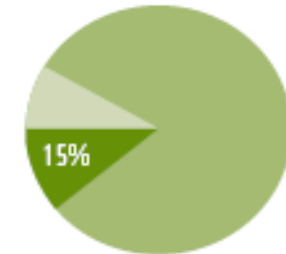
We apply what we call a green filter to all companies to screen out the heavier polluters. A company only passes through the filter if it is in the environmentally lighter half of its industry. The VCCLF typically invests between 75% – 100% of your money in these companies.

Lighter than average companies



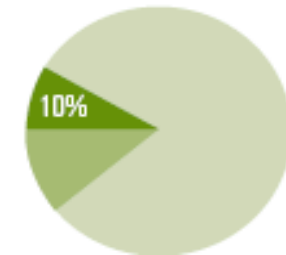
2 UP TO 15% IN SOLUTION ADOPTERS

These are companies taking a lead in their industries, actively adopting environmental best practice and seeking to minimize their environmental footprints. They make up to 15% of the fund.



3 UP TO 10% IN SOLUTION PROVIDERS

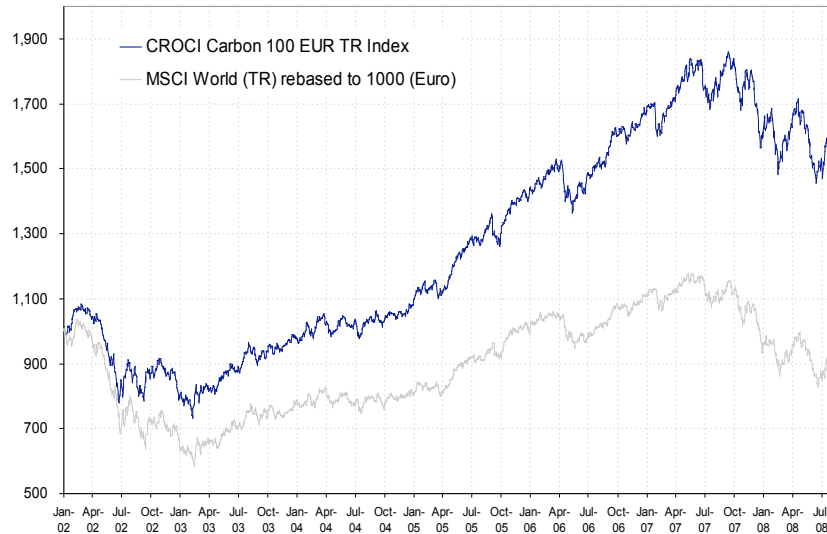
These are companies developing, manufacturing and providing innovative products and solutions to environmental problems. Investing in these stocks can be riskier which is why they only make up to 10% of the fund.



Deutsche Bank's CROCI Carbon 100



Absolute Historical Returns

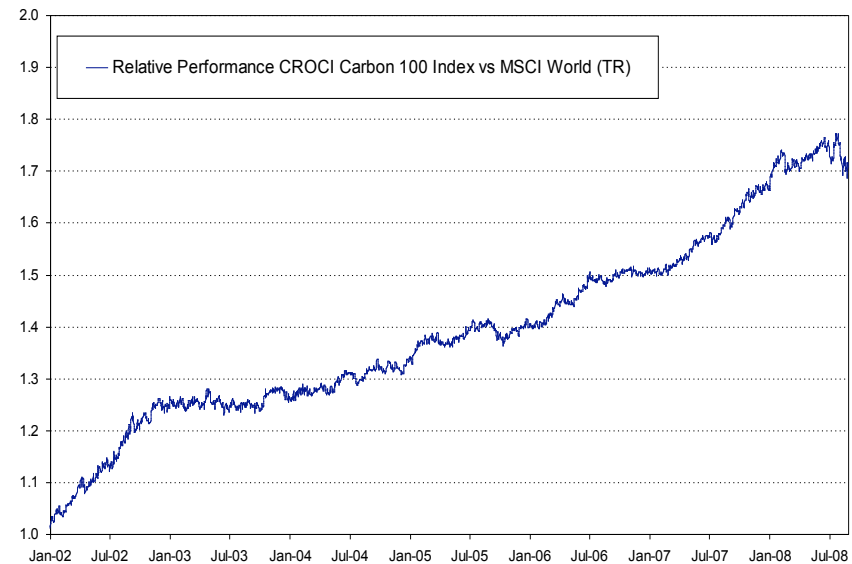


Source: Deutsche Bank, Bloomberg, Datastream, Factset.
Time period: 25-Jan-02 – 25- Sept 08

The CROCI Carbon 100 Index was launched on 11th April 2008 and has no prior operating history. All pro-forma performance data prior to this date is simulated and was calculated by means of retroactive application of the Index model. Past performance is not a reliable indicator of future results.

The performance of the CROCI Carbon 100 Index is shown gross of Index fees but net of environmental research cost. Transaction Costs and Volume Weighted Average Cost were not included in the calculation of the simulated historical performance of the index.

Relative Historical Returns



Source: Deutsche Bank, Bloomberg, Datastream, Factset.
Time period: 25-Jan-02 – 25 Sept 08

S&P US Carbon Efficient Index

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