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Extra-Financial Issues

Best Practice for SD-KPIs

Examples of good use of Sustainable Development Key Performance Indicators (SD-KPIs) in management reports 2006

A study by Prof. Dr. Dr. h.c. Jörg Baetge
(University of Münster)
and Dr. Axel Hesse (SD-M)
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1. Foundation and structure of this study

Non-financial factors have a considerable impact on a company´s success. That is why, according to the amended version of the 2003/51/EC modernisation directive, "non-financial key performance indicators" (KPIs) have to be included in a management report[1] if they are important to a company's development, position and anticipated development. The fourth accounting directive, 78/660/EEC, was revised accordingly. At the same time, the directive operationalised the notion of "Sustainable Development (SD) for the 21st Century"[2], demanding that „non-financial key performance indicators" containing information about environmental and employee issues must also be included. This came into effect with the „Bilanzrechtsreformgesetz" (BilReG)[3] which converted §§ 289, 315 of the German Commercial Code (Handelsgesetzbuch – HGB) accordingly regarding management reports.

The concept of Sustainable Development Key Performance Indicators (SD-KPIs)

Hesse surveyed investors and analysts to find the three most important non-financial SD key performance indicators for DAX companies to account for both their business development or position and their anticipated development, with its corresponding risks and opportunities. The companies were categorised into ten sectors. Answers to open questions were analysed and systemised by Hesse. The three most important non-financial key indicators in each sector were classified by Hesse as "SD-KPIs", which will be referred to as such in this study. An indicator was only described as an SD-KPI if at least 40% of the investors and analysts surveyed agreed it was important[4]. A sector´s most common SD-KPI was then called SD-KPI 1, followed by SD-KPI 2 and SD-KPI 3.

Throughout the study, the most important SD-KPI 1 was the fleet consumption of vehicles produced by the automobile industry (in g CO_2/km and l/100 km). This was the only SD-KPI listed by all the surveyed investors and analysts, with UBS stating it twice. Life-cycle analyses show that depending on the manufacturer, between 80% and 95% of CO_2 emissions are from the use of automobiles[5]. This SD-KPI also demonstrates clearly that non-financial KPIs could in fact have an important financial impact. Depending on which model is used to calculate the new CO_2 limit the average price of a Porsche will increase by between € 10,000 and € 17,000[6].

Figure 1 illustrates the SD-KPIs analysed in the ten sectors. For detailed information about these SD-KPIs, refer to Hesse's Sustained Added Value publication, with several pages devoted to each sector[7].

In Germany, the need to report important SD-KPIs was first applied in the management reports of the 2005 fiscal year. As a result, experience in this field is not yet well established. Nonetheless, the demands of SD management have risen and become more widely accepted. The last two Nobel Peace Prizes, awarded to Muhammed Yunus and the Grameen Bank[8] for micro-credits (economic and social development) in 2006 and to Al Gore and the International Panel on Climate Change (IPCC)[9] for climate protection (environmental protection) in 2007, are a clear sign of SD´s importance in society and the global economy.

1 The term "(Group) Management Report" is used by the majority of companies as the translation of the German expression "(Konzern-)Lagebericht". "Management Report" is used uniformly throughout this study. However, different terms are used in different companies and countries, for example, Management´s Discussion and Analysis (MD&A) in Canada and the United States, Operating and Financial Review (OFR) resp. Business Review in the United Kingdom. The term "Management Commentary" (MC) is used by the International Accounting Standards Board (IASB), which examines the potential for the IASB to develop standards or guidance for MCs.

2 Cf. World Commission on Environment and Development, Our Common Future, Oxford 1987, p. 43, und Hesse, A., Das Klima wandelt sich – Integration von Klimachancen und -risiken in die Finanzberichterstattung, Bonn, Berlin 2004, pp. 34–35.

3 Cf. legislation regarding the introduction of international accounting standards and the securing of quality relevant to annual audits (Bilanzrechtsreformgesetz – BilReG), in: Bundesgesetzblatt Jahrgang 2004 Teil I No. 65, published in Bonn on 9 December 2004, pp. 3166-3268., and Hesse, A., Das Klima wandelt sich – Integration von Klimachancen und -risiken in die Finanzberichterstattung, Bonn, Berlin 2004, pp. 40–42.

4 Cf. Hesse, A., Sustained added value. Information demand of investors and analysts for sector-specific "Sustainable Development Key Performance Indicators" (SD-KPIs) in Management Commentaries (MCs) of German companies, ed. Deloitte, Düsseldorf, Munich, 2007, pp. 5–7.

5 Cf. Hesse, A., Climate and corporations – Right answers or wrong questions? – Carbon Disclosure Project data – Validation, analysis, improvements, Bonn, Berlin, February 2006, p. 14.

6 Cf. Hauschild, H., Höhere CO_2-Grenzwerte verteuern Kauf von Neuwagen deutlich, in: Handelsblatt, 14 December 2007, p. 6.

7 Cf. Hesse, A., Sustained added value. Information demand of investors and analysts for sector-specific "Sustainable Development Key Performance Indicators" (SD-KPIs) in Management Commentaries (MCs) of German companies, ed. Deloitte, Düsseldorf, Munich, 2007, pp. 7–9. – free download on http://www.SD-M.de/Publikationen.htm.

8 Cf. http://nobelprize.org/nobel_prizes/peace/laureates/2006/.

9 Cf. http://nobelprize.org/nobel_prizes/peace/laureates/2007/.

Sector	SD-KPI 1	SD-KPI 2	SD-KPI 3
I. Automobile industry	Sales-weighted fleet consumption of types of vehicles sold in the fiscal year in g CO_2/km (EU) resp. „miles per gallon" (USA)	Group-wide energy and greenhouse gas intensity of the production, absolute in million t CO_2 and relative in kg CO_2 per produced vehicle	–
II. Banks	Credit checks for SD risks and opportunities in commercial/investment banking (checks of environmental and social risks with corporate loans/financing, esp. in emerging and developing countries; checks of environmental and social chances, e.g. financing of renewable energy projects or water infrastructure)	Credit checks for of SD risks and opportunities in retail banking (no „predatory" lending, mechanisms preventing money laundering; financial access for private clients, esp. microfinancing, allocation of SD supportive loans)	Integration of SD aspects in asset management (e.g. consideration of environmental, social and development aspects in research and asset services; active use of shareholder rights, „engagement")
III. Chemical industry	Group-wide energy and greenhouse gas intensity of production absolute in million t CO_2 and relative in kg CO_2 per production volume	Production related prevention/mitigation of hazardous substances (absolute, hazardous non-product output (NPO) in t; relative NPO per production volume; disposal methods)	Prevention/mitigation of human and environmental toxicity (related to the finished products; esp. in research & development regarding the reduction of human and environmental toxicity)
IV. Industrial goods	Group-wide energy and greenhouse gas intensity of production absolute in million t CO_2 and relative in kg CO_2 per production volume	Energy efficiency of products in the use phase (e.g. specific energy consumption per operating unit; aims and strategies of reducing energy consumption of products)	Labour conditions for staff and supply chain, esp. in emerging and developing countries; compliance with basic labour rights; health and safety of staff
V. Information and communication technology	Group-wide energy and greenhouse gas efficiency of production absolute in million t CO_2 and relative in kg CO_2 per production volume and products (e.g. per operating hour)	Eco-design (integration of environmental aspects from product design to recycling; in the production of semiconductors also: reduction of water consumption)	Labour condition for staff and supply chain, esp. in emerging and developing countries; compliance with basic labour rights; health and safety of staff; with regard to telecommunication also: health risks of electromagnetic radiation
VI. Consumer goods/ retailing	Environmental (e.g. ISO 14000-14060, reduction of emissions and water consumption, animal protection) and social standards of the supply chain esp. in emerging and developing countries; compliance with basic labour rights; health and safety of the staff working in the supply chain	Proportion of products with SD differentiation e.g. eco-/bio-/fair-trade-label; for paper or timber products e.g. also FSC (Forest Stewardship Council)	Hazardous substances/environmental and human toxicity both in the production and in the use phase of the products (e.g. gradual decrease in different chemical substances; label „faith in textiles" with garments)

Fig. 1 – SD-KPIs for the ten sectors (to be continued on the next page)

Sector	SD-KPI 1	SD-KPI 2	SD-KPI 3
VII. Pharma-ceutical industry	Strategies for access to medicines for the poor, esp. in emerging and developing countries; related to the high number of affected humans regarding the necessary medication; R&D; property rights; pricing; long-term strategies and profit aims	R&D ethics regarding controversial issues such as genetic engineering, stem-cell research, animal testing, clinical tests; stated and practised standards	Marketing ethics (appropriate distribution forms; compliance with WHO Ethical Criteria for Medicinal Drug Promotion; observance of medical safety for non-OECD countries)
VIII. Transport & logistics	Group-wide energy and greenhouse gas efficiency of transport services absolute in million t CO_2 and relative in g CO_2 per produced tonne/passenger kilometre	Average fleet consumption of airplanes/vehicle fleet in l/100 tonne/passenger kilometre; if not collected yet, alternatively: fleet age as approximative value for benchmarking	–
IX. Insurance	Integration of SD aspects in asset management (e.g. consideration of environmental, social and development aspects in research, own investments, assigned mandates and asset services offered to the insured; indirect SD effects of the investment portfolios, e.g. CO_2 emissions of investee companies; active use of shareholder rights; „engagement")	Ecological premium incentives (e.g. if a company can prove to have an environmental management or insurance clients assure environment-friendly products and risk checks (integration of environmental risks)	–
X. Utilities	Group-wide greenhouse gas intensity of energy production in g CO_2/kWh on the basis of thermically and electrically generated energy; indication of acquisition or sales of emission allowances	Increase of renewable energy proportion like wind and water power, photovoltaics, solar thermics as well as biomass in MW and MWh	Transparency of energy mix (list of generating plants in MW and production volumes in MWh of nuclear energy, oil, coal, gas and renewable energies; transparent information for the clients, if necessary via labelling)

Fig. 1 – SD-KPIs for the ten sectors

The Best Annual Report competition

In 2007, the Baetge Research Team of the University of Münster included SD-KPIs as criteria in the evaluation checklist[10] of the 13th Best Annual Report competition organised by manager magazin. The competition is under Prof. Baetge´s scientific direction and to objectify the checklist, his research team published a series of dissertations with IDW Publishing[11]. In the competition, the annual reports of nearly 200 stock companies were analysed from the Dow Jones Stoxx 50, DAX, MDAX, SDAX, TecDAX and the biggest stockmarket newcomers of Prime Standard using 320 criteria[12]. In 2006, the companies surveyed by Hesse called A Best Practice Guide the most useful tool when selecting and developing non-financial key performance indicators[13]. When the Baetge Research Team analysed the 2006 annual reports for the Best Annual Report competition, the SD-KPIs could be systematically collected for the first time: identifying best practice examples for SD-KPIs and allowing potential for improvement to be explored.

Structure of this study

Chapter 2 contains best practice examples for the ten DAX sectors listed in figure 1. In chapter 3, new SD-KPIs are determined for three sectors not included in figure 1, each of which is illustrated with a best practice example. Best practice examples were chosen using the six criteria below.

Disclosure in **management reports** is **relevant to a certified public accountant**. If a company does not report on SD-KPIs in its management report, the data are not seen as an example of best practice because it has not been audited. As a result, information about SD-KPIs in the management report[14] is conditio sine qua non for an assessment of best practice. The examples of best practice described in chapter 2 are derived from management reports that give the most information about SD-KPIs when evaluated against the criteria below. Each of the **five assessment criteria** were given a 20% weighting **for each SD-KPI**:

(1) The first criterion is whether the company **reports one or more of the 3 SD-KPIs** assigned to their sector.

(2) The second criterion is whether the company states the **economic importance of SD-KPIs** for its business development, position and anticipated development, with corresponding risks and opportunities. They are rated positively if they give statistics on costs, earnings, profit, return on equity, turnover, added value, brand value/reputation or customer satisfaction, giving some indication of the relationship between them.

(3) The third criterion considers whether a company´s **SD-KPIs** are supplemented with **quantitative statements** about their aims and achievements, which are also rated positively.

(4) The fourth criterion analyses **SD-KPI trends**; positively rating a company´s development of SD-KPIs in previous years, the current fiscal year and for the subsequent two or more years.

(5) The final criterion considers a company´s **SD-KPIs** against other companies in their sector because this **benchmarking** is of vital importance to the annual report´s original intended audience.

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10 Cf. Baetge, J./Armeloh, K.-H./Schulze, D., Anforderungen an die Geschäftsberichterstattung aus betriebswirtschaftlicher und handelsrechtlicher Sicht, in: DStR 1997, pp. 176–178; **the same authors in:**
Der Kriterienkatalog zur Beurteilung des Inhalts von Geschäftsberichten, in: Der Geschäftsbericht: die Visitenkarte des Unternehmens; Bedeutung – Inhalt – Sprache – Design – Servicefunktion – Praxisbeispiele, eds. Baetge, J./Kirchhoff, K.R., Vienna 1997, pp. 93–128;
Empirische Befunde über die Qualität der Geschäftsberichterstattung börsennotierter deutscher Kapitalgesellschaften, in: DStR 1997, pp. 212-219;
Externes Berichtswesen: Bestandsaufnahme aus Shareholder-Value-Sicht zeigt Defizite – Untersuchung der Uni Münster – Qualität der Geschäftsberichte insgesamt nur ausreichend, in: Handelsblatt No. 71, 14 April 1997, p. 22;
Sonstige Angaben im Geschäftsbericht, in: Der Geschäftsbericht: die Visitenkarte des Unternehmens; Bedeutung – Inhalt – Sprache – Design – Servicefunktion – Praxisbeispiele, eds. Baetge, J./Kirchhoff, K.R., Vienna 1997, pp. 285–303.

11 The checklist was developed on the basis of the following empirical dissertations:
Krumbholz, M., Die Qualität publizierter Lageberichte, Düsseldorf 1994;
Armeloh, K.-H., Die Berichterstattung im Anhang, Düsseldorf 1998;
Rolvering, A., Zwischenberichterstattung börsennotierter Kapitalgesellschaften, Herne/Berlin 2002;
Heumann, R., Value Reporting in IFRS-Abschlüssen und Lageberichten, Düsseldorf 2005;
Prigge, C., Konzernlageberichterstattung vor dem Hintergrund einer Bilanzierung nach IFRS, Düsseldorf 2006.
For the competition 2008 the following dissertation will also be taken into account:
Brüggemann, B., Die Berichterstattung im Anhang des IFRS-Abschlusses, Düsseldorf 2007.

12 Cf. Baetge, J./Prigge, C., Anforderungen an verpflichtende, empfohlene und freiwillige Angaben des Konzernlageberichts, in: Der Betrieb (DB), Heft 08/2006, pp. 401–407, Baetge, J./Heumann, R., Wertorientierte Berichterstattung, in: Der Betrieb (DB) issue 07/2006, pp. 345–350, sowie Döhle, P., Gute Seiten, schlechte Seiten, in: manager magazin 10/2007, pp. 104-106, http://www.manager-magazin.de/unternehmen/geschaeftsbericht/ and www.wiwi.uni-muenster.de/baetge/.

13 Cf. Hesse, A., Added value, long term. Non-financial sustainability key performance indicators on their way into financial reports of German companies, ed. Deloitte, Düsseldorf, Munich 2006, p. 15.

14 We consider it the best solution if SD aspects are integrated into the resp. sections of the management report (business and operating environment, results of operations, financial position and net assets, report on post-balance sheet date events, risk report, report on expected developments) as recommended by the German Standardisation Council (Deutscher Standardisierungsrat – DSR) rather than into a separate subsection, e.g. on environment, staff, corporate and social responsibility or sustainability. Cf. Bundesministerium der Justiz (ed.): Bekanntmachung des Deutschen Rechnungslegungs Standards No. 15 (DRS 15) – Lageberichterstattung – 31 January 2005, in: Bundesanzeiger, 26 February 2005, pp. 7–9.

If only two SD-KPIs were identified for a sector, SD-KPI 1 was given a 60% weighting and SD-KPI 2 40%. For a sector with three SD-KPIs, SD-KPI 1 was given a 40% weighting and SD-KPI 2 and SD-KPI 3 30% each, as shown in the following two assessment tables (figures 2 and 3).

The five criteria above are rated 0% if they are not disclosed, 50% if more information could be provided, and 100% if all requirements are met (cf. the headings of figures 2 and 3).

for two SD-KPIs	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (60%)						
SD-KPI 2 (40%)						
weighted sum (100%)						

Fig. 2 – evaluation table for sectors with two SD-KPIs

for three SD-KPIs	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)						
SD-KPI 2 (30%)						
SD-KPI 3 (30%)						
weighted sum (100%)						

Fig. 3 – evaluation table for sectors with three SD-KPIs

2. Examples of best practice in ten DAX sectors

2.1 Automobile industry: BMW—not quite best practice

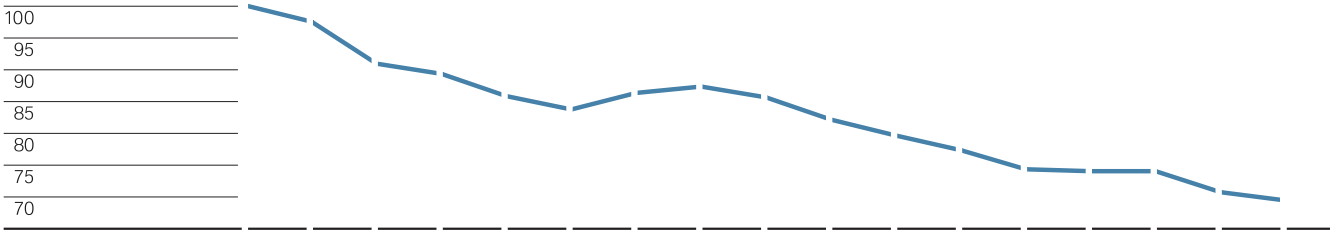
2.1.1 SD-KPI 1: Fleet consumption

In the automobile industry no best practice example of SD-KPI[15] reporting could be found. None of the automobile manufacturers mentioned the most important SD-KPI: total fleet consumption of vehicle types sold measured in g CO_2/km. In its management report, BMW only made passing reference to SD-KPI 1 in the passage headed Business Development[16]:

"In recent years the BMW Group has made good progress in reducing the fuel consumption level of its fleet. In accordance with the agreement made by the German Automobile Industry (VDA) to reduce fleet consumption by 25% in the period from 1990 to 2005, the BMW Group has contributed significantly to this commitment by reducing its fleet consumption by almost 30%. The BMW Group is also making an active contribution towards fulfilling the voluntary commitment given by the European Automobile Manufacturers (ACEA) to the EU Commission. This voluntary commitment envisages a 25% reduction in CO_2 emissions over the period 1995 to 2008. This means that the European fleet average for passenger cars should be reduced to 140 gram per kilometre driven by the year 2008."

Fuel consumption of BMW Group cars according to VDA commitment

(Index: 1990 = 100; Basis: fleet consumption of newly registered cars in Germany measured on the basis of the New European Driving Cycle in accordance with the VDA commitment for passenger/estate cars*)



90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	**06**
100.0	97.5	90.9	89.3	85.8	83.7	86.3	87.3	85.6	82.1	79.6	77.3	74.3	74.0	74.0	70.7	69.4

*The adoption of the uniform VDA computation method for the various DIN-1/3-Mix measurement methods (used up to 1996) and the New European Driving Cycle (used from 1997 onwards) gives rise to minor discrepancies compared to earlier BMW Group Annual Reports.

15 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

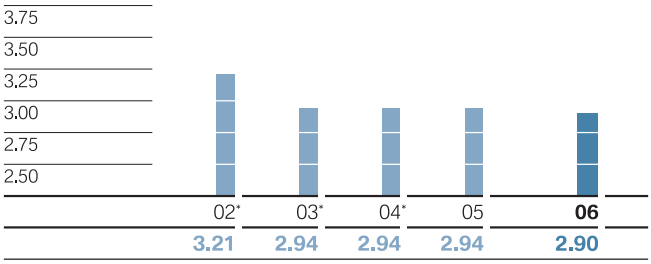
16 BMW Group, Annual Report 2006, pp. 30–31.

While BMW does report on its fleet consumption, it only gives relative, rather than absolute, emission data. This needs improvement and as a result, BMW's reference to SD-KPI 1 and the quantitative data were given a 50% rating. The economic significance of SD-KPI 1 to BMW is not clear (0%[17]). Trend analysis over previous years is described in detail, but no mention is made of anticipated development (50%). Benchmarking is only given in relative terms (50%). Although BMW reduced its fleet consumption by almost 30% from 1990 to 2005, compared to the German Automobile Industry´s target of 25%, the most important information on absolute fleet emissions is omitted. BMW reports on the voluntary commitment given by the ACEA to reduce fuel consumption to 140 g CO_2/km by 2008, but says nothing of the fact that the absolute output of its cars is higher than all of its competitors, at 192 g CO_2/km[18]. In view of an impending EU regulation, the company faces a high risk for further development, but this issue is withheld from investors. According to a study carried out by the EU Commission, BMW can expect price increases of between approximately € 1,500 and nearly € 3,000 per automobile on average across its fleet depending on the regulations set by the EU[19]. A further risk might be a drop in sales because fuel efficiency has become the most important criterion when purchasing an automobile.[20] As figure 4 demonstrates, BMW only achieves 40% of the maximum rating for SD-KPI 1.

2.1.2 SD-KPI 2: Energy and greenhouse gas intensity of production

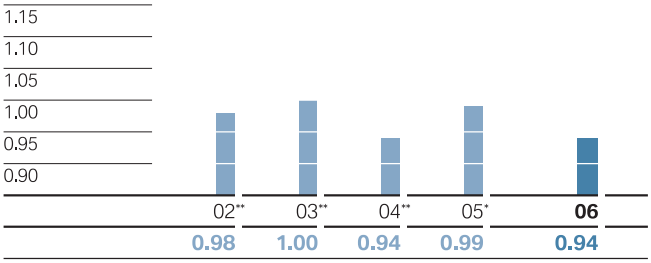
In its management report BMW graphically[21] states the energy consumption and CO_2 emissions per unit produced.

Energy consumed per unit produced
in MWh



*Variance to reported figures from previous years due to larger basis of data

CO_2 emissions per unit produced
in tons



*The increase is attributable to a change in the energy mix.
**Variance to reported figures from previous years due to larger basis of data

17 In the following our rating for each SD-KPI (0%, 50% or 100%) is given, like here with 0%, in brackets concerning the five criteria.

18 Comparative values of the brands Volkswagen: 159 g CO_2/km and Mercedes-Benz: 185 g CO_2/km. Cf. Hesse, A., Sustained added value. Information demand of investors and analysts for sector-specific "Sustainable Development Key Performance Indicators" (SD-KPIs) in Management Commentaries (MCs) of German companies, ed. Deloitte, Düsseldorf, Munich, 2007, p. 9.

19 Cf. Hauschild, H., Höhere CO_2-Grenzwerte verteuern Kauf von Neuwagen deutlich, in: Handelsblatt, 14 December 2007, p. 6.

20 KPMG, Momentum, 2007 KPMG Global Auto Executive Survey , Munich 2007, p. 5.

21 BMW Group, Annual Report 2006, p. 31.

With regard to SD-KPI 2, the BMW chart shows relative reductions in energy consumption and CO_2 emissions per unit produced. The text also mentions absolute reductions of more than 26% in energy consumption and roughly 24% in CO_2 emissions over the last ten years (100%). SD-KPI 2 is quantified (100%) but the economic significance of SD-KPI 2 is not given (0%). The trend analysis does not indicate anticipated development (50%). No reference is made to benchmarking (0%). As a result, BMW's percentage for SD-KPI 2 is 50% of the maximum rating, totaling 44% for the two SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (60%)	50%	0%	50%	50%	50%	40%
SD-KPI 2 (40%)	100%	0%	100%	50%	0%	50%
weighted sum (100%)	70%	0%	70%	50%	30%	**44%**

Fig. 4 – evaluation of reporting on SD-KPIs for BMW

2.2 Banks: ABN AMRO—SD opportunities are integral to the management report

ABN AMRO has fully integrated the three most important categories of SD-KPIs[22] for the banking sector into its management report in three sections: Client Business Units (BUs), Product Business Units and Other Businesses.

2.2.1 SD-KPI 1: Credit checks for SD risks and opportunities in commercial/investment banking

In the management report of its annual report, ABN AMRO makes the following remarks about SD-KPI 1[23]:

"ABN AMRO is widely recognised as a pioneer and leader in the development of sustainable bank-society relationships in Brazil. BU Latin America´s long-standing recognition of the importance of ethical principles in the way it does business has now developed into a strong overall commitment to society and the environment. Banco Real has been named one of the best companies to work for in Brazil for the fifth consecutive year in a national business survey. It also undertakes several socially responsible initiatives such as implementing Brazil´s first carbon credit transaction in 2006, applying an environmental, social and ethical risk policy to project finance […] In addition, the BU now offers a range of social and environmental financing products, which are specifically geared towards promoting better consumption and management of natural resources by companies […]"

The credit risks of SD-KPI 1 could have been described in more detail, but the illustration of different credit opportunities in commercial and investment banking, resulting from new business in the field of carbon credits for example, deserves an overall assessment of best practice at a value of 50%. The significance of SD-KPI 1 to the business development of the Latin America BU was clear (100%). E.g. the report highlights a positive effect on reputation, staff incentives and protection against credit risks. Quantitative illustrations, however, are missing (0%). Rather than analysing a trend, only sustainable activities are mentioned (50%). The bank states that it is known in Brazil as a pioneer in sustainability (benchmarking: 50%). ABN AMRO therefore scores 50% for SD-KPI 1.

2.2.2 SD-KPI 2: Credit checks for SD risks and opportunities in retail banking

The following two quotations from the management report of ABN AMRO's annual report refer to SD-KPI 2 in Brazil and Asia:

"By year-end 2006, BU Latin America´s microfinance business reached out to 11,500 Brazilian clients, compared with 8,300 clients in 2005. The BU's microfinance business has evolved from a pilot to a sizeable business activity; it is now active in over 70 communities in nine cities across Brazil. In 2006, BU Latin America´s microfinance business reached break-even."[24]

"Sustainability is a key component of BU Asia´s strategy and the success of the microfinance business in India is a great example of this. Started less than three years ago, ABN AMRO has emerged as an important player in microfinance and continues to be one of the largest foreign banks in the sector. Partnering with over 25 microfinance institutions and reaching across eight states in India, the portfolio grew by 93% year on year. By year end 2006, BU Asia´s microfinance business reached out to more than 340,000 households compared with 178,000 households in 2005. The BU´s microfinance business in India continues to operate profitably."[25]

All the important points outlined for SD-KPI 2 are covered (100%). As well as the information given on Brazil and Asia, the report also mentions the Green Building Initiative which was specifically geared to its customers, real estate developers and staff in North America. In the section on compliance[26] there are also detailed examples of the prevention of money laundering. The significance of this for ABN AMRO's business development rests on the protection of its reputation. The microfinance business for the Latin America and Asia BUs are accounted for. Originally launched as a pilot service, they have now been developed into a standard product and operate profitably (100%). More concrete quantitative indications (50%) and trend analyses (50%) are only given for microfinancing as illustrated by the increase of customer numbers compared with the previous year. There is no benchmarking for SD-KPI 2 (0%). ABN AMRO scores 60% for SD-KPI 2.

22 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

23 ABN AMRO, Annual Report 2006, pp. 50–51.

24 ABN AMRO, Annual Report 2006, pp. 50–51.

25 ABN AMRO, Annual Report 2006, p. 52.

26 Cf. ABN AMRO, Annual Report 2006, pp. 35–36 and p. 48.

2.2.3 SD-KPI 3: Integration of SD aspects into asset management

The following two quotations demonstrate detailed reporting on the integration of SD challenges into asset management (100%):

"BU Global Clients realises that many of its clients face global challenges ranging from climate change effects, security issues, health issues and demographic shifts in their customer base, to poverty alleviation and environmental issues. BU Global Clients´ knowledge and understanding of these challenges allow its senior relationship bankers to engage with their clients to address their challenges and create new business opportunities, balancing people, planet and profit considerations."[27]

"Throughout 2006, BU Asset Management´s socially responsible investment (SRI) initiatives gained momentum, with products that allow clients to invest in companies that work towards sustainable development. The BU offers more than 20 SRI funds. These funds invest in companies that maintain rigorous environmental, social and corporate governance criteria, while also showing solid performance. BU Asset Management believes its clients will benefit from investing in its SRI funds because companies that protect the environment, have good relations with their employees and communities, and have strong corporate governance policies, are better investment options in the long term. BU Asset Management is also committed to integrating environmental, social and governance factors into its (non-SRI) investment processes."[28]

The economic significance for investing clients and investee companies is clear from long-term increasing performance (100%). Quantitatively, however, the only statistic given is of more than 20 respective investment funds. Examples of fund assets (50%) are not provided. There is neither a trend analysis (0%) nor benchmarking (0%). As a result, ABN AMRO scores 50% on SD-KPI 3 and a total of 53% over the three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	50%	100%	0%	50%	50%	50%
SD-KPI 2 (30%)	100%	100%	50%	50%	0%	60%
SD-KPI 3 (30%)	100%	100%	50%	0%	0%	50%
weighted sum (100%)	80%	100%	30%	35%	20%	**53%**

Fig. 5 – evaluation of reporting on SD-KPIs for ABN AMRO

[27] ABN AMRO, Annual Report 2006, S. 53.

[28] ABN AMRO, Annual Report 2006, S. 61.

2.3 Chemical industry: BASF sets long-term climate targets[29]

2.3.1 SD-KPI 1: Energy and greenhouse gas intensity of production

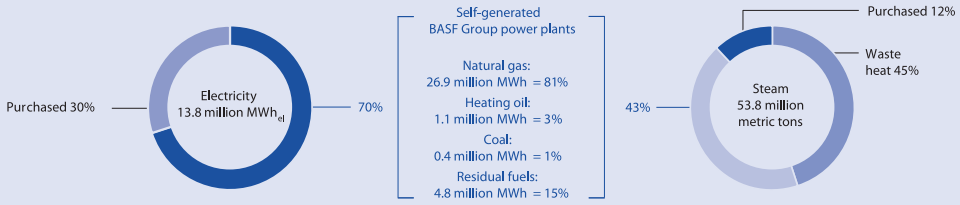
With regard to SD-KPI 1, BASF states the following in the management report of its financial report[30]:

"The operating costs relating to environmental protection throughout the BASF Group amounted to € 657 million in 2006 (2005: € 623 million). In the same period, we also invested € 116 million in new and improved environmental protection plants and facilities (2005: € 78 million). These capital expenditures include both end-of-pipe and prodution-integrated measures. Provisions established for environmental protection measures and remediation worldwide amounted to € 271 million as of December 31, 2006 (December 31, 2005: € 253 million)."

"We are committed to the aims of the 1997 Kyoto Protocol to reduce greenhouse gas emissions. In the years 1990 to 2002, we already reduced greenhouse gases by 38% in absolute terms, and by 61% in relative terms. In 2006, BASF's chemical business worldwide (excluding newly acquired businesses) emitted 25.0 million metric tons of greenhouse gases compared with 24.8 million metric tons in 2005. Compared with the baseline year 2002, we achieved a reduction of 12.4% in greenhouse gas emissions per metric ton of sales product. Our production rose by 15.4% during the same period."

BASF gives a detailed account of SD-KPI 1 in its management report (100%) both graphically and verbally. Its significance for business development, however, is only suggested (50%). Costs and investments for environmental protection are not broken down for the individual SD-KPIs (e.g. to prevent greenhouse gas emissions, hazardous substances or toxicity). BASF quanti-

Energy balance BASF Group 2006



Environment, Safety and Product Stewardship

The data do not include companies acquired in 2006.

Reduce emissions from chemical operations (baseline 2002)		2012 goals	Status at year-end 2006 Goal
Emissions of greenhouse gases per metric ton of sales product		–10%	–12.4%
Emissions of air pollutants		–40%	–42.6%
Emissions to water:	Organic substances	–60%	–64.2%
	Nitrogen	–60%	–73.1%
	Heavy metals	–30%	–42.6%
Occupational safety (baseline 2002)		2012 goal	Status at year-end 2006 Goal
Reduce lost time accidents per million working hours		–80%	–49.0%
Distribution safety (baseline 2003)		2012 goal	Status at year-end 2006 Goal
Reduce transportation accidents		–70%	–19.6%
Product stewardship		2008 goal	Status at year-end 2006
Complete the minimum data sets for all chemical substances handled by BASF in quantities of more than 1 metric ton per year.		> 98%	We have completed about 98% of data sets in Germany and 93% of data sets for the substances we produce worldwide.

[29] Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

[30] BASF, Financial Report 2006, pp. 68–69.

fies its long-term relative targets and the percentage of targets achieved for SD-KPI 1 by giving relative and absolute energy and greenhouse gas data. It shows an anticipated trend from 2002 to 2012 (100%). There is no benchmarking (0%). BASF scores 70% for SD-KPI 1.

2.3.2 SD-KPI 2: Prevention/mitigation of hazardous substances

BASF gives the following report on production-related SD-KPI 2[31]:

"Globally, we aim to have data sets for all substances and products we handle. By the end of 2008, we will have base data for all substances that we handle in quantities of more than one metric ton per year."

The report does not account for the potential danger of the substances they handle (50%). Rather than being clear about the potential for their reputation to be damaged by this, BASF only publishes unspecific data about costs and investments in environmental protection (50%). The reduction of air and water pollution for the chemical industry is quantified (100%). A trend analysis (100%) and benchmarking (0%) score a similar rating to SD-KPI 1. BASF scores 60% for SD-KPI 2.

2.3.3 SD-KPI 3: Prevention/mitigation of human and environmental toxicity

Very little information can be found on SD-KPI 3 (toxicity for man and environment) in BASF´s management report, except for some data on the company's "product responsibility" (50%). Its economic significance is only loosely accounted for in the costs and investments for environmental protection (50%). With regard to BASF's product responsibility, 98% of data on substances produced in Germany and 93% of the data on substances produced globally are described as complete. There is no mention, however, of degrees of toxicity (50%). With a target of ">98%" for 2008, BASF declares that the German level should be achieved throughout the group (50%). Benchmarks are not mentioned (0%). BASF scores 40% for SD-KPI 3 and a total of 58% for the three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	100%	50%	100%	100%	0%	70%
SD-KPI 2 (30%)	50%	50%	100%	100%	0%	60%
SD-KPI 3 (30%)	50%	50%	50%	50%	0%	40%
weighted sum (100%)	70%	50%	85%	85%	0%	**58%**

Fig. 6 – evaluation of reporting on SD-KPIs for BASF

[31] BASF, Financial Report 2006, p. 70.

2.4 Industrial goods—diversified: ThyssenKrupp[32]

2.4.1 SD-KPI 1: Energy and greenhouse gas intensity of production

In its management report, ThyssenKrupp says the following about business development and procurement relating to SD-KPI 1[33]:

"The introduction of CO_2 emissions trading was another cause of rising electricity costs. It was not possible to compensate for the higher prices through the sale of allowances under the emissions trading system, which ThyssenKrupp joined for the first time in fiscal 2005/2006. Overall, our companies received allowances for the emission of 18.7 million metric tons of CO_2 per year for the first trading period (2005–2007). By reducing emissions from production operations and due to rules restricting the allocation of allowances to the first trading period, we had a surplus of allowances which could be sold in the emissions trading system. Emissions trading is performed by the Group holding company in order to utilize synergies and simplify risk management."

"Sustainability and resource conservation were the central elements of ThyssenKrupp's environmental protection efforts in the reporting year. In addition to the € 412 million spent on operating pollution control equipment and the € 30 million invested in environmental protection, all segments took numerous measures to reduce their consumption of energy and raw materials. As raw material and energy prices are high, these measures also helped improve profitability. […]"

While ThyssenKrupp was able to sell a surplus of emissions allowances, no reference is made to the relative or absolute amount of energy or emissions - by comparing production to turnover, for example (50%). The economic significance is made partly clear by the reference to the effect of rising energy costs on CO_2 emissions trading. The list of investments in environmental protection across all segments over five years is detailed and informative. By contrast, the explanation that "as raw material and energy prices are high, these measures also helped improve profitability" could have been more detailed by including data on costs and profitability (50%). Quantitative illustrations are provided but are not sufficient. Above all, profit data should include separate costs for climate protection; in the field of "air protection", for example (50%). Trend analysis is only given on non-specific data on environmental protection costs. Predictions of CO_2 emissions are not published (50%). Benchmarks are also not given (0%). ThyssenKrupp scores 40% for SD-KPI 1.

2.4.2 SD-KPI 2: Energy efficiency of products

With respect to SD-KPI 2, only a few examples of emission-reducing products are listed[34]:

"The Steel segment was honored with Volkswagen AG's Environmental Award. As well as our environment-friendly production operations, the award was mainly in recognition of our innovative solutions to help reduce emissions from cars. These include weight-optimized parts which reduce fuel consumption. ThyssenKrupp Steel was named as one of Volkswagen's Sustainability Partners and thus joined a circle of suppliers who have committed to the objectives of sustainability."

The examples given do not, however, disclose an overall strategy for product energy efficiency (50%). The quote above also does not make the economic significance clear enough, only indicating that being a "Sustainable Partner" can give a competitive edge (50%). Quantitative data (0%) and trend analyses (0%) are not given. By dissociating itself from suppliers who are not "Sustainability Partners" of Volkswagen, benchmarking is implied (50%). ThyssenKrupp scores 30% for SD-KPI 2.

2.4.3 SD-KPI 3: Labour conditions

For SD-KPI 3, staff figures per continent are given, showing growth in Asia and South America[35], but there is no mention of basic labour rights in emerging and developing countries (50%). The economic significance is not made clear (0%). The number of occupational accidents is only given for Germany and while there is a group objective of „zero accidents", more quantitative data is needed here; such as a quota of audits to guaran-

Ongoing expenditure on environmental protection in million €

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
Air pollution control	105	101	124	141	141
Water protection	163	161	177	165	168
Noise control/landscape protection	11	13	12	15	16
Recycling	61	60	64	81	87
Total	340	335	377	402	412

32 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

33 ThyssenKrupp, Annual Report 2005–2006, pp. 52–53.

34 ThyssenKrupp, Annual Report 2005–2006, p. 53.

35 Cf. ThyssenKrupp, Annual Report 2005–2006, pp. 77–78.

tee basic labour rights (50%). Trend data only exist for staff numbers and occupational accidents in Germany which have dropped by roughly 10% to 11.4 accidents per 1 million working hours (50%). An industry benchmark is not given (0%). As a result, ThyssenKrupp scores 30% for SD-KPI 3 and a total of 34% over all three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	50%	50%	50%	50%	0%	40%
SD-KPI 2 (30%)	50%	50%	0%	0%	50%	30%
SD-KPI 3 (30%)	50%	0%	50%	50%	0%	30%
weighted sum (100%)	50%	35%	35%	35%	15%	**34%**

Fig. 7 – evaluation of reporting on SD-KPIs for ThyssenKrupp

2.5 Industrial goods—renewables: SolarWorld[36]

2.5.1 SD-KPI 1: Energy and greenhouse gas intensity of production

No stock company does as well as SolarWorld in describing climate protection as a contribution to sustained added value in its report. The report discusses SD-KPI 1 and 2 simultaneously, showing that the group has accumulated a positive CO_2 balance[37]:

"Climate protection adds value. As a producer of low-emission, renewable energy, we systematically record our greenhouse gas emissions throughout the Group. Our positive CO2 budget shows that the carbon dioxide emissions avoided by means of SolarWorld products in 2006 exceed the emissions generated throughout the Group by a factor of more than 45. We continuously implement activities for further improvement of our energy and material efficiency, for more cost-effective and environment friendly production. Our research and development projects, such as the project for development of a system to optimise consumption of auxiliary substances in photovoltaic cell production, simultaneously pursue economic and environmental goals. Technological optimisation has given rise to material savings and the prevention of climate gas emissions. The Group's CO2 emissions have therefore remained constant at around 41 (previous year: 41) thousand tonnes of CO2 equivalents despite the increase in production in 2006. These group-wide figures for the completed fiscal year did not yet include the newly added solar activities of the Shell Group. Due to the solar power modules supplied by us at the end of the value chain, the environment is spared a total of around 1.9 (previous year: 1.2) million tons of CO_2. The environmental damage prevented in this way is worth around 130 (previous year: 84) million €."

This report is exemplary on SD-KPI, however, is also facilitated by a business model geared specifically to SD (100%). Economic and ecological objectives are also discussed. From improvements in energy and material efficiency, production has become more cost-effective and environmentally friendly. Annual emissions from production are quantified at 41,000 tonnes of CO_2 equivalents (100%). The constant emission trend despite a growth in production is only analysed over a two-year period (50%). Benchmarks are not mentioned and would be of great interest to the solar industry and renewable energy market as a whole (50%). SolarWorld scores 70% for SD-KPI 1.

2.5.2 SD-KPI 2: Energy efficiency of products

As the quote in 2.5.1 shows, the reduction in emissions from the use of SolarWorld products is 45 times greater than the value of SD-KPI 1 (100%). The CO_2 savings for SD-KPI 2 are also given (100%), with 1.9 million tonnes CO_2 (previous year: 1.2 million tonnes CO_2) as well as € 130 million (previous year: € 84 million) of environmental damage prevented (100%). An explanation of the assumptions made in these calculations would, however, have been helpful. The potential economic success of SolarWorld's business model and CO_2 reducing technologies can be seen from their CNBC European Business Ranking[38]:

"In the CNBC European Business Ranking our Group was selected to be among the 50 worldwide pioneers who through CO_2-reducing technologies and sustainable environmental commitment have succeeded in benefiting economically. The ranking evaluates companies who have included entrepreneurial action against climate change as an opportunity into their business model and who have in this way positioned themselves at an early point in time in the growing market of low carbon technologies."

The trend analysis should have covered more than two years (50%) and no benchmarks were provided (0%). SolarWorld scores 70% for SD-KPI 2.

2.5.3 SD-KPI 3: Labour conditions

Of a total of 1,384 employees, only 84 work outside of Germany and the USA (in Africa and Asia, for example). With this in mind, the lack of data on basic labour rights with regard to SD-KPI 3 has not been considered significant. Fundamental issues such as anti-discrimination rules, job safety and staff motivation are mentioned, but supplier´s labour conditions are not (50%). The economic importance of good labour conditions to SolarWorld is illustrated by a staff survey: in 2006, 92% of employees interviewed at the Freiburg and Bonn works said that they would recommend SolarWorld as an employer (100%). In addition to staff figures, staff turnover is also quantified. The latter was only 3.5% in Germany for the 2006 fiscal year. SolarWorld compares it to an industry average of 10% across Germany. No data can be obtained on the frequency of occupational accidents, yet the direct costs for the health and safety of staff were quantified, at € 1,343,000 (previous year: € 72,000) (50%)[39]. Trend (50%) and benchmark (50%) reporting could have been more detailed. For SD-KPI 3, SolarWorld scores 60% and a total of 67% over the three SD-KPIs.

[36] Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

[37] SolarWorld, Annual Report 2006, p. 42.

[38] SolarWorld, Annual Report 2006, p. 42.

[39] Cf. SolarWorld, Annual Report 2006, pp. 53-54.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	100%	100%	100%	50%	0%	70%
SD-KPI 2 (30%)	100%	100%	100%	50%	0%	70%
SD-KPI 3 (30%)	50%	100%	50%	50%	50%	60%
weighted sum (100%)	85%	100%	85%	50%	15%	**67%**

Fig. 8 – evaluation of reporting on SD-KPIs for SolarWorld

2.6 Information and communication technology: Deutsche Telekom's campaign to halve CO_2 emissions[40]

2.6.1 SD-KPI 1: Energy and greenhouse gas efficiency of production and products

With regard to SD-KPI 1, Deutsche Telekom declares climate protection as one of its most important objectives, which the group campaigns for "massively":

"Deutsche Telekom considers climate protection one of the most important tasks of our time and is committed to implementing the Kyoto Protocol. The Group therefore aims to minimize the emission of greenhouse gases that are harmful to the climate by implementing a comprehensive package of strategies and actions. The main objective is to sever the link between power consumption and CO_2 emissions. Deutsche Telekom campaigns massively for reducing the emission of climate-impacting greenhouse gases in spite of rising energy consumption. […]

As an enterprise with international operations, Deutsche Telekom´s goals are to maximize the sustainability of its management, tap potential for climate protection both within the Group and at customers and suppliers, and make a contribution to society as a whole with its environmental policy."[41]

„By taking a number of measures, Deutsche Telekom has already achieved a significant reduction in CO_2 emissions. The Group will continue to pursue such actions in the future. Through its inhouse service provider PASM (Power and Air Condition Solutions Management GmbH & Co. KG), Deutsche Telekom makes sure that it purchases environmentally friendly energy: By buying RECS (Renewable Energy Certificate System) certificates, PASM managed the procurement of one billion kilowatt hours of electricity from renewable energy sources with a virtually neutral impact on the climate in 2006. This corresponds to around one-third of the Group´s total electricity consumption in Germany. Using RECS certificates, PASM aims to halve CO_2 emissions from power generation for Deutsche Telekom in Germany by 2010, compared with 1995 levels. In addition, the natural gas-powered fleet was actively expanded with the aim of reducing the Group´s emissions. DeTeFleetServices runs the largest natural gas-powered fleet in Germany with more than 800 vehicles. The number of vehicles that run on alternative power is to be increased to 2,500 by 2009."[42]

Although total energy consumption is not expressed, it can be calculated from the data given. Annual greenhouse gas emissions from energy consumption, however, are not accounted for (50%). Improvements to greenhouse gas efficiency through the acquisition of energy certificates are illustrated well, as is the increased used of natural gas to power Deutsche Telekom fleet cars, but there is no further explanation of additional costs or economic profitability (50%). The provision of one billion kilowatt hours of almost climate neutral, renewable sources of energy is quantified. Furthermore, there is an ambitious target of halving CO_2 emissions from electricity production by 2010 compared to 1995, which suggests a trend for anticipated development. The ìsignificant reductionî in CO_2 emissions of previous years should, however, be quantified (50%). No benchmarking is given (0%). Deutsche Telekom scores 50% for SD-KPI 1.

2.6.2 SD-KPI 2: Eco-design

The quote below, with regard to SD-KPI 2 "eco-design", is only exemplary (50%) in demonstrating how the potential for climate protection can be achieved both within the group and with clients and suppliers[43]:

"As a member of ETNO (European Public Telecommunications Network Operators´ Association), Deutsche Telekom is involved in a project to identify potential energy savings in digital switching technology. As part of this project, Deutsche Telekom wants to work together with system manufacturers to develop binding criteria for purchasing resource-efficient technologies that are easy to reuse or can be disposed of in an environmentally friendly manner."

References to "potential energy savings" and "easy to reuse" only suggest the economic significance of SD-KPI 2 (50%). Neither quantitative nor trend data is given (0%). The ETNO (European Network Operators´ Association) serves as quantitative benchmark (50%). Deutsche Telekom scores 30% for SD-KPI 2.

2.6.3 SD-KPI 3: Labour conditions and health risks from electromagnetic radiation

With regard to labour conditions, the first aspect of SD-KPI 3, Deutsche Telekom states that of a total of 248,800 employees, only 3,600 work outside of Europe and North America. Against this background, the lack of data on basic labour rights is not significant, but corresponding data for suppliers, especially in emerging and developing countries, would be valuable. Job safety data are also not supplied. The management report deals with the key topic of a socially acceptable restructuring of personnel, essential to the fiscal year, in detail (50%)[44]. Another aspect of SD-KPI 3, „electrosmog", is discussed in the section on risk and opportunities management[45]:

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40 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

41 Deutsche Telekom, Annual Report 2006, p. 101.

42 Deutsche Telekom, Annual Report 2006, p. 101.

43 Deutsche Telekom, Annual Report 2006, p. 101.

44 Cf. Deutsche Telekom, Annual Report 2006, pp. 97–99 and pp. 104–105.

45 Deutsche Telekom, Annual Report 2006, p. 105.

"Electromagnetic fields are repeatedly associated with potential environmental and health damage. This is a controversial issue and the subject of public debate. Existing public acceptance problems affect networks and the use of terminal equipment, and have an effect on T-Mobile, particularly with regard to network structure and intensity of usage. In addition to legal risks, the Company fears regulatory measures to implement the precautionary principle in the area of mobile communications."

The economic significance of staff reduction and "electrosmog" are made clear but the other topics related to SD-KPI 3 are not (50%). Only staff reduction is quantified (50%) and its trend given (50%). There is no mention of benchmarks (0%). Deutsche Telekom scores 40% for SD-KPI 3 and 41% over all three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	50%	50%	100%	50%	0%	50%
SD-KPI 2 (30%)	50%	50%	0%	0%	50%	30%
SD-KPI 3 (30%)	50%	50%	50%	50%	0%	40%
weighted sum (100%)	50%	50%	55%	35%	15%	**41%**

Fig. 9 – evaluation of reporting on SD-KPIs for Deutsche Telekom

2.7 Consumer goods/retailing: Adidas' supply chain[46]

2.7.1 SD-KPI 1: Environmental and social standards in the supply chain

In its management report, Adidas only discusses SD-KPI 1, environmental and social standards in the supply chain. They are described in detail on two full pages, emphasising the special significance (100%) SD-KPI 1 has for the company as opposed to SD-KPIs 2 and 3. From the outset, Adidas draws an economic line between its corporate value and its reputation but does not go so far as to prove it (with a client survey, for example)[47]:

"We always strive to manage both our own activities and our supply chain responsibly and to reduce our environmental impact. Moreover, we believe that acting as good corporate citizens will improve our corporate reputation and hence our economic value, helping us to be a sustainable company."

While the implementation of standards is described in detail, pertaining costs are not mentioned (50%). Quantitative data regarding the number of certifications, for example, are only partly given. It would be good here to see a reference to the percentage of suppliers already certified, as well as why and how often difficult cases eventually lead to the dissolution of business relations (50%)[48]:

"During 2006, we revised our social and environmental program to incorporate new standards, guidelines and procedures, covering supplier guidance, initial factory assessments and compliance monitoring. Our assessments are now recorded in an industry-wide data management system (Fair Factory Clearing House) […]. This facilitates the exchange and increased transparency of compliance-related information within our industry. […] The adidas Group´s Workplace Standards are based on the International Labour Organization (ILO) and UN conventions relating to human rights and employment practices, and follow the World Federation of the Sporting Goods Industry´s model code of conduct. Our Workplace Standards contain clear rules of conduct regarding environmentally sound, safe and healthy working conditions, fair wages and benefits, freedom of association, prohibition of excessive overtime, forced and child labor, and protection against harassment and discrimination. The Standards help us to select business partners that have workplace standards and business practices consistent with our values and to reject those that do not. […] Therefore, we support our business partners in pursuing the opportunity for certification with internationally recognized standards such as ISO (International Standardization Organization) 9000 and 14001 for quality and environmental management and OHSAS (Occupational Health and Safety Assessment Series) 18000. […] Further, we empower workers to protect their own rights and take an active role in decisions that affect their lives. In 2006, there were 35 adidas Group footwear suppliers´ factories worldwide certified in accordance with OHSAS 18000, ISO 14001 and/or the ISO 9000 series.

In 2006, the SEA team[49] conducted 173 (including Reebok) training sessions and workshops for suppliers, workers and adidas Group employees (2005: 225, including Salomon excluding Reebok). […] Our team members are represented locally in close proximity to supplier factories in Asia, Europe, Middle East, Africa and the Americas. During 2006, 1,101 factory visits (including Reebok) involving management and worker interviews, document review, facility inspections and trainings, were conducted at different levels in our supply chain (2005: more than 680 visits, including Salomon excluding Reebok).[…] In addition to the monitoring work of our SEA team, we value independent assessment by third parties to demonstrate the credibility of our internal program. In 1999, we joined the Fair Labor Association (FLA) […]. As a member, the adidas Group is subject to external assessment by independent monitors, participation in the FLA third-party complaint system and public reporting. […] Following an extensive review of the Group´s compliance program, the FLA accredited the monitoring program of the adidas Group excluding Reebok in May 2005. […] Since joining the FLA, more than 200 Independent External Monitoring (IEM) audits and verification visits were conducted at adidas and Reebok suppliers. […] In case of continuous non-compliance with the Workplace Standards, we see termination of the business relationship as a last resort […]."

There are not enough trend data given. In 2006, a total of 1,101 production facilities were visited compared to a minimum of 608 in 2005. A question remains, however, over when each of the production facilities will have been visited at least once (50%). There is only an indirect benchmarking given, since the group's workplace standards rely on the code of conduct set by the World Federation of the Sporting Goods Industry, subject to independent assessment by third parties (50%). Adidas scores 60% for SD-KPI 1.

46 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

47 Adidas, Annual Report 2006, p. 63.

48 Adidas, Annual Report 2006, pp. 63–64.

49 Team for Social and Environmental Affairs (SEA).

2.7.2 SD-KPI 2: Proportion of products with SD differentiation

No data regarding SD-KPI 2 is given in Adidas' management report (0%).

2.7.3 SD-KPI 3: Hazardous substances/environmental and human toxicity

As with SD-KPI 2, no information is given on SD-KPI 3 (0%). As a result, Adidas only scores 24% for the three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	100%	50%	50%	50%	50%	60%
SD-KPI 2 (30%)	0%	0%	0%	0%	0%	0%
SD-KPI 3 (30%)	0%	0%	0%	0%	0%	0%
weighted sum (100%)	40%	20%	20%	20%	20%	**24%**

Fig. 10 – evaluation of reporting on SD-KPIs for adidas

2.8 Pharmaceutical industry: GlaxoSmithKline´s pro-poor activities[50]

Over several passages in its management report, GlaxoSmithKline demonstrates that each of the three SD-KPIs is integral to its annual report.

2.8.1 SD-KPI 1: Strategies for improving access to medicines for the poor

SD-KPI 1 is given a whole page, with an even split between access to healthcare in the developing and developed worlds (100%). The medium and long-term economic strategies of current not-for-profit prices are not made clear. Does the company, for example, have future for-profit markets in mind when increasing prices and/or the binding of more international subsidies for developing countries (50%)? Price reductions of up to 30% are stated. 27 and 59 million pills of two varieties of medication give an idea of the size of the markets, but it would be good to be able to quantify what funding GlaxoSmithKline demands from the global community. In 2006, GlaxoSmithKline invested £302 million or 3.9% of its pre-tax profits (score still 100%) in its global community investment activities. The indication that only direct costs are covered can be considered a trend prediction, justifying that pro-poor subsidies can be maintained in the long term (50%). Benchmarking is not given (0%). GlaxoSmithKline scores 60% for SD-KPI 1[51]:

"Access to healthcare in developing countries remains a major challenge to the global community. The problem, which is rooted in poverty, demands a significant mobilisation of political will, additional resources and a true spirit of partnership. GSK continues to play a vital role, through its commitment to R&D into diseases particularly prevalent in the developing world, through its programme of preferential pricing for its anti-retrovirals (ARVs), anti-malarials and vaccines, through its community investment programmes (see page 19) and through its willingness to seek innovative solutions, such as voluntary licencing arrangements.

GSK has offered its vaccines to key organisations for vaccination programmes in developing countries at preferential prices for over 20 years. The Group also sets a single not-for-profit price for each of its ARVs and anti-malarials to a wide range of customers in the Least Developed Countries (UN definition) and sub-Saharan Africa, as well as Country Coordinating Mechanism-projects fully funded by the Global Fund to Fight AIDS, TB, and Malaria and the US President´s Emergency Plan for AIDS Relief (PEPFAR). In July 2006, GSK introduced two new ARVs, Kivexa and Telzir, to its not-for-profit offering and reduced prices to GSK´s abacavir-containing products by up to 30%.

GSK is committed to contributing to health improvements in a sustainable manner. The prices for its ARVs and anti-malarials are therefore set at levels at which no profit is made, but direct costs are covered, allowing supply to be sustained for as long as required. During 2006, GSK shipped to developing countries over 27 million tablets of not-for-profit-priced Combivir and nearly 59 million tablets of not-for-profit-priced Epivir. Some of our licensees are now supplying key markets in a more significant way. […] GSK will continue to build on its product, pricing and partnership commitments to help improve healthcare in the developing world. However, a significant increase in funding from the global community is still needed. It is also important to maintain incentives for R&D through protection of intellectual property. […] GSK´s global community investment activities in 2006 were valued at £ 302 million, equivalent to 3.9% of Group profit before tax. This comprised product donations of £ 238 million, cash giving of £ 46 million, other in-kind donations of £ 3 million and costs of £ 15 million to manage and deliver community programmes in 109 countries."

2.8.2 SD-KPI 2: Research and Development ethics

With regard to SD-KPI 2, the following statement is given[52]:

"For ethical, regulatory and scientific reasons, research using animals remains a small but vital part of research and development of new medicines and vaccines. GSK only uses animals where there is no alternative and only in the numbers required for each test."

Sensible issues such as the application of genetic engineering are not mentioned (50%). The economic significance is only suggested by the discussion of the regulatory and scientific necessity of animal experiments (50%). Quantitative indications are not given (0%). In addition, trend analysis of the number of animal experiments conducted over a given time period is also missing (0%). There is no benchmarking (0%). GlaxoSmithKline scores 20% for SD-KPI 2.

2.8.3 SD-KPI 3: Marketing ethics

The report gives a comprehensive group policy for SD-KPI 3 (100%):

"GSK is committed to ethical, responsible and patient-centred marketing. The Group´s Pharmaceutical Marketing and Promotional Activity policy governs marketing activities and applies to all employees, suppliers, contractors and agents. This policy requires that all marketing and promotional activities are based on valid scientific evidence and comply with applicable laws and regulations. This policy is supported by regional marketing practices codes […]."[53]

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50 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

51 GlaxoSmithKline, Annual Report 2006, pp. 18-19.

52 GlaxoSmithKline, Annual Report 2006, p. 12.

53 GlaxoSmithKline, Annual Report 2006, p. 8.

"Business ethics and reputation: Performance with integrity is central to operating at GSK. The 2006 Global Leadership Survey (GLS) showed 91% believe that ´people in their department show commitment to performance with integrity ´ and 82% agree that they ´can report unethical practices without fear of reprisal´. To engage a wider range of managers, the half-day workshop on Ethical Decision-making (attended by 479 leaders in 2005) has been extended to three e-learning modules, which are being implemented across the businesses. So far, over 400 people have completed at least one of the three modules."[54]

The economic significance is described as being vital to the company's reputation (100%). A leadership survey quantifies ethical values, but in order to underline the credibility of this statement, the number of incidents of unethical conduct should also be given (50%). Both trend analysis (0%) and benchmarking (0%) are not given. For SD-KPI 3, GlaxoSmithKline scores 50% , totalling 45% over all three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	100%	50%	100%	50%	0%	60%
SD-KPI 2 (30%)	50%	50%	0%	0%	0%	20%
SD-KPI 3 (30%)	100%	100%	50%	0%	0%	50%
weighted sum (100%)	85%	65%	55%	20%	0%	**45%**

Fig. 11 – evaluation of reporting on SD-KPIs for GlaxoSmithKline

[54] GlaxoSmithKline, Annual Report 2006, p. 17.

2.9 Transport & logistics: TUI´s SD-KPI focused report[55]

2.9.1 SD-KPI 1: Energy and greenhouse gas efficiency of transport services

TUI gives a focused report on the two SD-KPIs of its business (each scoring 100%). Two pages of its management report are devoted to environmental protection[56]:

"Nature conservation and an intact environment, climate protection and the protection of seas and oceans are key prerequisites for sustainable activities in the tourism and shipping divisions. TUI's sustainable environmental management therefore is integral part of the Group´s management quality concerning ecological governance, compliance and risk prevention.

Environmental monitoring: Group environmental performance indicators
Due to the differentiated consideration of international reporting standards such as the G3 Guidelines of the Global Reporting Initiative (GRI) the transparency of the environmental performance across the entire Group could be enhanced in the 2006 financial year. In 2006, environmental indicators concerning energy efficiency and climate-related emissions were determined in particular for the Group´s airlines and hotels as well as its shipping division. These indicators facilitated a relevant determination of its environmental impact. This improved transparency was reflected by TUI AG´s admission to the Dow Jones Sustainability Index (DJSI) World.

Energy consumption
The highest part of the energy consumption by the Group primarily relates to the use of fossil fuels in airline and shipping operations. Due to the integration of CP Ships the energy consumption is not comparable year-on-year. Total energy consumption amounted to 232,426 Tera Joule (TJ). Fuel consumption by the airlines rose 3.4% due to the expansion of the fleet. TUI's airlines recorded a specific fuel consumption of 3.08 litres of aircraft fuel per 100 passenger kilometres in 2006 and were thus among the most efficient airlines. The increase in specific energy consumption per TEU and nautical mile in the container shipping to 2.41 Mega Joule per TEU and per nautical mile was caused by the increase in the number of smaller container ships. A decrease of about 12% to 3,65 mega joule per passenger and 100 nautical miles could be achieved in case of the cruise ships.

Carbon dioxide emissions
One of the key environmental indicators for the TUI Group is the emission of carbon dioxide (CO_2) caused by the airlines and shipping operations. In the 2006 financial year the overall emission of CO_2 stood at 15.99 million tons. At 7.9 kilogram, the emission of CO_2 per 100 passenger kilometre was slightly – about 2% – higher year-on-year for all airlines. The emission of CO_2 of the container ship fleet stood at 174.16 g per TEU and nautical mile in the 2006 financial year. In the cruise sector a reduction of the specific emission of about 12% to around 283 g CO_2 per passenger and 100 nautical miles was achieved."

After mentioning the materiality of environmental management – which is integrated into governance, compliance and risk prevention systems – it is given careful consideration against reporting standards for environmental performance indicators. By focusing on these points, the company provides environmental indices for energy efficiency and climate-relevant emissions which are identical to the two SD-KPIs. Furthermore, TUI devotes half a page to biodiversity and its importance to the tourism industry.

For SD-KPI 1, TUI quantifies CO_2 emissions from airline and shipping operations in both absolute and relative values. The economic significance is only given in general terms, in that the conservation of natural assets is described as a prerequisite for its tourism and shipping divisions. A description of the costs and revenues of energy consumption measures would improve the quality of the report (50%). Total CO_2 emissions for 2006 are quantified, with 15.99 million tons of CO_2 emissions as well as the emissions from TUI´s airlines, container ships and cruise ships (100%). Trend indications are only given for the previous year, not for anticipated development in years to come (50%). No information is given on benchmarking (0%). TUI scores 60% for SD-KPI 1.

2.9.2 SD-KPI 2: Fleet consumption

TUI gives a full report on SD-KPI 2 (100%), quantifying its absolute energy consumption for the fiscal year in its airline and shipping divisions as well as the absolute increase (100%). Fuel consumption of 3.08 litres of aircraft fuel per 100 passenger kilometres (pkm) is reported, as is energy consumption per standard container (TE) and nautical miles (nm) in container shipping, at 2.41 Mega Joule (MJ)/TE/nm. For the cruise section, a relative value of 3.65 MJ per passenger and 100nm and a reduction of 12% is given. The economic significance, however, is only suggested, with the use of fossil fuels in airline and shipping operations referred to as the most energy-intensive in the group. The cost of energy consumption should be included here (50%). A trend analysis is only given in comparison with the previous year and only the increase in container shipping energy consumption is explained in detail (50%). Benchmarking is only given for the fuel consumption of airline operations. With 3.08 litres of airline fuel per passenger kilometre, it is said to be "among the most efficient airlines", but this could be expressed in more concrete terms (50%). For SD-KPI 2, TUI scores 70%, and 64% overall for the two SD-KPIs.

55 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

56 TUI, Annual Report 2006, p. 99.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (60%)	100%	50%	100%	50%	0%	60%
SD-KPI 2 (40%)	100%	50%	100%	50%	50%	70%
weighted sum (100%)	100%	50%	100%	50%	20%	**64%**

Fig. 12 – evaluation of reporting on SD-KPIs for TUI

2.10 Insurance: Munich Re experiences "random fluctuations" in some segments[57]

2.10.1 SD-KPI 1: Integration of SD aspects into asset management

In its management report, Munich Re highlights its business development in asset management for SD-KPI 1[58] as follows:

"In 2002, we determined that our investments in shares and corporate bonds should meet sustainability requirements. One of our goals is to ensure that 80% of our equities and corporate bonds are included in recognised sustainability indices or satisfy the sustainability criteria of renowned sustainability rating agencies. We have already surpassed this target. In the case of government bonds, we have achieved a rate of around 95% compliance in terms of the aforementioned criteria. Munich Re also considers sustainability factors in its long-term investments. We use an appropriate set of criteria when acquiring participations and take sustainability aspects into account when performing regular analyses of our shareholdings. In April 2006, Munich Re became the first German company to sign the UN Principles for Responsible Investment (PRI), which it had played a prominent role in helping establish. The PRI offer institutional investors with guidelines for incorporating social and ecological criteria in their investments. This includes observing such criteria in investment decisions, promoting sustainable investment approaches in the financial sector, and reporting regularly on the implementation of the criteria."

While reference is made to SD-KPI 1 in research and the group's own investments, nothing is said about mandates, the indirect SD effects of investment portfolios (such as the CO_2 emissions of investee companies), investment services offered to its clients, or active use of shareholder rights (50%). An economic explanation of the integration of SD aspects (such as the anticipated effect on performance, risk or reputation) is also not given (0%). The company aims to ensure that 80% of its equities and corporate bond holdings are included in recognised sustainability indices or comply with criteria of recognised sustainability rating agencies. They achieved this goal in the year the report was published (100%). While in 2002 the company decided it would meet sustainability requirements for its investments, this does not constitute a full trend analysis (50%). No benchmarking is given (0%). Munich Re scores 40% for SD-KPI 1.

2.10.2 SD-KPI 2: Ecological insurance premiums and risk management

In the "further success indicators/environment" section of its management report, Munich Re makes the following remarks about SD-KPI 2[59]:

"Munich Re´s business is inextricably linked with ecological aspects, even if as a service provider we place comparatively little burden on the environment ourselves. We are directly affected by environmental impacts, such as the growing number and intensity of weather-related natural catastrophes. A particular focus of our commitment is therefore climate protection: for many years Munich Re has been contributing its specialist knowledge to numerous organisations and associations concerned with global climate change, especially UNEP FI, the Finance Initiative of the United Nations Environment Programme, which promotes understanding of climate change in the financial sector. In addition to this, in April 2005, Munich Re became a founder-member of the Munich Climate Insurance Initiative for insurance solutions intended to benefit people in developing countries. In the Climate Group, an international alliance of companies, governments and cities for climate protection, we work for the reduction of greenhouse gases from the 20 economies with the highest emission levels and the 500 largest firms."

With regard to business development the following information is added[60]:

"A comparison of the major-loss burden from natural catastrophes with that of the last two financial years (€ 177m in 2006 and € 2,629m in 2005) indicates the extent to which insurance business – and particularly reinsurance business – is subject to random fluctuations in certain segments. A better understanding essentially requires a longer-term view of our business. We see the situation as endorsing our strategy of systematically optimising our risk management in the Group and refining the models with which we evaluate loss potentials. With this range of tools, we can determine risk-adequate prices, terms and conditions, despite the volatilities in our business. The Munich Re Group has maintained its overall liability for natural catastrophe covers at a virtually unchanged level, reflecting our firm conviction that this insurance segment is still very attractive in the long term."

SD aspects in risk management are dealt with in SD-KPI 2, but ecological insurance premiums or services are only described vaguely as insurance solutions intended to benefit people in developing countries (50%). The economic significance is, however, made clear. The business of a reinsurance company is "inextricably linked with ecological aspects" and "directly affected by […] the growing number and intensity of weather-related

[57] Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

[58] Munich Re, Annual Report 2006, p. 92.

[59] Munich Re, Annual Report 2006, p. 108.

[60] Munich Re, Annual Report 2006, pp. 69–71.

natural catastrophes". To counteract the "random" major-loss burden from natural catastrophes, risk management should be systematically optimised (100%). The proportion of natural catastrophes of the damage-cost quota damage/accident for 2006 is quantified, at 1.3%, and illustrated in a table showing data from the last five years: 19.4% in 2005, 5.0% in 2004, 1.8% in 2003, 3.4% in 2002[61] (trend analysis: 100%). Substantial increases in contributions to onshore and offshore energy risks (especially offshore oilrigs) are also discussed[62]. There is no benchmarking on SD-KPI 2 (0%). Munich Re scores 70% for SD-KPI 2 and totals 52% for the two SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (60%)	50%	0%	100%	50%	0%	40%
SD-KPI 2 (40%)	50%	100%	100%	100%	0%	70%
weighted sum (100%)	50%	40%	100%	70%	0%	**52%**

Fig. 13 – evaluation of reporting on SD-KPIs for Munich Re

61 Cf. Munich Re, Annual Report 2006, p. 69

62 Cf. Munich Re, Annual Report 2006, p. 71.

2.11 Utilities: Potential for improvement at Suez

Suez is a leading multinational corporation active in water, gas, electricity and waste management. Here, reports are only rated on SD-KPIs[63] relating to its activities in energy supply.

2.11.1 SD-KPI 1: Greenhouse gas intensity of energy production

In its risk report, Suez devotes one-and-a-half pages to risks related to climate change[64]:

"In the longer term, one of the major risks identified in the European Union Greenhouse Gas Emission Trading Scheme (EU ETS) market is the renewal of the national allocation plans every 5 years beginning in 2008. […] This situation does not allow manufacturers to clearly envision their long-term obligations. This uncertainty is also tied to the uncertainty of governments, which are having difficulty making progress on international negotiations on the structure and objectives for reducing greenhouse gas emissions (GHG) over the long term ('post 2012'). […] Based on the initial decisions of the European Commission (11/2006 and 1/2007), it should be expected that the allocation of quotas for the second period (2008–2012) will bring greater restrictions. The change in prices on the quota market depends on numerous factors. […] In the United States, a change in 'climate' policies is taking place at the State level, which complicates the overall view of the risk. […]"

In the "environmental information" section the table below is published[65].

Indicator names	2006 data	Scope covered (% of pertinent turnover)
✓ Total greenhouse gas emissions (excluding vehicle fleet)	82.8 Mteq. CO_2	100%
✓ CO_2 emissions– Energy production	77.1 Mt	100%
✓ CO_2 emissions – Transport and storage of gas	0.3 Mt	100%
✓ CH_4 emissions – Transport, storage and distribution of gas	10.2 kt	100%
✓ GHG emissions – Landfills	2.4 Mteq. CO_2	100%
✓ GHG emissions – Incineration	2.6 Mteq. CO_2	100%
✓ GHG emissions – Wastewater treatment	0.11 Mteq. CO_2	100%
CO_2 emissions – Vehicle fleet	0.7 Mt	-

✓ Reviewed by Statutory Auditors.

For SD-KPI 1, Suez lists absolute greenhouse gas emissions. With regard to relative energy efficiency in g CO_2/kWh, there is a general statement about the company continually striving to reduce CO_2 emissions from heat and electricity production[66] (50%). The economic significance of SD-KPI 1 is only given in terms of it being a price risk. According to the report, there are long-term risks associated with the uncertain, restrictive reallocation of quotas determined both by the European emissions trading system and a post-Kyoto agreement. More concrete economic scenarios, however, are not given. Suez does include „environment-related expenses" (energy activities: € 485.4 million; environmental activities: € 2.624,5 million) and „environment-related provisions" at € 5.436,6 million[67]. The costs and benefits of SD-KPIs should, however, be made clear (50%). Quantitative data are also given, but as discussed above, more information is required (50%). The analysis could be improved by including data from previous years and by making predictions about future trends (50%). No benchmarking is given (0%). Suez scores 40% for SD-KPI 1.

63 Fig. 1 provides a comprehensive overview of all the SD-KPIs for the ten sectors of the DAX.

64 Suez, Reference Document 2006, p. 23. – The contents of this very detailed French "Reference Document" is confirmed by certified public accountants.

65 Suez, Reference Document 2006, p. 78.

66 Cf. Suez, Reference Document 2006, pp. 78–79.

67 Cf. Suez, Reference Document 2006, pp. 88–89.

2.11.2 SD-KPI 2: Growth in renewable energy proportion

Regarding SD-KPI 2, Suez reports as follows:

"In the medium term, efforts are converging to strengthen low carbon energy sources (natural gas, renewable energy) in the global energy mix, improve the capture of biogas from waste storage sites, and consider the energy produced by the incineration of waste. Landfills and anaerobic sludge treatment facilities can be considered as renewable energy."[68]

Improved use of renewable sources of energy by 10% to 6.6 GW is broken down in a table that identifies wind, water power, biomass, etc.[69] Data are missing here, however, regarding both the installed, regenerative performance and generated GWh for SD-KPI 2 (50%), as well as its quantification (50%). No economic significance is taken into account (0%). The trend is only given in comparison to the previous year, and there is no mention of anticipated development (50%). No benchmarks are provided (0%). Suez scores 30% for SD-KPI 2.

2.11.3: SD-KPI 3: Transparency about energy mix

The relative proportions of different kinds of energy generated would be indispensable for SD-KPI 3 and these are not made clear (0%)[70]. As a result, the economic significance is also unclear (0%). Quantitative data (0%), trend (0%) and benchmarking (0%) are all omitted. For SD-KPI 3, Suez scores 0%, totalling 25% across all three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	50%	50%	50%	50%	0%	40%
SD-KPI 2 (30%)	50%	0%	50%	50%	0%	30%
SD-KPI 3 (30%)	0%	0%	0%	0%	0%	0%
weighted sum (100%)	35%	20%	35%	35%	0%	**25%**

Fig. 14 – evaluation of reporting on SD-KPIs for Suez

68 Suez, Reference Document 2006, p. 23.

69 Cf. Suez, Reference Document 2006, p. 80.

70 Cf. Suez, Reference Document 2006, pp. 82–84

3. Best Practice examples of recently analysed SD-KPIs in three other sectors

3.1 Definition of SD-KPIs for the three sectors

The three sectors covered in this chapter—building, basic resources and the oil and gas industries—are not represented in the DAX. Consequently, Hesse has not yet determined SD-KPIs from the survey of investors and analysts. However:

- the SD-KPIs for the building, basic resources and the oil and gas industries are analogous[71] to SD-KPIs of DAX businesses, and
- sustainability indicators worked out by the sectors building, basic resources and oil and gas industries themselves can be defined as SD-KPIs.

3.2 Building industry: HeidelbergCement determines SD-KPIs

3.2.1 Preliminaries

For the building industry (here: Industry Group: Building Materials) SD-KPIs have not yet been determined (cf. figure 1). From the results of the international "Cement Sustainability Initiative" (CSI[72]), however, in which HeidelbergCement actively participated, the following three SD-KPIs can be determined:

	SD-KPI 1	SD-KPI 2	SD-KPI 3
Sector building industry	Energy intensity of production[73] (specific heat consumption of clinker production, in MJ per tonne of clinker; alternative fossil fuel rate: consumption of alternative fuels, as a percentage of thermal consumption) and greenhouse gas intensity of production (company-wide total CO_2 emissions gross and net in tonnes/year; company-wide gross and net CO_2 emissions per tonne of cementitious product)	Energy efficiency of products[74]: Sustainability-related product and service innovations will allow companies to meet new demands for construction products with lower environmental impact	Labour conditions[75] for staff and the supply chain, esp. in emerging and developing countries; compliance with basic labour rights; health and safety of staff

Fig. 15 – SD-KPIs for the sector building industry

71 Cf. Hesse, A., Sustained added value. Information demand of investors and analysts for sector-specific "Sustainable Development Key Performance Indicators" (SD-KPIs) in Management Commentaries (MCs) of German companies, ed. Deloitte, Düsseldorf, Munich, 2007, pp. 5–7.

72 Regarding CSI, the "World Business Council for Sustainable Development" (WBCSD), cf. http://www.wbcsdcement.org.

73 WBCSD, The cement sustainability initiative progress report, Conches-Geneva, June 2005, p. 26.

74 WBCSD, Battelle (ed.), Toward a Sustainable Cement Industry, Executive summary, Conches-Geneva, Columbus, no indication of the year, pp. 4–5.

75 Similar to fig. 1. on pp. 6–7. Cf. also WBCSD, The cement sustainability initiative progress report, Conches-Geneva, June 2005, p. 26.

3.2.2 SD-KPI 1: Energy and greenhouse gas intensity of production

On SD-KPI 1, HeidelbergCement reports both verbally and graphically[76]:

"Climate protection, one of the biggest challenges to our society, is the central environmental issue. As early as 2003, HeidelbergCement made a commitment to reduce its specific net CO_2 emissions (CO_2 emissions in relation to the volume of cement produced) by 15% by 2010 compared with 1990. […] Across the Group, we were able to reduce specific net CO_2 emissions from 680 kg CO_2/tonne of cement in 2005 to 667 kg CO_2/tonne of cement in 2006. In 2006, absolute gross CO_2 emissions amounted to 47.5 million tonnes of CO_2, compared with 43.9 million tonnes of CO_2 in 2005. As an energy-intensive company, we are involved in the Europe-wide emissions trading system. The surplus of emissions certificates from the first trading period is essentially attributable to specific modernisation measures and investments. These measures are also financed by proceeds from certificate trading."

The content meets all the requirements for SD-KPI 1 (100%). With regard to the economic significance, climate protection is described as the biggest challenge our society faces and the central environmental issue. This energy-intensive company´s involvement in the emissions trading system is also mentioned (100%). Emission data are quantified. With regard to the ordinary result of € 25 million (previous year: € 117 million) reference is made to the fact that the sale of CO_2 emission certificates generates significant revenue[77] (100%). The trend of CO_2 emissions is given for more than two years with the aim of reducing them by 2010 (100%). Only benchmarks are not mentioned (0%). HeidelbergCement scores 80% for SD-KPI 1.

3.2.3 SD-KPI 2: Energy efficiency of products

For SD-KPI 2, HeidelbergCement provides no data in its management report (0%).

Absolute gross and net CO_2 emissions
million tonnes CO_2

2006	gross	47.5
	net	45.4
2005	gross	43.9
	net	42.0
2004	gross	44.7
	net	42.9
2003	gross	41.7
	net	40.2
1990	gross	50.8
	net	50.2

Specific gross and net CO_2 emissions
kg CO_2 / tonne cement

2006	gross	698
	net	667
2005	gross	711
	net	680
2004	gross	726
	net	697
2003	gross	722
	net	696
1990	gross	775
	net	765

Net CO_2 emissions: all direct emissions less the savings that are achieved through the use of alternative fuels and which are assessed to be CO_2 neutral.
Gross CO_2 emissions: all direct emissions including those arising from the use of alternative fuels.

[76] HeibelbergCement, Annual Report 2006, pp. 38–39.

[77] Cf. HeibelbergCement, Annual Report 2006, p. 19.

3.2.4 SD-KPI 3: Labour conditions

For SD-KPI 3, the company gives both verbal and graphical information[78].

Occupational health and safety	2004	2005	2006
Accident frequency rate[1)]	8.1	11.9	6.0
Accident severity indicator[2)]	167	169	169
Fatality rate[3)]	2.4	2.0	0.4

[1)] Number of accidents (with at least one lost working day) suffered by Group employees per 1,000,000 working hours
[2)] Number of lost working days resulting from accidents suffered by Group employees per 1,000,000 working hours.
[3)] Number of fatalities of Group employees per 10,000 Group employees

The company's commitment to occupational health and safety is described in detail, but nothing is said about the supply chain. Since HeidelbergCement is active in more than 50 countries, compliance with basic labour rights should be discussed (50%). The economic significance of occupational safety is considered a contribution to the business culture and to the company's long-term success. The economic effects of reducing the number of accidents and the death rate should have been mentioned (50%). Occupational health and safety trends over previous years are illustrated in a table, but only for the cement division. A proposed initiative is also mentioned (quantification and trend: 50% each). No benchmarking is given (0%). For SD-KPI 3, HeidelbergCement scores 40%, totalling 44% across all the three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	100%	100%	100%	100%	0%	80%
SD-KPI 2 (30%)	0%	0%	0%	0%	0%	0%
SD-KPI 3 (30%)	50%	50%	50%	50%	0%	40%
weighted sum (100%)	55%	55%	55%	55%	0%	**44%**

Fig. 16 – evaluation of reporting on SD-KPIs for HeidelbergCement

78 HeidelbergCement, Annual Report 2006, p. 41.

3.3 Basic resources: Norddeutsche Affinerie— profit in environmental protection

3.3.1 Preliminaries

Norddeutsche Affinerie (NA) is Europe's leading copper smelter and the biggest copper recycler worldwide. In its annual report of 2005/2006, the fiscal year is described as very successful, with an increase in turnover of 90% in relation to the company's price and quota policies. SD-KPIs have not been determined yet for "basic resources" (cf. figure 1). Like other energy-intensive companies, we consider the energy and greenhouse gas intensity of NA's production to be the most important SD-KPI 1. Against a background of increasing scarcity in natural resources, rising prices for raw materials, and an increasingly circular-flow economy[79], the use of recycling material is defined as SD-KPI 2 in the basic resources sector. Similar to other industries, labour conditions are identified as SD-KPI 3.

	SD-KPI 1	SD-KPI 2	SD-KPI 3
Sector basic resources	Group-wide energy and greenhouse gas intensity of production absolute in million t CO_2 and relative in kg CO_2 per production volume unit	Group-wide proportion of recycling material absolute in t and relative in per cent regarding the produced total volumes of the resp. basic resources	Labour conditions for staff and the supply chain, esp. in emerging and developing countries; compliance with basic labour rights; health and safety of staff

Fig. 17 – SD-KPIs for the sector basic resources

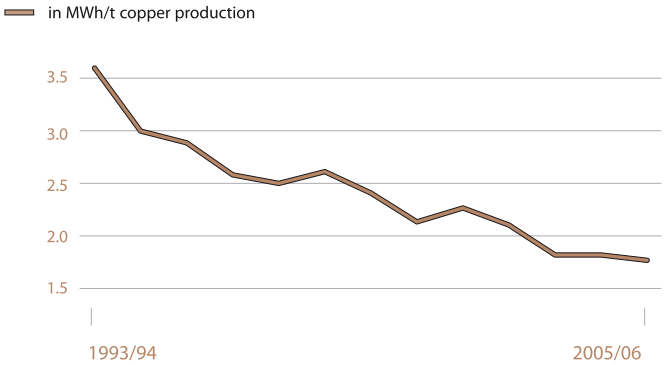
79 Cf. Kirchgeorg, M., Marktstrategisches Kreislaufmanagement, Ziele, Strategien und Strukturkonzepte, Wiesbaden 1999.

3.3.2 SD-KPI 1: Energy and greenhouse gas intensity of production

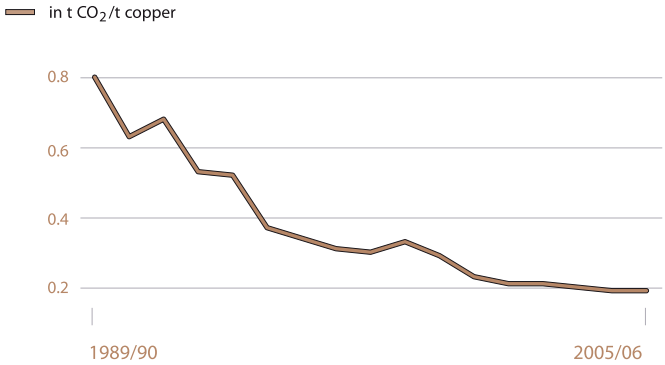
NA gives both verbal and graphical information about SD-KPI 1 in its management report[80]:

"The improvement of environmental and climate protection is one of our priority objectives. We have invested more than € 250 million in environmental protection in Hamburg since 1981 and thus can be counted among the most environmentally friendly copper smelters in the world. Throughout the Group, NA seeks open dialogue with the authorities and environmental groups. In addition it takes on commitments in joint projects between the state and industry, such as the Environmental Partnership Hamburg. Since 1985, NA has concluded voluntary agreements with the respective authorities on the improvement of the environmental protection sector. These define measures that achieve maximum success in environmental protection while taking cost-efficiency into consideration. This year we have also set up a concept to reduce emissions at the Lünen works as well, which should be implemented by the end of 2009. It primarily contains measures that help to reduce fugitive emissions in the smelter plant sector as well as improvements in the storage and handling of dusting materials. […] NA´s responsibility towards future generations is expressed as well in the economical use of raw materials and energy. Our main energy sources are electricity and natural gas – the NA Group consumes in total about 1.6 billion kWh of energy each year. Since fiscal year 1989/90, we have succeeded in reducing specific energy consumption per tonne of produced copper by almost two thirds."

Specific energy consumption NA AG (Hamburg)



CO_2 emissions NA AG (Hamburg) since 1990



80 Norddeutsche Affinerie, Annual Report 2005/06, p. 57.

The energy and greenhouse gas intensity of production is explained in detail and presented graphically for the Hamburg works but not for the group as a whole (50%). NA gives the impression that even in an energy-intensive industry exposed to rising energy prices and global competition, environmental protection can be profitable. According to NA, all its measures take cost-efficiency into account. Since 1981 more than € 250 million have been invested in environmental protection in Hamburg. The proportionate contribution to SD-KPI 1 should be mentioned separately here (50%). Quantitatively, only the company's absolute energy consumption for the current fiscal year is given, at approximately 1.6 billion kWh. For the preceding years, there is no data on consumption or anticipated development. Other quantitative illustrations, however, are sufficient (50%). The trend of a reduction in energy consumption and CO_2 emissions in relation to production output covers a period of more than ten years (100%). For benchmarking, while NA´s record of environmental investment has given it the reputation of being one of the most environment-friendly copper smelters in the world, for SD-KPI 1 no comparison is made with other related businesses (50%). Overall for SD-KPI 1, NA scores 60%.

3.3.3 SD-KPI 2: Proportionate use of recycling material

NA provides integrated data on SD-KPI 2 throughout its management report. For example[81]:

"Recycling: diversification of input materials Today, recycling is an integral part of sustainable development and is used as a tool for environmental protection and to secure raw material supplies. Recycling materials are increasingly complex composite materials with significant high-grade metal contents. They are part of the new structures in the closed loop economy. The supply of these »modern« recycling materials in Europe is increasing rapidly. Innovative, high-performing process technology, like the facilities at NA, is required to recycle them. Regardless of price-related market fluctuations, we are adhering to our successful strategy of a wide diversification of the recycling materials used, which include both industrial residues as well as those from the waste disposal business and the end-of-life sector."

The proportionate use of recycling material is discussed in relative rather than absolute terms. Several passages in the management report can be attributed to SD-KPI 2, such as the reference to the company-owned recycling centre (50%).[82] According to NA, its recycling facilities are used efficiently at capacity due to a guaranteed supply of raw materials.[83] In combining the production of primary copper with recycling and the extraction of precious metals, NA has a significant competitive advantage (100%).[84] The following data are quantified: approximately 60% of the raw materials NA purchases worldwide consist of copper concentrate with the remaining 40% consisting of recycled materials[85]. At the Lünen works the recycling of secondary raw materials could be increased. Recycling of electronic scrap has increased by 28%. The Hamburg smelting works are running at full capacity. In recycling, NA has increased production by almost 10%.[86] But data on absolute quantities are omitted (50%)[87]. Only a qualitative description is given of future trends. To consolidate its position against international competitors, NA aims to improve its Hamburg and Lünen works by expanding and optimising its concentrate processing and recycling activities (50%).[88] With respect to benchmarking, NA is considered an industry leader in the field of copper recycling, both in terms of volume and the diversity of materials processed. NA has a particularly strong position in the recycling of electronic scrap (50%).[89] NA scores 60% for SD-KPI 2.

3.3.4 SD-KPI 3: Labour conditions

NA gives the following statement on SD-KPI 3 in its management report[90]:

"The already very low accident frequency level at NA AG in Hamburg could again be slightly improved in the last fiscal year. With 6.0 notifiable accidents per one million hours worked, it was substantially under the average of the Employers´ Liability Insurance Association of the chemical industry. NA AG was awarded second prize in a competition run by the Association of the Chemical Industry on the topic »Responsible Care: the tasks of Occupational Safety« We owe this success to the constant improvements in occupational safety and also in health protection."

Occupational safety is covered well here but data on basic labour rights are not given. The majority of NA's employees are based in Germany, but compliance with basic labour rights and occupational safety standards should be made clear to suppliers of raw materials, especially in emerging and developing countries (50%). The economic significance of this is not made clear (0%). Quantitative data are given in the passage above for occupational safety in Germany. Elsewhere in the document, NA describes how it is minimising the risk to its supply of copper concentrate by signing long-term purchase agreements for 80% to 90% of the volume required. These agreements are made with mines in a number of countries worldwide and as a result, NA is not dependent on any one supplier. Wages in the smelting and refinery industries are agreed for periods of several

81 Norddeutsche Affinerie, Annual Report 2005/06, p. 96.
82 Cf. Norddeutsche Affinerie, Annual Report 2005/06, p. 51.
83 Cf. Norddeutsche Affinerie, Annual Report 2005/06, p. 74.
84 Cf. Norddeutsche Affinerie, Annual Report 2005/06, p. 83.
85 Cf. Norddeutsche Affinerie, Geschäftsbericht 2005/06, p. 50.
86 Cf. Norddeutsche Affinerie, Geschäftsbericht 2005/06, p. 75.
87 Cf. Norddeutsche Affinerie, Geschäftsbericht 2005/06, p. 83.
88 Cf. Norddeutsche Affinerie, Geschäftsbericht 2005/06, p. 96.
89 Cf. Norddeutsche Affinerie, Geschäftsbericht 2005/06, p. 49.
90 Cf. Norddeutsche Affinerie, Geschäftsbericht 2005/06, p. 90.

years.[91] These data should be differentiated for individual continents, however, to give an indication of basic labour rights. Contingent minimum wages should also be stated (50%). A trend of an ongoing reduction in the frequency of accidents is mentioned (50%). A benchmark is given for occupational accidents in the average number of accidents at work of the Employers' Liability Insurance Association of the Chemical Industry (50%). NA scores 40% for SD-KPI 3 and a total of 54% across all three SD-KPIs.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (40%)	50%	50%	50%	100%	50%	60%
SD-KPI 2 (30%)	50%	100%	50%	50%	50%	60%
SD-KPI 3 (30%)	50%	0%	50%	50%	50%	40%
weighted sum (100%)	50%	50%	50%	70%	50%	**54%**

Fig. 18 – evaluation of reporting on SD-KPIs for Norddeutsche Affinerie

[91] Cf. Norddeutsche Affinerie, Annual Report 2005/06, p. 92.

3.4 Oil and gas: Shell in search of "material alternative energy business"

3.4.1 Preliminaries

SD-KPIs are also yet to be determined for the oil and gas industry (cf. figure 1). As with other industries, it is the energy and greenhouse gas efficiency of oil and gas industry products with respect to sources of energy that should be examined, because climate change is described as the biggest SD challenge of this century, CO_2 is the most significant anthropogenic greenhouse gas, and 75% of CO_2 originates from the incineration of fossil fuels[92]. The politics of climate change, the long-term decline of the era of fossil fuels and the megatrend towards a low carbon or carbon neutral economy all show that the greenhouse gas potential of the energy sources produced every year is the most important SD-KPI 1. A close second is the energy and greenhouse gas intensity of production, SD-KPI 2, which comprises a number of KPIs determined by Shell and a range of its stakeholders[93]. SD-KPI 3 will have to be defined at a late date when further information becomes available. It is possible that labour conditions, mitigation for people living next to extraction areas or the company's conduct when operating in areas of high biodiversity could all be taken into account, but as a decision has not been made on a third SD-KPI for the oil and gas industry, we have confined our analysis to the two SD-KPIs mentioned above.

	SD-KPI 1	SD-KPI 2	SD-KPI 3
Sector oil & gas	Group-wide energy and greenhouse gas intensity of products (e.g. absolute contribution of produced energy sources to the greenhouse effect in million t CO_2 equivalents and specific contribution of a produced energy source unit to the greenhouse effect in g CO_2 equivalents per kWh; aims and strategies of a group-wide reduction of the greenhouse potential of the produced energy sources)	Group-wide energy and greenhouse gas intensity of production absolute in million t CO_2 and relative in kg CO_2 per production volume	–

Fig. 19 – SD-KPIs for the sector oil & gas

92 Cf. Hesse, A., Big Six – The six most important global challenges for Sustainable Development in the 21st century, Münster 2006, p. 12.

93 The following KPIs worked out by Shell are summed up under SD-KPI 2 "energy and greenhouse gas efficiency of production": Greenhouse gas emissions, energy intensity – exploration & production/in refineries, flaring. Cf. Royal Dutch Shell, Annual Report 2006, pp. 64–66.

3.4.2 SD-KPI 1: Greenhouse gas potential of produced energy sources

When considering SD-KPI 1, it should be noted that the production of oil and gas remains central to Shell's business model. And yet, Shell does not publish any data on its absolute or relative emission potential. In the field of renewable energies, however, it strives to develop "at least one material alternative energy business" (50%):

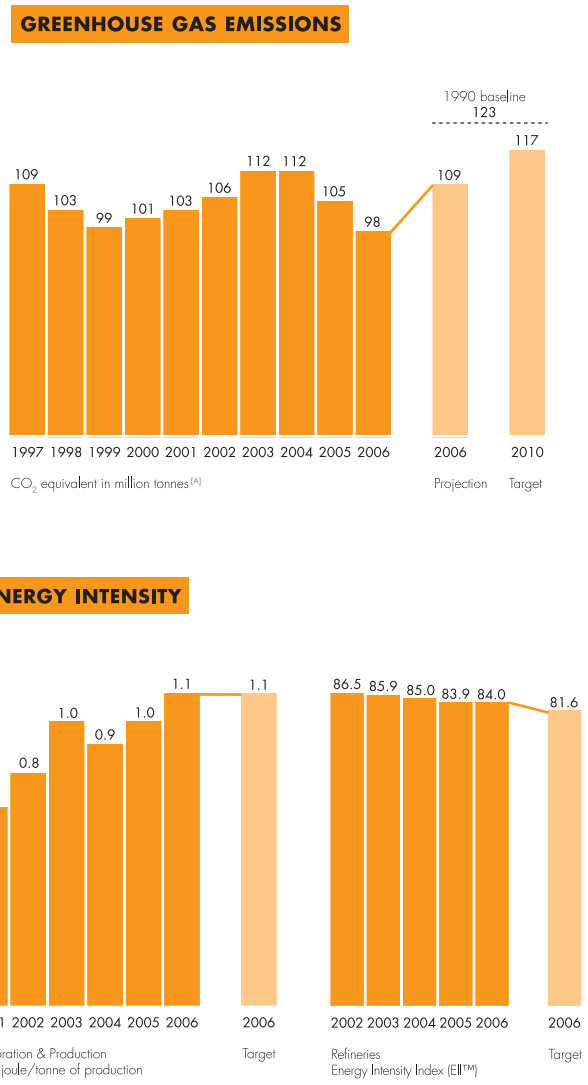
"Other industry segments include Renewables, Hydrogen and CO_2 co-ordination activities. Renewables develops business opportunities based on renewable sources of energy including wind and solar while Hydrogen works towards the introduction of hydrogen as a commercial fuel. The CO_2 group co-ordinates efforts to address carbon dioxide emissions across Shell's businesses and our research in technology to capture and store such emissions. Corporate represents the functional activities supporting the Group. Shell Renewables aims to develop at least one material alternative energy business for Shell. Its activities include growth in the more mature wind energy business, and developing emerging opportunities such as new solar technology and hydrogen. Shell Wind Energy develops and operates onshore and offshore wind farms with activities in the USA, the UK, Germany, France, Spain, the Netherlands and China."[94]

"All major new investments must include the expected future costs of emitting carbon in their financial calculations. […] Sustainable development performance is an important component of appraisals and compensation, as it comprises 20% of the Group Scorecard."[95]

All the persons in charge of Shell's segments must include anticipated future costs of emitting carbon in their calculations for new investments in every sector in which they operate (50%). Quantitatively, SD performance contributes to 20% of the group's score, thereby influencing corresponding remuneration (50%). Qualitatively, a trend towards a business model based on "low carbon products" is described (50%). No benchmarking is provided (0%). Shell scores 40% for SD-KPI 1.

3.4.3 SD-KPI 2: Energy and greenhouse gas efficiency of production

In Shell's "operating and financial review" the following charts can be found in relation to SD-KPI 2 [96] (100%):



From an economic point of view, Shell justifies its SD activities only in general terms and sometimes only, because a diversity of stakeholders make demands on the company (50%). The energy and greenhouse gas efficiency of production is quantified (100%). A trend analysis is given over several years, as well as corporate aims and anticipated development of years to come (100%). No benchmarks are given though (0%). Shell scores 70% for SD-KPI 2, and 52% overall for both SD-KPIs.

94 Royal Dutch Shell, Annual Report and Form 20-F for the year ended December 31, 2006, p. 52.

95 Royal Dutch Shell, Annual Report and Form 20-F for the year ended December 31, 2006, p. 62.

96 Royal Dutch Shell, Annual Report and Form 20-F for the year ended December 31, 2006, pp. 65–66.

	(1) report on SD-KPIs (20%)	(2) economic importance (20%)	(3) quantitative indications (20%)	(4) trend analysis (20%)	(5) bench-marking (20%)	weighted sum (100%)
SD-KPI 1 (60%)	50%	50%	50%	50%	0%	40%
SD-KPI 2 (40%)	100%	50%	100%	100%	0%	70%
weighted sum (100%)	70%	50%	70%	70%	0%	**52%**

Fig. 20 – evaluation of reporting on SD-KPIs for Shell

4. Summary and outlook

Non-financial factors have an important impact on a company's success. According to the 2003/51/EC modernisation directive and the corresponding §§ 289, 315 HGB resp. DRS 15[97], Sustainable Development Key Performance Indicators (SD-KPIs) established by Hesse in 2007 should be published in management reports to give a clear understanding of business development, position and the anticipated development with all the associated risks and opportunities. Since this requirement was first applied in 2005, companies felt that a "Best Practice Guide" would be helpful when selecting and developing SD-KPIs. As a result, we have sought to provide this guide.

Manager magazin´s competition "Best Annual Report" served as a basis for this study, where the Baetge Research Team included SD-KPIs for the first time in 2007. For the competition, the annual reports of nearly 200 publicly traded companies from the Dow Jones Stoxx 50, DAX, MDAX, SDAX, TecDAX as well as the biggest stockmarket newcomers of the Prime Standard were analysed. From the findings, best practice examples were highlighted in 14 sectors, illustrating potential for improvement.

To be considered as an example of best practice, we examined the information provided in the reports about SD-KPIs against the criteria below. The first condition (the reporting of a company in the management report which has been certified by public accountants), was the conditio sine qua non for any company to be acknowledged as an example of the best practice.

The following five criteria for the SD-KPIs each made up 20% of the total score:

(1) **Good information** on the criteria of the most important **SD-KPI 1, SD-KPI 2 and possibly SD-KPI 3 of the specific sector** as illustrated in figures 1, 15, 17 and 19.

(2) An **indication of the SD-KPIs' economic significance** to the development, position and anticipated development of the company.

(3) **Quantitative data on the SD-KPIs**.

(4) A comparison of SD-KPIs over time **(trend analysis)**.

(5) A comparison of a company's SD-KPIs with those of other companies in the same sector **(benchmarking)**.

If only two SD-KPIs were defined for a sector, SD-KPI 1 was given a 60% weighting and SD-KPI 2 40%. Where a sector had three SD-KPIs, SD-KPI 1 was given 40%, with SD-KPI 2 and SD-KPI 3 each given 30%. The five criteria mentioned above were rated with 0% if no data were provided, 50% if the information could have been more detailed, and 100% if they met all the criterion´s requirements.

The best practice examples examined with regard to SD-KPI reporting differed in quality. None of the companies received a 100% score. The quality of individual disclosures for the SD-KPIs is explained in the rating checklist in figures 2 and 3. The following table shows the points earned for the three SD-KPIs by the 14 best practice examples:

Ranking	Company	Total number of points for reporting on SD-KPIs
1.	SolarWorld	67%
2.	TUI	64%
3.	BASF	58%
4.	Norddeutsche Affinerie	54%
5.	ABN AMRO	53%
6.	Munich Re	52%
6.	Shell	52%
7.	GlaxoSmithKline	45%
8.	HeidelbergCement	44%
8.	BMW	44%
9.	Deutsche Telekom	41%
10.	ThyssenKrupp	34%
11.	Suez	25%
12.	adidas	24%

Fig. 21 – ranking of the reporting quality regarding SD-KPIs

In each case there is potential for improvement.

97 Cf. footnote 14.

In some cases an SD-KPI was only addressed in relative terms, showing, for example, a proportional reduction of CO_2 emissions without giving the absolute reduction. This missing data can pose a significant risk to a company´s future development; especially with SD-KPI 1 of the automobile industry, where disclosure of absolute fleet consumption is particularly important (as in the case of BMW, which scored 44%, due to its high absolute fleet consumption).

SD-KPIs are often still published in a separate section of the management report called "environment, staff, sustainability" rather than integrated into the structure recommended by the DRS 15[98] (business and operating environment, results of operations, financial position and net assets, report on post-balance sheet date events, risk report, report on expected developments). ABN AMRO provides a management report which scored 53% overall with well integrated descriptions of different SD opportunities, which are partly quantified and economically rated. HeidelbergCement (44%) provides data which demonstrates how sustainability KPIs were set out for the sector in an international Cement Sustainability Initiative, thereby encouraging transparency. BASF (58%) gives a good graphical and verbal description of SD-KPI 1 that includes both relative and absolute energy and greenhouse gas data as well as a long-term term trend analysis, although only with relative targets and the percentage of targets achieved. Norddeutsche Affinerie (54%) suggests that even in an energy-intensive industry with rising energy prices and stiff global competition, environmental protection can still be economically profitable.

ThyssenKrupp´s (34%) break down of its investments in environmental protection for each segment over five fiscal years is informative. Their explanation that "as raw material and energy prices are high, these measures also helped improve profitability", however, could be more specific. At 67%, SolarWorld´s report achieved the highest score, presenting climate protection as a contribution to sustained added value. A reduction in the CO_2 emissions of products and production result in a positive CO_2 balance. The environmental damage this prevents is also estimated financially at € 130 million (previous year: € 84million), but the assumptions on what these calculations are based are not made clear. Deutsche Telekom (41%) says it campaigns "massively" for climate protection, expressing the ambitious aim of halving CO_2 emissions from power production by 2010 compared to 1995. Increased greenhouse gas efficiency is discussed but additional costs and benefits are not. In consumer goods and retail, the supply chain´s environmental and social standards are the most important non-financial factor (SD-KPI 1). Adidas gives a very detailed report on SD-KPI 1 (60%) but says nothing about the other two SD-KPIs so only scores 24% overall. Adidas rightly asserts the importance of SD-KPI 1 for corporate value and reputation but does not provide the data required to back this up. In its renewable energy division, Shell (52%) aims to develop "at least one material alternative energy business", saying that all its divisions have to calculate the expected "costs of emitting carbon" in future investments. The SD performance amounts to 20% of the corporate scorecard and correspondingly affects the remuneration of the people in charge.

In the pharmaceutical industry, the significance of GlaxoSmith Kline´s pro-poor activities is clear (45%) and their management report gives detailed information on this. Medium and long-term strategies for providing "access to healthcare in the developing world" remain unclear; not illustrating whether future profit could be achieved and if so, how. TUI (64%) gives a focused report on the two SD-KPIs in its sector. Energy consumption of the fiscal year in its airline and shipping operations is given in absolute figures without withholding the fact that it has risen. Fuel consumption of 3.08 litres of aircraft fuel per 100 passenger kilometres (pkm) is described as being "among the most efficient airlines", but this could be specified further. A visual and verbal description of the costs and benefits of energy efficiency measures would improve the report. TUI also addresses the importance of biodiversity to the tourism industry. Munich Re (52%) describes how SD has been integrated into asset management without giving any economic reasons. In view of a major-loss burden from natural catastrophes in the last two financial years (€ 177 million in 2006, € 2,629 million in 2005) it is clear how exposed the insurance and especially the reinsurance industries are to this "random fluctuation" in some segments. Among utility companies, Suez (25%) was considered an example of best practice as a result of the page and a half devoted to "risks related to climate change" in its risk report as well as the tabular presentation of its CO_2 emissions (although this only covered one year).

A significant number of best practice examples are corporations located outside of Germany; accounting for four of fourteen in total. German companies often discussed SD-KPIs in the voluntary part of the annual report rather than integrating them into the management report, which is subject to auditing. As a result they were not awarded a best practice rating. Important data have to be checked on a company's development, position and anticipated development, as well as the relevant risks and opportunities resulting from SD-KPIs. As DRS 15 dictates, this information must be integrated in the audited management report[99].

98 Cf. footnote 14.

99 Cf. footnote 14.

Outlook

In addition to the SD-KPIs of ten DAX sectors empirically determined in 2007, SD-KPIs for the building, basic resources and oil and gas industries were also defined in this study by drawing on analogies and/or KPIs set out by the industries themselves. In future, SD-KPIs should be defined for every sector.

It should be noted that the SD-KPIs used in this study are not intended to undermine the importance of other SD challenges. As determined by the survey, the SD-KPIs stated here are of particular importance to the business development, position and anticipated development of an enterprise. SD challenges which are not considered as important now may grow in importance in years to come and become relevant to certified public accountants. When you consider the six most important SD challenges of the 21st Century (the **"Big Six"**[100]), the topic of climate change predominates over most of the SD-KPIs in each sector. In our opinion, the other five Big Six issues (freshwater scarcity, deforestation/desertification, absolute poverty, loss of biodiversity and global population growth/migration) will all grow in importance and become increasingly integrated into SD-KPIs.

In future, other aspects in the disclosure of SD-KPIs could contribute to best practice ratings, such as reports about:

- **incentives** to improve SD-KPI performance in companies;
- influence on (political) **frameworks** beneficial to SD;
- **legal disputes** relating to SD-KPIs;
- integration of **SD-KPIs specific to individual companies** which are not covered by SD-KPIs of the respective sector.

[100] Cf. Hesse, A., Big Six—The six most important global challenges for Sustainable Development in the 21st century, Münster 2006.

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Prof. Dr. Dr. h.c. Jörg Baetge undertakes research in accounting, auditing, company assessment and corporate culture. Until his retirement he was head of the Department of Accounting at the University of Münster. The many editions of his books "Bilanzen" and "Konzernbilanzen", co-edited with other authors, are some of the standard texts at many German universities. Since 1996 he has been a member of the Academy of Sciences in Northrhine Westphalia. In 1997 he was awarded an honorary doctorate, in 1998 he won the "Dr. Kausch Prize" and in 2000 he was awarded the "Hans-Georg Plaut Prize of Science". Since his retirement in 2002 he has directed a research team of twelve scientists. At the University of Münster his main field of lecturing is "external accounting" for postgraduate students of the Executive Master of Business Administration in Accounting and Controlling programme. He is also an honorary professor at the University of Vienna, teaching theories of auditing. In 2006, Prof. Baetge directed the Best Annual Report competition which was organised by "manager magazin" for the 13th time. This study relies on his findings of best practice with regard to SD-KPIs.

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