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Information demand of investors and analysts for sector-specific "Sustainable Development Key Performance Indicators" (SD-KPIs) in Management Commentaries (MCs) of German companies

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A study by Dr. Axel Hesse (SD-M)
for Deloitte and the German Federal Ministry of the Environment

Contents

1. Foundation and structure of this study

Non-financial resp. extra-financial "Sustainable Development Key Performance Indicators" (SD-KPIs) had to be disclosed in Management Commentaries (MCs)[1] for the first time for the accounting year 2005 according to §§ 289, 315 of the German Commercial Code – "Handelsgesetzbuch" (HGB). As stated in the Deloitte survey "Added value, long term" 85% of the DAX-30-companies declared at the beginning of 2006 to publish SD-KPIs in their MCs.[2] According to them SD-KPIs are important in the short term and even more so in the long run for the business' development and the position of the consolidated group. As the most important target group for SD-KPIs in the MCs of annual reports DAX-30-companies named investors and analysts.[3]

Therefore the information demand of this target group was examined for this second study from August to October 2006. Seven relevant investors and analysts stated their estimation for the up to three most important SD-KPIs for ten sector groupings of the DAX-30. Furthermore they evaluated for each sector grouping the short- and long-term importance of the SD-KPIs for the understanding of the business' development, the position and the expected development with its relevant opportunities and risks.

The stated SD-KPIs of investors and analysts were systematised according to the frequency of statements as well as the estimated importance (see tables in part 2 "results"). The shadings stated here illustrate groupings of SD-KPIs of similar content of which the two to three most important SD-KPIs of the sector grouping were singled out. Afterwards the DAX-30-companies were questioned regarding the most important SD-KPIs from the investors' and analysts' point-of-view they would probably report on in their next or future MC. This part of the examination was carried out from October to November 2006. 23 of the DAX-30-companies participated in it, which was even higher than in the first Deloitte study, which emphasises the increasing importance of SD-KPIs.

The results of this study could be the beginning of an (inter-) national standardisation process for SD-KPIs in MCs (e.g. in the context of the MC project of the IASB). One can see from the following points that such a process – analogous to the one for international financial reporting – is necessary: In previous DAX-30-MCs SD-KPIs were disclosed mainly in very general terms.[4]

The relevant commentaries provide no concrete indications either. They just refer to the also general statements of an act called "Bilanzrechtsreformgesetz" (BilReG) of 2004 as well as to the recommendations of the EU commission regarding the recognition, measurement and disclosure of environmental issues in the annual accounts and annual reports of companies of 2001.[5] Even the German Accounting Standard GAS 15 (number 30–35) and the accounting comment IDW RH HFA 1.007 – both regarding to MC reporting – do not provide further specifications. The German Institute of Public Auditors (IDW), however, emphasises an important role of non-financial key performance indicators: "Statements should especially consider sector-specialities and allow comparisons with other companies of the sector."[6] Regarding this sector-reference, however, there had been no concrete criteria for SD-KPIs in MCs before this study was published.

1 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 MC. This generic abbreviation is used throughout this study. Different terms are used in different countries, for example, MD&A in Canada and the United States, Operating and Financial Review (OFR) resp. Business Review of the Companies Act in the United Kingdom and Management Reporting ("Lagebericht") in Germany.

2 See Hesse, A., Deloitte (ed.): Added value, long term. Non-financial sustainability key performance indicators on their way into financial reports of German companies, Düsseldorf, Munich 2006, pp. 5-8.

3 See Hesse, A., Deloitte (ed.): Added value, long term. Non-financial sustainability key performance indicators on their way into financial reports of German companies, Düsseldorf, Munich 2006, pp. 11-14.

4 See Hesse, A., Deloitte (ed.): Added value, long term. Non-financial sustainability key performance indicators on their way into financial reports of German companies, Düsseldorf, Munich 2006, pp. 12-13.

5 See Ellrott, H.: Beck'scher Bilanz-Kommentar, Handels- und Steuerbilanz §§ 238 to 339, 342 to 342e HGB, 6. ed.., Munich 2006, § 289, margin number 100–108, Merkt, H., in: Baumbach/Hopt, Beck'sche Kurz-Kommentare, vol. 9, Handelsgesetzbuch, 32. ed., Munich 2006, § 289, margin number 4 and Morck, W., in: Koller/Roth/Morck, Handelsgesetzbuch Kommentar, 5. ed., Munich 2005, § 289, margin number 8.

6 German Institute of Public Auditors: IDW RH HFA 1.007 of 18.10.2005, section 3.

In 2005 Chistoph Butz from the bank Pictet already argued in favour of SD research to focus on the most important indicators rather than too many.[7] Charles Gooderham from Deloitte mentioned: "There may be 20 key risks to the business, one or two of which may be environmental."[8]

The present study is the first to provide the two to three most important SD-KPIs for MC reporting of ten DAX-30 sector groupings and thus gives an important input for an essential inter(national) standardisation regarding more information content of MCs.

7 See Butz, C., Pictet (ed.): Less can be more, Geneva, March 2005. Butz initiated and characterised this method. The development happened in collaboration with the Centre Info, Fribourg, Switzerland, partner of the SiRi Company.

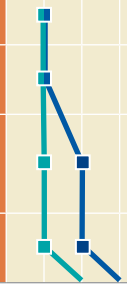
8 Nicholls, M.: Bringing risks to account, in: Environmental Finance, October 2005, p. 16.

2. Results

2.1 Automobile industry: Fleet consumption as the most important SD-KPI of the whole study

Company	ISIN	Prime sector	Industry group
BMW AG[9]	DE0005190003	Automobile	Automobile Manufacturers
Continental AG[10]	DE0005439004	Automobile	Auto Parts & Equipment
DaimlerChrysler AG[9]	DE0007100000	Automobile	Automobile Manufacturers
Volkswagen AG[11]	DE0007664005	Automobile	Automobile Manufacturers

SD-KPI 1: Fleet consumption
SD-KPI 2: Energy and greenhouse gas intensity of the production

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 Pictet[12]	Average fleet consumption	g CO_2/km (weigthed according to the number of sold vehicles of a specific kind)		
SD-KPI 2 UBS SRI	CO_2 intensity of the fleet	g CO_2/km		
SD-KPI 1 oekom[13]	Fleet consumption	Average fleet consumption of passenger cars produced during the year in g CO_2/km (throughout the consolidated group)		
SD-KPI 1 WestLB	CO_2 emissions of the fleet	Average CO_2eq emissions/km of the fleet; targets and programmes to reduce CO_2eq emissions of the fleet		

9 BMW and Daimler Chrysler could not answer during the examination period.

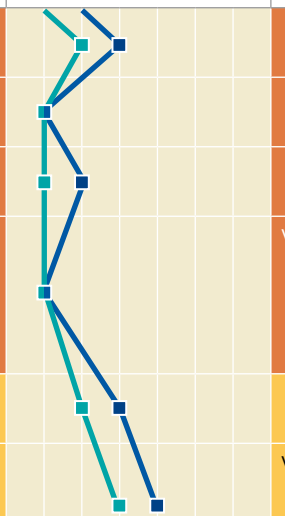
10 Due to the conditions of the examination several SD-KPIs mentioned in the table are not applicable directly for the auto parts & equipment supplier Continental.

11 Volkswagen: The information refers to short- to mid-term consideration of SD-KPIs in MCs. Single SD-KPIs will (especially short-term) be reported rather qualitatively in MCs, whereas quantitative presentation will take place in sustainability reporting.

12 Pictet: SD-KPI 1 only applies to automobile manufacturers.

13 oekom: Since Continental is not an automobile manufacturer, SD-KPIs 1 and 2 are not applicable to this company.

2.1 Automobile industry

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 scoris	CO_2 emissions of the fleet	Weighted average of the CO_2 emissions per km of the company's product portfolio/fleet		
SD-KPI 1 UBS SRI	Fleet consumption	l/100 km		
SD-KPI 2 Innovest	CAFE performance	Corporate Average Fuel Economy (CAFE) performance in miles per gallon		
SD-KPI 1 F&C	Atmospheric emissions	Emissions from the combustion of energy sources which arise directly at company's plants and indirectly during the use phase of the cars Emissions which arise elsewhere from the generation of purchased electricity and district heating		Volkswagen
SD-KPI 3 UBS SRI	CO_2 intensity of the production	kg CO_2/produced vehicle		
SD-KPI 3 oekom	Energy consumption of the production	Development of the specific energy consumption over several years, e.g. in relation to the number of produced passenger cars/units (throughout the consolidated group)		Volkswagen
SD-KPI 2 WestLB	Safety	Product safety (EURO NCAP ratings[14]) and passive car safety		Volkswagen
SD-KPI 3 scoris	Product safety	Product safety as assessed e.g. in EURO NCAP ratings[14]		
SD-KPI 2 F&C	Indexes of frequency and severity of accidents	Accident frequency index: Frequency of industrial accidents relative to the total number of hours worked Severity index: calculates the ratio of the total number of working days lost to the total number of hours worked		Volkswagen
SD-KPI 3 Innovest	Occupational accident rate	Frequency of accidents per million man-hours		Volkswagen
SD-KPI 3 F&C	Environmental protection expenditures	All additions to property, plant and equipment which serve exclusively or predominantly to protect against harmful effects arising from production processes. Such measures may relate either to products or to production processes.		Continental, Volkswagen
SD-KPI 2 Pictet[15]	Range of customers	For which producer/types of vehicles parts, components are produced? Is the business model linked to types of vehicles which are valued weakly under "SD-KPI 1 Pictet"?		Volkswagen
SD-KPI 1 Innovest	R&D spending	Research & Development (R&D) spending in % of net sales		Continental, Volkswagen
SD-KPI 2 scoris	Green procurement	Targets and programmes for environmental procurement and environmental improvement of suppliers		Continental, Volkswagen
SD-KPI 2 oekom[13]	Diesel-passenger cars with soot particle filter	Percentage of sold passenger cars with regulated diesel particle filter (throughout the consolidated group)		

[14] Euro NCAP = European New Car Assessment Programme.

[15] Pictet: SD-KPI 2 only applies to automobile suppliers.

The fleet consumption is by far the most important "Sustainable Development Key Performance Indicator" (SD-KPI 1) for the automobile industry.[16] Life cycle analyses show that depending on the manufacturer over 80% up to even 95% of the CO_2 emissions are caused during the use phase of the vehicles.[17] The fleet consumption is the only SD-KPI of this whole study stated by all seven investors and analysts. UBS named it even twice (in g CO_2/km and l/100 km). So far, however, no automobile manufacturer has disclosed his fleet consumption in the MC.

Very essential information for the anticipated development of the automobile manufacturers are thus not disclosed. The "European Automobile Manufacturers Association" (ACEA) for example professed a self-imposed commitment vis-à-vis the European Union (EU): The CO_2 emissions of new passenger cars sold in the EU are to be reduced to 140 g CO_2/km by 2008 and 120 g CO_2/km by 2012. While the brands Fiat, Citroën, Renault and Peugeot are likely to reach or outperform this target, the Volkswagen Group might probably not reach it (sales-weighted CO_2 emissions of the Volkswagen Group brands in 2005: Seat: 150 g CO_2/km; Skoda: 152; Volkswagen: 159; Audi: 177; not considered: Bentley, Bugatti and Lamborghini). DaimlerChrysler will not reach the target either (Mercedes-Benz: 185 g CO_2/km; the brand smart[18] is not considered here), it will be even more difficult for BMW (192 g CO_2/km; the brands MINI[19] and Rolls-Royce are not considered here). It is true that according to ACEA the target value of the self-commitment is meant as a European sector average, the sector as a whole, however, is lagging behind the achievement of its objectives.[20] If, for example, SD-ratings attached an appropriately higher value to the fleet consumption, BMW would definitely be placed worse. And even rank one of the current sector rating of the so-called "Dow Jones Sustainability Index" would be out of question.[21]

The EU is the only large economic region in which no mandatory fuel efficiency values have been codified so far, as opposed to the USA, Japan and even China.[22] For 2007 the EU commission has announced a legislation to secure – if necessary – the achievement of the 120 g CO_2/km target for 2012.[23] Assuming that all automobile manufacturers will have to meet the same average CO_2 emission value, WestLB has calculated additional costs per automobile of 85 Euros for Volkswagen, 329 Euros for BMW, 335 Euros for DaimlerChrysler and 2,132 Euros for Porsche.[24] Investors and analysts will thus expect a disclosure of the most important SD-KPI "sales-weighted fleet consumption" in g CO_2/km for the EU resp. "miles per gallon" for the USA. Furthermore the effects on business' development, position and expected development should be estimated as well as exemplified and the underlying assumptions should be disclosed.

BMW disclosed relative reduction values for the fleet consumption in its MC of 2005 as well as not sales-weighted absolute emission values for all passenger cars in the voluntary part of its annual report. And the increasing requirements for reductions of the fleet consumption were mentioned as a sector risk in the MC.[25] DaimlerChrysler also named relative reduction results for the fleet consumption and the sector risk "regulations of emission and consumption values" in the MC 2005 without mentioning the ACEA commitment.[26] Volkswagen wrote about its participation in the ACEA commitment and stricter consumption standards in China in its MC of 2005.[27] Quantitative statements regarding the fleet consumption will probably not been disclosed in its MC of 2006 either (see table).

The SD-KPI 2 "energy and greenhouse gas intensity of the production" (in kg CO_2eq per produced vehicle) is of significantly lower importance than SD-KPI 1 "fleet consumption". All further SD-KPIs were only named once or twice and therefore do not have to be emphasised as important SD-KPIs for the automobile sector.

16 See also Butz, C., Pictet (ed.): Less can be more, Geneva, March 2005, p. 10.

17 See Hesse, A., Germanwatch (Hrsg.), Climate and corporations – Right answers or wrong questions? – Carbon Disclosure Project data – Validation, analysis, improvements, Bonn, Berlin, February 2006, p. 14.

18 The cdi-version of the "smart fortwo" has the lowest emissions with only 3,4 l per 100 km (c. 91 g CO_2/km) and is the best-selling three-litre-car of the world. See DaimlerChrysler: Geschäftsbericht 2005, Stuttgart 2006, p. 75.

19 The "One D"-Version of the MINI has the lowest emissions and needs 4,8 l per 100 km (129 g CO_2/km). See BMW, Geschäftsbericht 2005, voluntary part, Munich 2006, p. 52.

20 See anon.: Dreiviertel der großen Autobauer verfehlen Klimaziele, in: Spiegel Online, 25.10.2006.

21 See Bergius, S.: Nachhaltigkeitsratings – Auf der Suche nach der Tugend, in: Handelsblatt, 17.11.2006, pp. 32-33.

22 See European Federation for Transport and Environment (T&E): How Clean is Your Car Brand?, October 2006, pp. 2-6.

23 See anon.: Commission threatens legislation for 2012 CO_2 target of 120 g/km, in: T&E Bulletin, No 152, October 2006, p. 2.

24 See WestLB: Die Quadratur des Kreises, Emissionsrichtlinien für die Automobilindustrie, December 2005, p. 7.

25 See BMW: Geschäftsbericht 2005, Munich 2006, p. 30, p. 57 and voluntary part, pp. 51-55.

26 See DaimlerChrysler: Geschäftsbericht 2005, Stuttgart 2006, p. 56 and p. 60.

27 See Volkswagen: Geschäftsbericht 2005, Wolfsburg 2006, p. 59 and p. 91.

2.2 Banks: SD integration in credit analysis and asset management

Company	ISIN	Prime sector	Industry group
Commerzbank AG	DE0008032004	Banks	Credit Banks
Deutsche Bank AG	DE0005140008	Banks	Credit Banks
Deutsche Postbank AG	DE0008001009	Banks	Credit Banks
Hypo Real Estate Holding AG[28]	DE0008027707	Banks	Mortgage Banks
Deutsche Börse AG[29]	DE0005810055	Financial Service Provider	Securities Brokers

SD-KPI 1: Credit checks for SD risks and opportunities in commercial/investment banking
SD-KPI 2: Credit checks for SD risks and opportunities in retail banking
SD-KPI 3: Integration of SD aspects in asset management

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 Innovest	Incorporation of ESG factors into wholesale credit decisions	The corporate lending divisions that we pick as outperformers are more capable of gathering critical intelligence about key environmental, social, and governance (ESG) risks and opportunities and incorporate this information into their wholesale lending operations.		(Anonymous answer 1[30]) Anonymous answer 2 Hypo Real Estate
SD-KPI 1 scoris	Credit business	Programmes to take into account sustainable impact of products of credit business; percentage of respective credits		
SD-KPI 2 F&C	Environmental and social credit risk assessment/ management	High-quality, comprehensive credit risk procedures that minimise default risk through the incorporation of social and environmental factors in financing decisions		(Anonymous answer 1[30])

[28] Hypo Real Estate Holding is not a universal bank, but a bank specialised in commercial mortgaging. Especially the SD-KPIs for retail banking are not applicable.

[29] Most of the SD-KPIs are not applicable to Deutsche Börse AG due to a different business orientation.

[30] Just one reference in a separate CSR report will probably be disclosed in the MC.

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 oekom[31]	Granting of loans	Proportion of project financing, export financing, credits to corporate clients and relevant investment banking activities, which occur on the basis of detailed and sector-specific environmental and social guidelines (throughout the consolidated group)		
SD-KPI 1 UBS SRI	Credit risk (relates to risks throughout the loan book)	Risks arise from a range of areas within the loan book Corporate: investments in high ESG risk projects, areas Consumer: rising consumer debt levels may impact credit quality and default that need to be managed		Anonymous answer 2
SD-KPI 2 Innovest	Incorporation of social risk and opportunity into retail lending considerations	Innovest's retail lending analysis focuses primarily on three key factors which drive outperformance: stakeholder engagement, financial inclusion, predatory lending		(Anonymous answer 2[32])
SD-KPI 1 WestLB	Controversies	Controversies over money laundering and over sub-prime or predatory lending		Anonymous answer 1: General statements regarding anti-money laundering programmes
SD-KPI 3 F&C	Responsible lending principles	Inform bank response to key reputational issues such as: anti-money laundering strategies; financial inclusion; mis-selling		(Anonymous answer 2[32])
SD-KPI 3 Innovest	Incorporating ESG factors into asset valuation models in investment banking and asset management	Anticipate and capitalise on environmental and social strategic profit opportunities, incorporate qualitative ESG value drivers into their Asset Management strategies, effectively foresee potential conflicts of interest and ensure robust governance systems navigate opaque governance systems in emerging markets.		
SD-KPI 2 Pictet	Sustainable asset services	Are there direct efforts, concrete services in the area of sustainable assets? What kind of services? How important are they?		(Anonymous answer 1[30]) (Anonymous answer 2[32])
SD-KPI 3 WestLB	SRI	Data on assets managed according to Socially Responsible Investments (SRI) criteria		(Anonymous answer 1[30])
SD-KPI 2 scoris	Equity investments	Programmes to take into account sustainable impact of products at equity investments; percentage of respective product portfolio		
SD-KPI 2 oekom[31]	Asset Management	Strategy for the integration of ethical, social and environmental criteria into asset management products and services		(Anonymous answer 1[30])

[31] oekom: The SD-KPIs 1 and 2 are not applicable to Deutsche Börse AG due to the different business orientation.

[32] Anonymous answer 2: These topics will probably be disclosed qualitatively in the annual report, but not in its MC part.

2.2 Banks

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 2 UBS SRI	ESG in investments	While metrics to assess ESG impacts are limited to date, effects to address they may help in value generation; also relates to specialist products		
SD-KPI 1 F&C	Corporate Governance	The system by which businesses are directed and controlled: including empowered boards; effective internal controls and risk management; transparency and accountability; and remuneration rewarding creation of long-term shareholder value		(Anonymous answer 1[33]) Deutsche Börse (Anonymous answer 2[32]) Hypo Real Estate
SD-KPI 3 UBS SRI	Governance	Wide ranging criteria that address areas of: - corporate governance, audit systems - gradual risk management - customer/client servicing - code of ethics		(Anonymous answer 1[33]) Deutsche Börse (Anonymous answer 2[32]) Hypo Real Estate
SD-KPI 2 WestLB	Micro-finance	Micro-finance activities		(Anonymous answer 1[30])
SD-KPI 3 scoris	Micro-finance	Programmes to provide financing of respective initiatives		(Anonymous answer 1[30])
SD-KPI 1 Pictet	Business model	What kind of activities, projects, companies are predominantly financed? Which sectors does the business policy primarily focus on?		(Anonymous answer 1[30]) (Anonymous answer 2[32]) Hypo Real Estate

Three similar important SD-KPIs could be defined for the universal banks. SD-KPI 1 demands an integration of SD aspects into credit risk und opportunity checks in commercial banking (e.g. project finance, export finance as well as further credits for corporate clients) and, if applicable, in investment banking. Qualitative aspects outweigh quantitative ones here. Quantitatively, the percentage of credits could be disclosed for which SD aspects had been analysed. SD-KPI 2 has a similar outlook on retail banking services. Unsustainable debt levels, predatory lending and money laundering should be avoided for private clients and access to (micro-)financing should be made easier. Looking ahead as a possible opportunity, subsidised credits for investments in energy efficiency measures could, for example, be part of SD-KPI 2.

SD-KPI 3 clarifies SD aspects in asset management. This could happen through the explicit disclosure of the proportion of SD asset services (e.g. SD mutual funds or private equity for wind farms) in percentage of the total assets under management; or the degree of integration of important SD value drivers (such as the SD-KPIs in this study) into the analysis of all assets under management. In the future SD-KPI 3 could indirectly also be applicable to the MC content of the index business of Deutsche Börse.

In August 2006 Deutsche Börse launched the "DAXglobal Alternative Energy Index" consisting of 15 companies from the sectors natural gas, solar, wind, ethanol and geothermal energy/ hybrid drive/batteries. Additional demand for SD investment services would lead to further SD indices of Deutsche Börse.[34]

SD-KPIs will probably only be disclosed in the MCs of some of the questioned companies. Two banks are likely to report on SD-KPI 1 and another two on SD-KPI 2. No reporting has been planned on SD-KPI 3 yet. One bank found the stated SD-KPIs too open and abstract and could therefore not answer the questionnaire. Two other banks wanted to answer only anonymously.

SD-KPI 1 to 3 are the most important MC contents. In the future, a harmonised und concrete disclosure is required by universal banks.

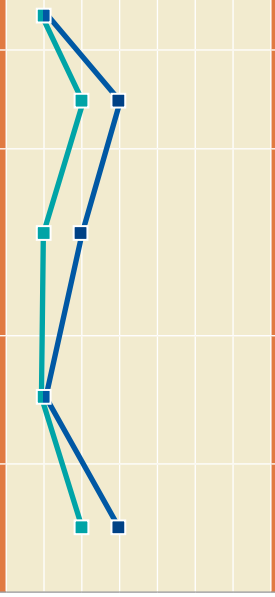
[33] Anonymous answer 1: Voluntary part of the financial report, but not included in the MC.

[34] See Graf, H., head of department indices at Deutschen Börse: Bei Bedarf werden wir reagieren, in: Handelsblatt, 10.11.2006, p. 33.

2.3 Chemistry: Mitigation of greenhouse gas intensity and hazardous substances

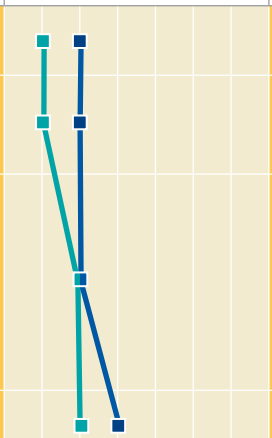
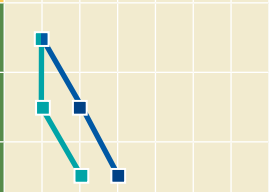
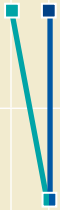
Company	ISIN	Prime sector	Industry group
BASF AG	DE0005151005	Chemistry	Chemicals, Speciality
Bayer AG	DE0005752000	Chemistry	Chemicals, Speciality
Linde AG	DE0006483001	Chemistry	Industrial Gases
Henkel KGaA[35]	DE0006048432	Consumer Products	Personal Products

SD-KPI 1: Energy and greenhouse gas intensity of the production
SD-KPI 2: Prevention/mitigation of hazardous substances
SD-KPI 3: Prevention/mitigation of human and environmental toxicity

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 2 Pictet	Energy consumption	Energy consumption of the production and products (life cycle analysis)		BASF Linde
SD-KPI 2 UBS SRI	Energy consumption	Sector-wide comparable SD-KPIs for absolute and specific energy consumption; information about energy efficiency measures		Bayer Linde Henkel
SD-KPI 1 Innovest	Energy related costs	The International Energy Agency estimates that energy related costs may represent approximately 7–15% of net income for a given chemical company depending on the specific nature of its operations or in some special cases, accounting for up to 85% of the production costs.		
SD-KPI 1 F&C	Atmospheric emissions	Emissions from the combustion of energy sources which arise directly at company's plants Emissions which arise elsewhere from the generation of purchased electricity		Linde
SD-KPI 2 oekom	Greenhouse gas emissions	Development of the specific greenhouse gas emissions (direct and indirect) over several years, in kg CO_2eq per turnover, production volume or added value		BASF Bayer Linde

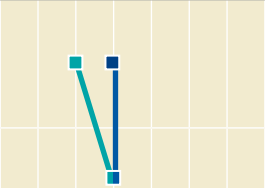
[35] Due to the conditions of the examination Henkel was assigned to the sector grouping chemicals rather than consumer products. The SD-KPIs are only relatively applicable for Henkel. The contents of the 2005 MC were accordingly evaluated, for 2006 the contents of the MC are expected to be the same.

2.3 Chemistry

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 WestLB	Hazardous substances	Targets and programmes to phase out production of hazardous substances		
SD-KPI 3 oekom	Sustainable management of chemicals	Strategy for the identification and reduction of hazardous substances		
SD-KPI 2 F&C	Hazardous Non-Product Output (NPO)	Units: kg per ton production. Local regulations determine which NPO, or waste, are categorised as hazardous (i.e. poisonous to humans and animals or harmful to the environment if not disposed of properly). Data should include all NPO disposed of by all methods – recycling, landfill, incineration (with and without energy recovery), and other methods.		Bayer
SD-KPI 2 scoris	Hazardous waste	Targets and programmes to reduce the hazardous waste production. Output per ton		Bayer Linde
SD-KPI 1 Pictet	Toxicity	Human and environmental toxicity of the production and products		
SD-KPI 2 WestLB	Toxicity of products	Targets and programmes to reduce the environmental toxicity of products (R&D)		
SD-KPI 1 scoris	Toxicity of products	Targets and programmes to reduce the environmental toxicity of products; R&D policies		
SD-KPI 1 oekom	Chemicals safety	Number of produced substances (over one ton of production volume per year) whose environmental and health risks were analysed systematically in relation to all produced substances (over one ton of production volume per year) (throughout the consolidated group)		BASF Henkel
SD-KPI 2 Innovest[36]	% of assets and sales in Europe	A review of potential product risk for each company and an estimation of product groups that are likely to trigger the "authorisation" phase of REACH[37] allow Innovest to identify intermediates used in production and end products that might be phased out in the authorisation stage.		Linde Henkel
SD-KPI 3 F&C	Aquatic Oxygen Demand (AOD)	Units: kg per ton production Aquatic Oxygen Demand (AOD) measures the potential of discharges to water to remove dissolved oxygen. It comprises chemical oxygen demand and ammonia.		
SD-KPI 3 Pictet	Water consumption and load	Consumption of water and load not yet included in "SD-KPI 1 Pictet"		Bayer Linde

[36] Innovest: The SD-KPIs described above are mostly related to chemicals companies and to a lesser extend to Henkel's activities.

[37] REACH = Registration, Evaluation and Authorisation of Chemicals (EU Directive, which might be in force in 2007).

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 3 scoris	Health and safety of employees	Targets and programmes on health and safety (reduction of accidents and fatalities). Certification of management systems (OHSAS 18001[38], BS 8800[39] or others)		BASF Linde Henkel
SD-KPI 3 UBS SRI	Health & safety	Sector-wide comparable SD-KPIs regarding security and health of employees and information about measures in this area		Bayer Linde Henkel
SD-KPI 3 Innovest[36]	R&D expenditures	% of net sales invested in Research and Development		BASF Bayer Linde Henkel
SD-KPI 1 UBS SRI	Production risks and opportunities	Information about high environmental impacts (high energy consumption, toxic emissions of the production and/or use phase) and health impacts		Linde Henkel

The chemistry sector has had to deal with SD aspects for decades. The chemical spill in Seveso with emission of toxic substances happened 30 years ago. The fire at Sandoz effected the river Rhine negatively 20 years ago. Since then, the sector has had to invest billions in environmental and risk management. Even if SD challenges still have to be mastered[40] the reporting of SD-KPIs in MCs has improved.

Climate change has the highest priority for the chemistry sector as well. SD-KPI 1 is the energy consumption of the production resp. its resulting greenhouse gas emissions. Innovest would like to see this SD-KPI reported economically as "energy related costs", which could account for up to 85% of the production costs.

SD-KPI 2 is supposed to show up targets, strategies, measures and quantitative data regarding the prevention resp. mitigation of hazardous substances. Similarly, SD-KPI 3 should be disclosed with regard to human and environmental toxicity. The EU chemicals directive "REACH" which might be enforced in 2007 leads to further information needs of investors and analysts.

SD orientated product opportunities are addressed explicitly only with SD-KPI 1 of UBS SRI. The companies could surely report in more detail on this topic. And well-used opportunities could often be "sold" better to investors and analysts than "simply" reduced risks. BASF, for example, sells insulation materials and additives reducing fuel consumption, which significantly reduce CO_2 emissions during the products' life cycle.[41]

38 OHSAS 18001 = Occupational Health and Safety Assessment Series.

39 BS 8800 = British Standard 8800 is a norm for management systems regarding occupational health and safety.

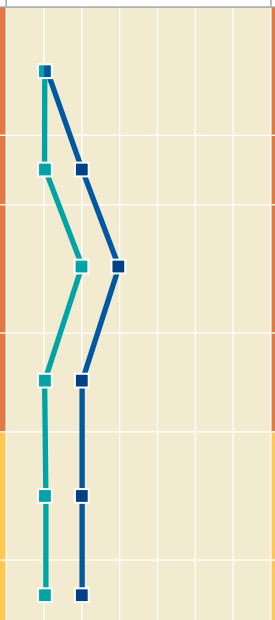
40 See Hofmann, S., Stock, O.: Wundersame Wandlung, in: Handelsblatt, 01.11.2006, p. 2.

41 See Hesse, A., Germanwatch (ed.), Climate and corporations – Right answers or wrong questions? – Carbon Disclosure Project data – Validation, analysis, improvements, Bonn, Berlin, February 2006, p. 11.

2.4 Industrial goods: Energy and greenhouse gas intensity of production and products

Company	ISIN	Prime sector	Industry group
MAN AG	DE0005937007	Industrial goods	Industrial, Diversified
Siemens AG	DE0007236101	Industrial goods	Industrial, Diversified
ThyssenKrupp AG	DE0007500001	Industrial goods	Industrial, Diversified

SD-KPI 1: Energy and greenhouse gas intensity of the production
SD-KPI 2: Energy efficiency of the products
SD-KPI 3: Labour conditions

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 F&C	Atmospheric emissions	Emissions from the combustion of energy sources which arise directly at company's plants Emissions which arise elsewhere from the generation of purchased electricity		MAN (Siemens[42]) Thyssen-Krupp[43]
SD-KPI 2 Innovest[44]	Costs of energy use in production	Cost of energy used in the production process in % of net sales		
SD-KPI 1 oekom	Greenhouse gas emissions	Development of the specific greenhouse gas emissions (direct and indirect) over several years, in kg CO_2eq per turnover or added value (throughout the consolidated group)		MAN
SD-KPI 1 Pictet	Energy consumption & efficiency	For energy consuming products (engines etc.): of the products; for other products: of the production		
SD-KPI 2 oekom[45]	Energy efficiency of products	Development of the specific energy consumption per product unit, according to the respective product group (e.g. per operating hour, driving performance) (throughout the consolidated group)		(Siemens[42])
SD-KPI 2 WestLB	Energy consumption of products	Targets and programmes to reduce the energy consumption of products		MAN for trucks

[42] Siemens only touches upon "non-financial key performance indicators" of the three pillars "People Excellence" and "Corporate Responsibility" as a driving force for financial targets in its MC 2006. Apart from that one can only find a reference to the voluntary part of the annual report, where Siemens reports about examples for energy-saving products and a 20% reduction target for energy efficiency of the production until 2010. See Siemens: Geschäftsbericht 2006, Munich 2006, p. 30, pp. 109-112 and p. 141.

[43] See ThyssenKrupp: Geschäftsbericht 2005/2006, Düsseldorf, 1.12.2006, pp. 52-56 and pp. 77-81.

[44] MAN: Not possible to investigate throughout the consolidated group and not summable without consolidation.

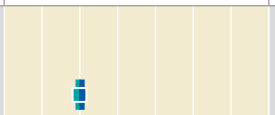
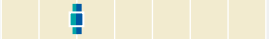
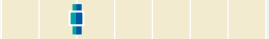
[45] MAN: Not yet available for the productivity of the consolidated group.

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 Innovest	Percentage of manufacturing sites in emerging markets	Many companies in the sector are shifting manufacturing and outsourcing to Southeast Asia and other markets. Comparative analysis will focus on the company's ability to minimise the effects of layoffs, planning for cultural compatibility and human capital management issues.		MAN Thyssen-Krupp[43]
SD-KPI 2 scoris	Basic labour rights	Formal policy statement on basic labour rights for employees and contractors. Monitoring systems to ensure compliance etc.		MAN
SD-KPI 3 scoris	Health and safety of employees	Targets and programmes on health and safety (reduction of accidents and fatalities). Certification of management systems (OHSAS 18001[38], BS 8800[39] or others)		MAN Thyssen-Krupp[43]
SD-KPI 2 UBS SRI	Workforce	Information about employee motivation and labour conditions (training and qualification, health & safety: comparable SD-KPIs, transparency for restructuring measures and layoffs)		MAN (Siemens[42]) Thyssen-Krupp[43]
SD-KPI 1 WestLB	Environmental products	Products beneficial to the environment		(MAN) (Siemens[42]) Thyssen-Krupp[43]
SD-KPI 1 UBS SRI	Impacts of products	Information about products, which offer solutions for sustainability challenges		(MAN[46]) (Siemens[42]) Thyssen-Krupp[43]
SD-KPI 3 oekom	Product design	Guidelines for product design with the target to maximise service life and reuse (compatible upgrades, replacement parts, re-manufacturing) and optimised recyclability (usage of as few components as possible, modular construction, marking of materials/components)		
SD-KPI 1 scoris[47]	Eco-design	Formal policy on eco-design (including energy efficiency, product recyclability, waste etc.)		

46 This has already been reported, however in MAN's sustainability report.

47 MAN: Eco-design guidelines do exist, but are not reported.

2.4 Industrial goods

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 3 Innovest	Percentage of suppliers ISO14001 certified	As production shifts to low cost regions, conglomerates exhibit a comprehensive approach to risk management by integrating environmental and social criteria into the supply chain audit process. Requiring suppliers to achieve ISO 14001[48] certification is a standard application.		MAN (not reported comprehensively)
SD-KPI 3 F&C	Water consumption	Worldwide consumption of water (million cubic metres)		MAN
SD-KPI 2 Pictet	Analysis of utilization	On which sectors, companies, operations do the business model and the products focus (e.g. production of renewable energy systems vs. military components/dual use)?		(Siemens[42])
SD-KPI 2 F&C	Environmental capital spending	Capital spending and operating expenses that are clearly associated with an environmentally relevant field (i.e. waste management, air pollution control)		MAN: "environmental investment" Thyssen-Krupp[43]

Like in the chemistry sector, SD-KPI 1 is the energy and greenhouse gas intensity of the production for the manufacturers of industrial goods. This could be measured quantitatively and disclosed in MCs in CO_2eq per turnover or added value throughout a consolidated group, as MAN already does. SD-KPI 2 is the energy efficiency of products during the use phase, e.g. the energy consumption per operating hour. Reduction targets and strategies should also be set and disclosed quantitatively. Furthermore investors and analysts focus on product solutions for further SD challenges as well as "eco-design from cradle to cradle" (extension of the use period, reuse, recyclability).

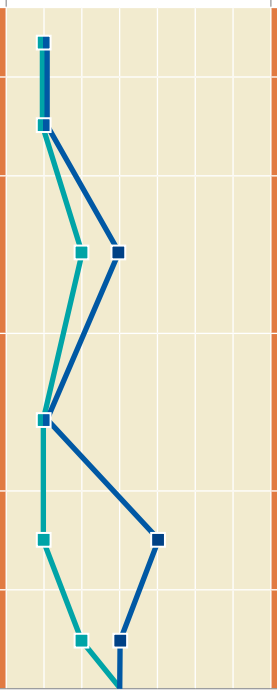
SD-KPI 3 demands reporting about labour conditions in the broader sense. Against the background of globalisation and the increasing production in emerging and developing countries, compliance to basic labour standards for employees and suppliers is an important value driver for employee motivation and the product quality. Prospectively, MAN will report comprehensively about this SD-KPI. Siemens and ThyssenKrupp could not answer during the period of examination. Therefore, the contents of their annual reports of December 2006 including the MCs were evaluated and considered in the table above.

[48] ISO 14001 = Environmental management norm of the International Organisation for Standardisation.

2.5 Consumer goods/retail: Supply chain and management of product opportunities

Company	ISIN	Prime sector	Industry group
adidas AG	DE0005003404	Consumer goods	Clothing & Footwear
Metro AG[49]	DE0007257503	Retail	Retail, Multiline

SD-KPI 1: Environmental and social standards of the supply chain
SD-KPI 2: Proportion of products with SD differentiation
SD-KPI 3: Hazardous substances/environmental and human toxicity

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 2 UBS SRI	Supply chain	Statements about suppliers (evaluation, criteria for the selection, monitoring)		adidas Metro
SD-KPI 2 Pictet	Supply chain	Quality, but primarily ethical acceptance of the conditions with the suppliers; animal protection standards for food/animal products		adidas Metro
SD-KPI 1 oekom	Suppliers	Proportion of suppliers comprehensive social and environmental standards apply to – covered by regular and comprehensive monitoring. Disclosure as a percentage of all suppliers (throughout the consolidated group)		
SD-KPI 1 Innovest[50]	Responsiveness to Supply Chain Disclosure and Management	Through increased monitoring and screening of suppliers, companies reduce operational risk and demonstrate adaptability and responsiveness. The use of contractors and leased facilities diminish direct environmental risks and liabilities.		adidas Metro
SD-KPI 2 F&C	Supply chain environmental impacts	Strong environmental management systems covering reduction of supply chain/manufacturing greenhouse gas emissions, waste, water consumption		Metro
SD-KPI 1 scoris	Basic labour rights for contractors	Formal policy statement on basic labour rights for contractors. Monitoring systems to ensure compliance etc.		adidas

49 In its MC Metro refers to a separate sustainability report.

50 Innovest: The 3 SD-KPIs provided are relevant for adidas.

2.5 Consumer goods/Retail

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 3 F&C	Supply chain labour standards	Vendor code of conduct committing to ILO[51] Core Conventions, robust monitoring of highest risk parts of supply chain, investment in supplier training/ awareness raising and transparent reporting of the status of the supply chain. Good relations with campaign groups/NGOs		(adidas[52])
SD-KPI 1 F&C	Product	Managing product risks: Strong product safety management systems to meet regulatory requirements and anticipate consumer concerns about emerging issues such as toxic chemicals, PVC etc. Spotting product opportunities: Growing sales through product development that plays on the growing consumer trend of "ethical fashion" e.g. fair trade/organic cotton, recycled clothes etc.		(adidas[52])
SD-KPI 1 WestLB	Fair-trade products	Percentage of fair-trade products		
SD-KPI 2 WestLB	Eco-labelled/ organic products	Percentage of sales from eco-labelled/ organic products		
SD-KPI 1 UBS SRI	Array of products	Proportion of products with special attributes (e.g. eco-label, fair trade)		
SD-KPI 2 scoris	Sustainable products	Product line of environmental-green products or products with social added value (FSC[53] label, organic food, fair trade etc.)		(adidas[52])
SD-KPI 1 Pictet	Energy consumption	Analysis of manufacturing, transport and sales of manufactured as well as retailed products		(adidas[52])
SD-KPI 3 Pictet	Toxicity	Human and environmental toxicity of products; compatibility, degradability, waste management		(adidas[52])
SD-KPI 2 oekom	Controversial substances in textiles	Measures to reduce controversial substances in textiles, e.g. carcinogenic colourants, phenols, phthalate, chrome VI (throughout the consolidated group)		(adidas[52])
SD-KPI 3 Innovest[50]	Use of VOCs[54]	To reduce operational risk, companies are working to phase out various chemicals (i.e. VOCs) that are potentially harmful to human health from their product line		(adidas[52])
SD-KPI 3 oekom[55]	GMOs[56]	Strategy for the use of GMOs in the processing of food, incl. monitoring systems and consumer information		
SD-KPI 3 scoris	GMOs[56] labelling practice	Transparency on development, production or marketing of genetically modified organisms; customer information		
SD-KPI 3 UBS SRI	Fluctuation of employees	Information about employee motivation and labour conditions (education, health & safety: comparable SD-KPIs, transparency about restructuring measures and layoffs)		adidas Metro

[51] ILO = International Labour Office.

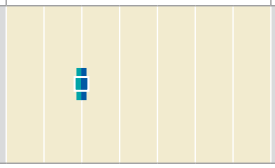
[52] In its MC adidas refers to the separate sustainability report. The contents in brackets are only disclosed there.

[53] FSC = Forest Stewardship Council.

[54] VOCs = Volatile Organic Compounds.

[55] oekom: SD-KPI 3 refers to companies from the food sector.

[56] GMOs = Genetically Modified Organisms.

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 2 Innovest[50]	Stakeholder Relations	Companies that develop strategic ties with industry groups (e.g. Fair Labor Association), NGOs, governments, and local organisations gain a competitive advantage relative to peers as they share best practices and take advantage of external expertise.		(adidas[52]) Metro

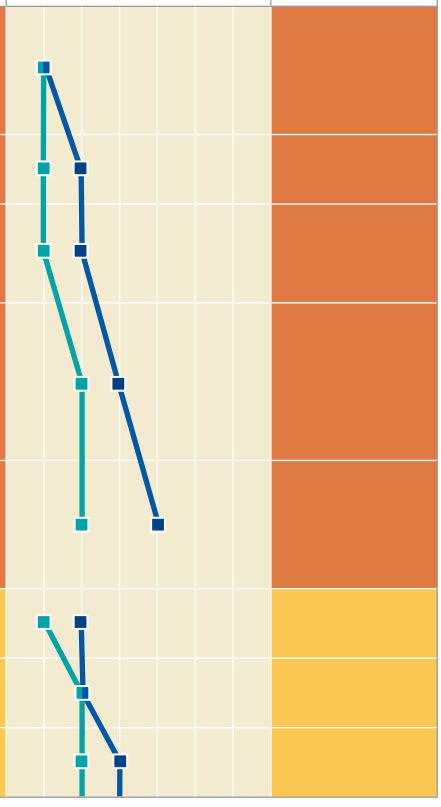
The most important SD-KPI in the sector grouping consumer goods/retail is the management of environmental and social standards in the supply chain, especially in emerging and developing countries. This supply chain management was implemented as recently as the turn of the millennium. Today six of the seven investors and analysts demand such a management – a direct and important reaction to the globalisation of the world economy. Metro and adidas both disclose such management information in their MCs. Metro still focuses on environmental aspects, while adidas also reports on social standards.

SD-KPI 2 aims at the use of business opportunities through SD differentiation. The proportion of turnover and profit from such products, e.g. fair trade, organic cultivation or eco-labelled, could be increased in annual comparison and disclosed separately. The examined companies are likely not to report on this SD-KPI in their next MCs. SD-KPI 3 is similar to SD-KPI 2 and 3 of the chemistry sector and aims at the prevention resp. mitigation of hazardous substances and the human and environmental toxicity of the products. Only adidas plans to disclose information here, yet only in its sustainability report.

2.6 Pharmaceuticals: Access to medicines for the majority of humankind

Company	ISIN	Prime sector	Industry group
Altana AG	DE0007600801	Pharmaceuticals	Pharmaceuticals
Fresenius Medical Care AG & Co. KGaA	DE0005785802	Pharmaceuticals	Health Care

SD-KPI 1: Strategies for access to medicines for the poor
SD-KPI 2: R&D ethics
SD-KPI 3: Marketing ethics

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 2 Innovest	Investment in access to medicines	Access to medicines involves intellectual property rights protection, R&D in medications and vaccines for neglected diseases, differential pricing and drug donations.		
SD-KPI 2 F&C	Access to medicines	Reconciling public health needs with the need to cover R&D budgets		
SD-KPI 2 Pictet	Business model, range of therapies and products	Accessibility of the therapy; orientation on the high number of affected humans (malaria, typhus, AIDS etc.); penalty for designer or lifestyle medicine		
SD-KPI 3 oekom	Access to medicines	Strategy regarding the access to medicines for the poorer parts of the population (pricing and patent policy) and development of medicines for rare diseases resp. ones that occur mainly in developing countries (orphan drugs)		
SD-KPI 1 UBS SRI	Access to drugs	Strategies which ensure fair access to medicines for socially underprivileged (uninsured, developing countries etc.): adapted prices, healthcare infrastructur, R&D		
SD-KPI 1 WestLB	Research activities	Controversies regarding ethical issues over research activities		
SD-KPI 3 F&C	Drug safety & clinical trials	Ethical conduct of trials, disclosure of results and appropriate testing regimes		
SD-KPI 1 scoris	Policy on genetic engineering	Policy statement on ethically sensitive issues like genetic engineering or stem cell research		

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 2 scoris	Animal testing policy	Policy statement on animal testing (reduce-refine-replace policies). Also relevant for outsourced testing/ third parties		
SD-KPI 3 UBS SRI	R&D ethics	Clear guidelines about the dos and don'ts in research & development (R&D), e.g. with respect to genetic engineering, ethical rules for clinical testing		
SD-KPI 1 F&C	Sales & marketing	Use of appropriate sales techniques		
SD-KPI 2 UBS SRI	Marketing ethics	Clear guidelines to ensure ethical marketing; and information about the track record in this area		
SD-KPI 3 scoris	Marketing ethics	Adherence to WHO Ethical Criteria for Medicinal Drug Promotion Drug safety monitoring for any product introduced in non-OECD countries		
SD-KPI 1 Pictet	Energy consumption	Production (also outsourced basis chemicals at suppliers according to life-cycle-analysis)		
SD-KPI 2 oekom	Energy consumption	Development of the specific energy consumption over several years per turnover, production volume or added value (throughout the consolidated group)		
SD-KPI 1 oekom	Greenhouse gas emissions	Development of the specific greenhouse gas emissions (direct and indirect) over several years, in kg CO_2eq per turnover, production volume or added value (throughout the consolidated group)		
SD-KPI 1 Innovest	Product recalls	Following the recall of the drug Vioxx in 2004, the pharmaceuticals sector has come under increasing scrutiny relating to product safety. Due to safety concerns, several companies had to withdraw their products from the market leading to a drop in share price and several lawsuits.		
SD-KPI 3 Pictet	Environmental and human toxicity	Own production (also outsourced) & final products		
SD-KPI 3 Innovest	Environmental liabilities	The sector produces large volumes of hazardous chemicals and pollutants through its manufacturing process potentially leading to clean-up costs.		

The producers of pharmaceuticals are under increasing pressure to make medicines, e.g. against AIDS or malaria, accessable for the poorer parts of humankind. Therefore SD-KPI 1 demands companies to report about their respective targets, strategies and measures. These could be arranged passively and risk-reducing or opportunity-orientated with "bottom of the pyramid" strategies. Indeed, one could achieve only small margins with poorer humans especially in emerging and developing countries. Yet the masses of the needy could lead to high profits in the mid- to long-term with appropriate patent and pricing strategies.

Closely linked with SD-KPI 1 is SD-KPI 3 "marketing ethics". Here qualitative reporting about appropriate strategies for advertising, sales und quality assurance is especially expected in emerging and developing countries. SD-KPI 2 also demands a qualitative disclosure regarding research and development ethics. Precise rules should be kept for clinical human and animal testing as well as the use of stem cells and genetic engineering.

The MC reporting about these SD-KPIs could not been analysed for the two DAX-30-companies. During the examination period, Altana sold its pharmaceuticals business to Nycomed. The transaction remained to be approved. Meanwhile Altana could not comment as a pharmaceuticals company. In the future it will concentrate on special chemicals. Even if Fresenius Medical Care belongs to the prime branch "pharmaceuticals", the business model is based on health care services, which underlie criteria different from those in medicines.

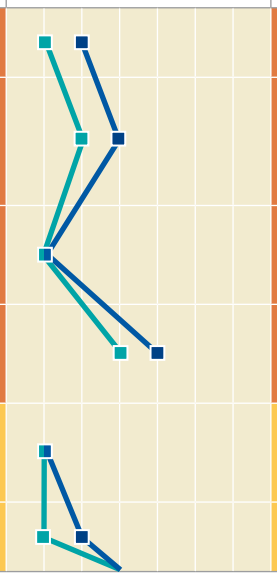
The annual report of 2005 provides other interesting company-specific SD-KPIs: For dialysis clinics therapy quality values were defined. E.g. 80% of the patients should be brought to a haemoglobin value of at least 11 gram/decilitre blood which is slightly lower than that of healthy humans. Also, the number of cost-intensive days in the hospital should be decreased. The development of these SD-KPIs was disclosed in a table.[57]

[57] See Fresenius Medical Care: Geschäftsbericht 2005, Bad Homburg 2006, p. 98.

2.7 Information and communication technology: Energy efficiency and eco-design

Company	ISIN	Prime sector	Industry group
SAP AG	DE0007164600	Software	Software
Infineon Technologies AG[58]	DE0006231004	Technology	Semiconductors
Deutsche Telekom AG	DE0005557508	Telekommunication	Fixed-Line Telecommunication

SD-KPI 1: Energy and greenhouse gas efficiency of production and products
SD-KPI 2: Eco-design
SD-KPI 3: Labour conditions

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 WestLB	Energy consumption of products	Targets and programmes to reduce the energy consumption of products		
SD-KPI 2 oekom[59]	Energy efficiency of products	Development of the specific energy consumption per product unit, according to the respective product group (e.g. per operating hour) (throughout the consolidated group)		
SD-KPI 2 Pictet[60]	Energy consumption	Energy consumption during the production, but – where applicable – also during the use phase (processors)		Infineon
SD-KPI 1 oekom	Energy consumption	Development of the specific energy consumption over several years per turnover or added value (throughout the consolidated group)		Infineon Telekom
SD-KPI 2 F&C[61]	Regulatory compliance/ technology	Assessing technology impacts and managing stakeholder concerns about health; WEEE and RoHS[62] Directives compliance		Infineon
SD-KPI 1 Innovest	Investment in R&D	Amount invested in Research & Development (R&D) in % of net sales		SAP

58 Infineon: For the predefinition of information relevance (e.g. energy: manufacturing phase – use phase) the distinction between end products and components has to be considered and determined (e.g. semiconductors and their installation in refrigerators or motors which reduce the energy consumption). This information is not only disclosed in the annual report but also in further media like 20F report, internet, official statements on specific topics, consolidated publications of associations.

59 oekom: SD-KPI 2 applies mainly to Infineon.

60 Pictet: SD-KPI 2 applies only to telecommunication companies and manufacturers of semiconductors.

61 F&C: These companies form part of very different subsectors and hence different SD factors apply.

62 WEEE = Waste Electrical and Electronic Equipment; RoHS = Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment.

2.7 Information and communication technology

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 UBS SRI	Environmental product design	Environmental considerations enter product design		Infineon SAP
SD-KPI 3 Innovest	Health impacts	Infineon: Rate of occupational accidents Deutsche Telekom: financial penalties paid consequently to claims on health risks of electromagnetic frequency (EMF) radiation SAP: average number of days of absence per year and per employee		Infineon SAP
SD-KPI 3 F&C[61]	Supply chain management & disposal	Labour and environmental standards; recycling		Infineon SAP
SD-KPI 2 UBS SRI	Labour relations	Measures to stabilise workforce/reduce turnover		SAP Telekom
SD-KPI 3 Pictet[63]	Water consumption	Specific water consumption during the production phase		
SD-KPI 2 Innovest[64]	Use of water	Volume of water used during the production process. The semiconductor industry's growing use of large quantities of highly purified water in the chip manufacturing process is costly and has major environmental implications. Companies should address the issue of water shortage, especially in China.		
SD-KPI 1 Pictet[65]	Purpose/customer structure/type of distribution	Which sectors, functions, companies is the software committed to? How is the software spread, installed, supported in the market?		SAP
SD-KPI 1 F&C[61]	Corporate Governance	Effective oversight and accountability structures; remuneration		SAP
SD-KPI 2 scoris	Marketing policy	Marketing policy with respect to transparency on charges and tariffs. (Non-)Existence of controversies on marketing and advertising practices, controversies on anti-competitive practices		
SD-KPI 3 scoris	Economic opportunity	Public statement and programmes on access to products and services/economic opportunity. A risk of improved telecommunication services could be the so-called "digital divide". This could affect different groups (within one society) in one country and people living in developing countries.		Telekom
SD-KPI 1 scoris	Global e-Sustainability Initiative	Membership in the global e-Sustainability Initiative (GeSi) – an initiative of ICT companies to improve the global environment – or similar efforts		

63 Pictet: SD-KPI 3 only applies to manufacturers of semiconductors.

64 Innovest: The SD-KPI 2 is relevant for the semiconductor companies.

65 Pictet: SD-KPI 1 only applies to software companies.

The sector grouping considered here is the most heterogeneous one in this study, which partly led to problems of demarcation with investors and analysts. Or SD-KPIs in question did partly not apply to the three examined companies resp. their products. However, the energy efficiency of the production and the products – as for the majority of others sectors – is the most important SD-KPI, too. SAP SD-KPI 1 is not worth reporting, because not the software products consume the energy but the diverse hardware solutions the software is used with. Deutsche Telekom missed the link to CO_2 emissions for SD-KPI 1. A parallel disclosure of these two values will indicate, if companies advocate a decoupling of the energy consumption and CO_2 emissions, an important suggestion. SD-KPIs in other sectors have already corresponded to.

SD-KPI 2 describes eco-design activities in research & development. Infineon and SAP will report on this issue. SAP, for example, offers software modules in the field of "waste management & recycling" and "environment, health & safety" – possibly also for SD-KPIs soon? SD-KPI 3 regarding "labour conditions" has heterogeneous contents such as occupational incidents, number of days of absence, general labour and environmental standards in the supply chain or measures to decrease employee fluctuation. Each of the three companies reports about this SD-KPI, SAP even to all aspects, because employee satisfaction is extremely important to them.

In its upcoming MC Infineon is likely not to report on the SD-KPI "water consumption" named by Pictet and Innovest especially for the manufacturers of semiconductors.

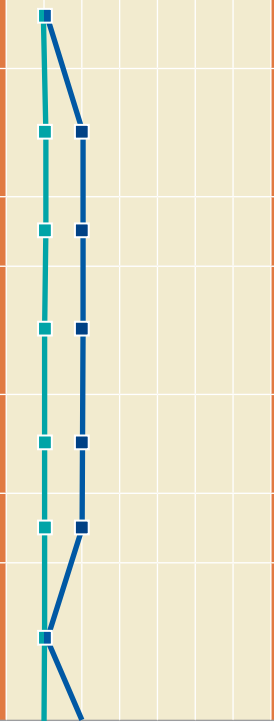
One SD-KPI was named only by scoris with Deutsche Telekom only disclosing such information: The closure of the "digital divide". In the future, this deserves more attention for SD especially in emerging and developing countries as well as for a good business performance within the scope of "bottom of the pyramid" strategies (see 2.6).

2.8 Transport & logistics: Energy and greenhouse gas efficiency, esp. fleet consumption

Company	ISIN	Prime sector	Industry group
Deutsche Lufthansa AG	DE0008232125	Transport & logistics	Airlines
Deutsche Post AG	DE0005552004	Transport & logistics	Logistics
TUI AG	DE000TUAG000	Transport & logistics	Transportation services

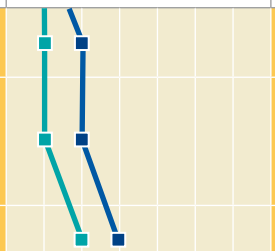
SD-KPI 1: Energy and greenhouse gas efficiency of transportation services
SD-KPI 2: Fleet consumption

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 F&C	Addressing climate change	Research and implementation of technologies helping companies to reduce emissions and contribution to climate change		Lufthansa TUI
SD-KPI 1 Innovest	Energy efficiency of fleet (ground and air)	Fuel efficiency average for the air fleet and ground fleet. In air transport ideal is less than 3 litres/passenger/100km. Fuel efficiency also determines amount of CO_2 and NO_x emissions – the lower the better		TUI
SD-KPI 1 scoris	Energy efficiency	Energy efficiency of providing the service		
SD-KPI 2 oekom	CO_2 emissions	Development of the specific CO_2 emissions of freight and passenger transport over several years, in CO_2 emissions per ton- resp. passenger-kilometre (throughout the consolidated group)		TUI
SD-KPI 2 scoris	Air emissions	Targets and programmes to reduce the air emissions (GHG[66], NO_x, SO_x) of transport means. Position statement on transport and climate change		Lufthansa
SD-KPI 2 WestLB	Emissions	Targets and programmes to reduce emissions of transport means		
SD-KPI 1 Pictet	Fleet consumption and average flight distance	Average fuel consumption of the fleet (when this is not available: average age of air fleet as a proxy of fuel consumption) as well as average flight distance, in order to capture 'absolute' impact and not just efficiency		Lufthansa[67]



66 GHG = Greenhouse Gas.

67 Lufthansa: These SD-KPIs could possibly be disclosed in its MC of 2006 or later. But all the information has already been provided in the sustainability report, a reference has been given to in its MC.

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 UBS SRI	Aviation	fleet age, load factor, specific fuel consumption (l/100 pkm)		Lufthansa[67] TUI
SD-KPI 2 Innovest	Average fleet age	New technology is important. The newer the fleet, the more fuel efficient it is. The top companies have strong R&D capacity and work with manufacturers (even in developing new fuels).		Lufthansa TUI
SD-KPI 1 oekom	Mean age of the fleet	Development of the mean age of the deployed fleet over several years (throughout the consolidated group)		Lufthansa[67] TUI
SD-KPI 3 F&C	Eco-efficiency	Development of technologies to help reduce pollution		Lufthansa[67]
SD-KPI 1 WestLB	Eco-efficiency	Eco-efficiency of providing the service		
SD-KPI 2 F&C	Safety	Improving systems to ensure staff and customer safety		Lufthansa[67]
SD-KPI 3 oekom	Security of transports	Strategies for the security of transports (e.g. fleet maintenance), programmes to combat fatigue accidents		Lufthansa[67]
SD-KPI 2 Pictet[68]	Means of transport	Which means of transport are used for logistic services? Air plane, train, car/truck, other (passenger-, ton-kilometres per vehicle)		Lufthansa[67] TUI
SD-KPI 2 UBS SRI	Logistics	Modal split (split of carriers) CO_2/tkm		
SD-KPI 3 Pictet[69]	Business model	Where and what kind of transportation services are offered; positioning in the market for travel organisations (short/long haul destinations etc.)		Lufthansa[67] TUI
SD-KPI 3 Innovest	Management	Good management needed to keep identifiable and measurable performance standards - good reporting. Good mangement also needed to maintain good labour relations. These industries require motivated and dedicated workforce.[70]		Lufthansa[67]
SD-KPI 3 scoris	Sustainable Mobility Project of WBCSD	Membership of Sustainable Mobility Project of WBCSD or similar initiatives		Lufthansa[67]
SD-KPI 3 UBS SRI	Hotel and leisure	CO_2/night, l Water/night; kg waste/night; number (%) of certified hotels/resorts		

68 Pictet: SD-KPI 2 only applies to logistics companies.

69 Pictet: SD-KPI 3 only applies to "transportation services".

70 Innovest: Industrial relations can also affect operations, due to actions against specific companies or disputes across the sector, which can have significant impacts on the company's performance. Sector leaders have formalised policies recognizing unions, and employee engagement and satisfaction processes.

The investors and analysts rank the mitigation of contributions to climate change as the top priority also for the transport and logistics sector. SD-KPI 1 is the energy and greenhouse gas efficiency of the transportation services. Apart from the information about energy consumption resp. greenhouse gas emissions per ton- and/or passenger-kilometre, the reduction targets and strategies should be disclosed. SD-KPI 2 is closely related to SD-KPI 1 and - like in the automobile sector - especially asks for the fleet consumption of the deployed means of transport, in particular the consumption of air planes, but also of the ground fleet (car, truck, train). Since this information was partly not disclosed by the companies in the past, investors and analysts evaluated the average age of the fleet as a correlating value. The lower the fleet age, the better for the relative efficiency. Absolute energy and greenhouse gas reductions, however, are also asked for because these are at least as important for SD implications as relative improvements.

Lufthansa and TUI integrate several of the demanded SD-KPIs in MC reporting (see table). Deutsche Post considered them as not really suitable. According to the risk management system, none of the questioned SD-KPIs exceeded the economic barrier of materiality of the HGB rules of law. However, SD aspects were taken seriously and disclosed in the separate sustainability report. In the foreseeable future, only a reference to this report will be given in the MC, apart from a very brief description of SD highlights of the business year.

The non-disclosure of SD-KPI 1 in the MC is amazing, because Deutsche Post reported risk-orientation on several pages of its MC due to recently increased fuel prices and costs, which were hedged with derivatives or passed on to clients through surcharges.[71] Another option of risk protection are energy efficiency measures. Yet these were not named in this MC context. In the future it will also be of interest for investors and analysts how the SD differentiation through the first low-carbon or carbon-neutral packet services for private and commercial clients "GoGreen" will impact on a business' position and development.[72]

[71] See Deutsche Post: Geschäftsbericht 2005, Bonn 2006, p. 69, p. 102 and p. 133.

[72] See http://www.dpwn.de/dpwn?tab=1&skin=hi&check=yes&lang=de_EN&xmlFile=2006949 as of 19 January 2007.

2.9 Insurance: SD integration in asset management and insurance premiums

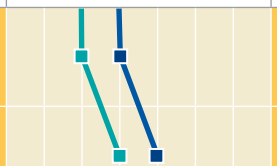
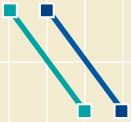
Company	ISIN	Prime sector	Industry group
Allianz SE	DE0008404005	Insurance	Insurance
Münchener Rück AG[73]	DE0008430026	Insurance	Re-Insurance

SD-KPI 1: Integration of SD aspects in asset management
SD-KPI 2: Ecological premium incentives and risk checks

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 F&C	Investment in climate change solutions	R&D into technologies contributing to greenhouse gas emission mitigation and investment in renewable energy companies		Allianz
SD-KPI 2 F&C	ESG impact of investment portfolio	Data on indirect environmental and social performance of investment portfolio, e.g. number of companies with human rights policies, combined CO_2 emissions of investment portfolio		
SD-KPI 2 Pictet	Asset Management	Consideration of sustainable aspects for own financial investments (financing of technical innovations, prevention of future environmental problems such as climate change etc.)		
SD-KPI 3 oekom	Asset Management	Strategy for the integration of ethical, social and ecological criteria in asset management products and services		
SD-KPI 3 Innovest	Percentage of assets managed under SRI	How many percent of assets are managed under socially responsible investment?		Allianz
SD-KPI 1 oekom	Investments	Strategy for the integration of ethical, social and ecological criteria for own financial investments (shares, bonds, real estate, private equity)		
SD-KPI 1 WestLB	Environmental incentives	Percentage of premium volumes or number of policies with environmental incentives within the tariffs		Allianz
SD-KPI 1 scoris	Environmental impact of products	Environmental impact of products. Inclusion of environmental criteria in product and tariff development, risk assessments etc.		

[73] Munich Re could not answer during the examination period.

2.9 Insurance

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 Innovest	Resources dedicated to research on emerging risks	How much is dedicated to research on emerging risks		
SD-KPI 2 oekom	Property insurance products	Strategy for the integration of ecological criteria in underwriting, calculation of premiums and assessment of damage claims		
SD-KPI 3 F&C	Customer services	Commitment to fair treatment of customers and fair pricing supported by data on resolved claims over a specified time frame and customer satisfaction levels		
SD-KPI 2 Innovest	Number of customer complaints during the year	How many complaints does the company receive each year?		
SD-KPI 2 scoris	Business ethics	Adequate policies against bribery and corruption and money laundering		Allianz
SD-KPI 1 Pictet	Business model/ model of insurance	Analogous to banks: Analysis of the sustainability of the business model; what kind of activities, companies etc. are insured? Are innovative services provided?		

According to the number of statements by investors and analysts, SD-KPI 1 for the insurance sector is the integration of SD aspects into asset management. The financial investments of one's own and the clients' assets with SD differentiated asset management services were summarised. The progress of integration should be disclosed separately for the asset classes shares, bonds, real estate and private equity (e.g. renewable energy projects or financing of SD innovations).

SD-KPI 2 is of similar importance. It looks at implications of incentives for ecological orientated insurance premiums and the integration of ecological aspects in risk checks. So far investors and analysts have not demanded information on social aspects resp. aspects in developing countries, e.g. micro-insurance within the scope of "bottom of the pyramid" strategies (see 2.6). However, Munich Re already reported about this topic in its MC of 2005.[74]

Allianz plans to report on the most important SD-KPIs (see table). Munich Re disclosed in its annual report of 2005 that about 2% of its own financial investments followed SD principles. The corresponding target to SD-KPI 1, that 80% of the share- and bond-portfolio should consist of companies which are components of well-known SD indices, was already surpassed. For government bonds even 95% were reached. Regarding to SD-KPI 2 one could find several statements about the immense natural catastrophes in 2005 (e.g. hurricane "Katrina"). The premiums increased for such insurances. However, Munich Re did not explicitly speak about ecological premium incentives.[75]

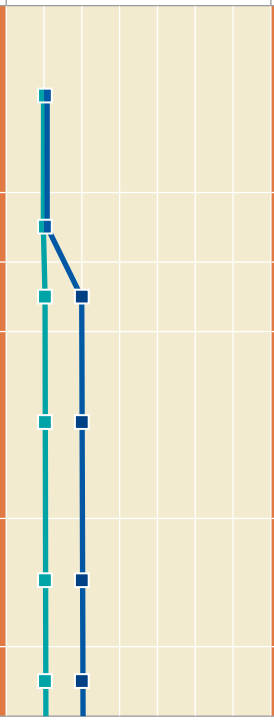
[74] See Munich Re: Geschäftsbericht 2005, Munich 2006, p. 107.

[75] See Munich Re: Geschäftsbericht 2005, Munich 2006, p. 33, p. 80 and p. 93.

2.10 Utilities: Completely under the impact of climate change

Company	ISIN	Prime sector	Industry group
E.ON AG	DE0007614406	Utilities	Multi-Utilities
RWE AG	DE0007037129	Utilities	Multi-Utilities

SD-KPI 1: Greenhouse gas intensity of energy production
SD-KPI 2: Increase of renewable energy proportion
SD-KPI 3: Transparency in energy splitting

	Abbreviations	Definitions	Importance for business development, position and expected development from investors' and analysts' point of view 1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 1 F&C	Atmospheric emissions	Carbon dioxide (CO_2), sulphur dioxide (SO_2) and oxides of nitrogen (NO_x) emissions per GWh of electricity generated Carbon dioxide (CO_2), sulphur dioxide (SO_2) and oxides of nitrogen (NO_x) emissions per GWh of electricity supplied		(E.ON[76]) (RWE[77])
SD-KPI 2 Pictet	CO_2 emissions	CO_2 emissions per produced thermal or electronic energy unit		(E.ON[76]) (RWE[77])
SD-KPI 2 UBS SRI	CO_2 intensity	CO_2 intensity (CO_2/kWh) of electricity generation		(E.ON[76]) (RWE[77])
SD-KPI 1 Innovest	Total CO_2 emissions	The emissions data should be broken down by country/jurisdiction for analysts to be able to assess exact company exposure to different regulatory regimes such as the EU ETS[78]. The preferred methodology for reporting is that known as the Greenhouse Gas Protocol, developed by the WBCSD and the WRI.		(E.ON[76]) (RWE[77])
SD-KPI 1 oekom	Greenhouse gas emissions	Development of the specific greenhouse gas emissions (direct and indirect) over several years, in kg CO_2eq per turnover or added value (throughout the consolidated group)		(E.ON[76])
SD-KPI 1 scoris	Air emissions	Targets and programmes to reduce air emissions (CO_2, SO_X, NO_X, dust, VOCs[54])		(E.ON[76]) (RWE[77])

76 E.ON reports regularly about all stated SD-KPIs in a CSR report resp. in the internet. Some SD-KPIs are also disclosed in the voluntary part of the annual report. A regular consideration with the stated SD-KPIs in the MC is not even planed for the future, only case-by-case single SD-KPIs will supplement risk reporting. However, the MC refers to the CSR report.

77 During the examination period RWE could not differentiate between the future contents of MCs and sustainability reports. Yet the separate sustainability report is also verified by a certified public accountant.

78 EU ETS = Emissions Trading Scheme of the EU.

2.10 Utilities

	Abbreviations	Definitions	1 = very important 6 = unimportant 2006–2008 / 2015 1 2 3 4 5 6	Prospective MC reporting
SD-KPI 2 Innovest	Net annual cost of carbon	An explanation/breakdown of that cost should be provided, including: the gross value of CO_2eq credits needed for the year, the value of CO_2eq credits awarded under the relevant NAP[79] for the year, the average per ton value of CO_2eq credits acquired within and outside of the EU ETS[78], respectively.		(E.ON[76])
SD-KPI 2 F&C	Investments in new renewable energy	MW of new renewables commissioned MW of new renewables acquired MW of renewables in development MW of renewables in operation		(E.ON[76]) (RWE[77])
SD-KPI 3 oekom	Renewable sources of energy	Strategy regarding the extension of renewable energy sources (incl. quantitative targets for amounts to be invested and capacity of power plants)		(E.ON[76]) (RWE[77])
SD-KPI 3 scoris	Renewable energy	Transparency on percentage of renewable energy produced/sold		(E.ON[76]) (RWE[77])
SD-KPI 1 WestLB	Renewable energy	Percentage of renewable energy sold		(E.ON[76]) (RWE[77])
SD-KPI 3 F&C	Energy efficiency	Total volume of electricity billed to business customers supplied under contract for renewable energy Number of customers signed up for green energy programmes Energy efficiency measures installed MWh of renewable energy sold through green energy programmes		(E.ON[76])
SD-KPI 3 Innovest	Generation and production mix by fuel source	Breakdown of the company's generation assets (in MW) and annual output (GWh) by fuel source, past, present and projected. Companies should provide data allowing the analyst to follow the evolution of the generation and output mixes over the past few years, and their medium and long term directions.		(E.ON[76]) (RWE[77])
SD-KPI 1 Pictet	Power plant park	Analysis of the power plant park: Strategic positioning; extension plans; efficiency of transformation		(E.ON[76]) (RWE[77])
SD-KPI 2 scoris	Product labelling	Labelling of production chain: Origin and source of electricity sold; transparency about energy mix		(E.ON[76])
SD-KPI 2 oekom	Efficiency factor	Average efficiency factor of thermal power plant park in produced energy/energy consumption of power plants (throughout the consolidated group)		(E.ON[76]) (RWE[77])
SD-KPI 1 UBS SRI	Energy split	Electricity generation by energy source		(E.ON[76])

[79] NAP = National Allocation Plan.

The utilities sector is completely under the impact of climate change. Three SD-KPIs were found, each of them referring without exception to climate change. SD-KPI 1 covers the greenhouse gas intensity of electronic and thermal energy production and its relative as well as absolute development over several years. If possible, they should be disclosed according to regions with different emissions reduction regulations to achieve a connection with economic values of transactions for certificates of different emissions trading systems.

SD-KPI 2 demands extension targets and strategies for proportions of renewable energies. Within the scope of SD-KPI 3 investors and analysts would like to be informed in the MC about the current split of power plants and fuel sources. This information should also be made available to customers through labelling. Behind the background of long-term investment cycles, the anticipated mid- to long-term development for the mix of power plants and fuel sources should also be disclosed.

Most SD-KPIs are reported by the companies questioned. However, especially for this sector, an MC disclosure analogous to § 315 HGB is necessary because this information haggle over non-financial key performance indicators important for the business' development, position and expected development. A reference to a CSR/sustainability report in the MC alone does not meet the HGB requirements.

3. Summary and outlook

In accordance to the EU modernisation directive 2003/51/EC and its conversion in §§ 289, 315 of the German Commercial Code (Handelsgesetzbuch – HGB), non-financial resp. extra-financial "Sustainable Development Key Performance Indicators" (SD-KPIs) had to be disclosed for the first time in Management Commentaries (MCs) for the business year 2005. Companies as well as analysts and investors – the main target group for MCs – predominantly evaluated the importance of SD-KPIs as important or very important for the business' development, the position and the expected development. The disclosure of SD-KPIs will further improve in the future.

On the basis of the answered questionnaires of the relevant investors and analysts the three most important SD-KPIs for ten sector groupings of the DAX-30 index have been worked out. These most important SD-KPI for each sector grouping is:

- Fleet consumption for the automobile industry
- Credit checks for SD risks and opportunities in commercial and investment banking
- Energy and greenhouse gas intensity for the manufacturers of chemicals as well as industrial goods
- Compliance to environmental and social standards in the supply chain for consumer goods and retail
- Access strategies to medicines for the poor majority of humankind for the producers of pharmaceuticals
- Energy and greenhouse gas efficiency of the production and the products for information and communication companies
- Energy and greenhouse gas efficiency of transport and logistics services
- Proportion of integration of SD aspects in asset management as well as premium incentives and risk checks for insurers
- Greenhouse gas intensity of energy production for utilities

These results could mark the beginning of an (inter-)national standardisation process for SD-KPIs in MCs. Such a process – analogous to the one for international financial reporting – is necessary, because in previous MCs SD-KPIs were disclosed mainly in very general terms. And neither the relevant commentaries nor the German Accounting Standard GAS 15 nor the accounting comment IDW RH HFA 1.007 of the German Institute of Public Auditors (IDW) provide more concrete indications. But the IDW emphasises that SD-KPIs should consider sector-specialities and allow comparisons with other companies of the sector. This study is the first to provide concrete criteria for this sector reference.

Requirements for SD-KPIs

In principle SD-KPIs should be

- of importance for the business' development, the position and the expected development with its relevant chances and risks,
- measured quantitatively,
- disclosed annually and over time relative to the competitors of the sector to show improvements of the reporting company.[80]

The importance of SD-KPIs should be emphasised especially through relations between the SD-KPIs and economic factors such as costs, earnings, profit, return on equity, turnover, added value or brand value/reputation. This further increases the value of the information provided for investors and analysts. So far risk-orientated SD-KPIs have been predominant, but the opportunities of a SD for the company should equally be disclosed to investors and analysts. Quantitative SD-KPIs simplify the analysis, but in some cases only qualitative "indicators" have been provided so far. In these cases it is equally important to clarify the impact on business' development, position and expected development, regarding to IDW RH HFA 1.007. In the MC SD-KPIs should be disclosed over several years – e.g. via three or five year comparison – and preferably with SD-KPIs standardised for the sector. For special situations company-specific SD-KPIs might be necessary, too.

[80] See Department for Environment, Food and Rural Affairs, Trucost: Environmental Key Performance Indicators – Reporting Guidelines for UK Business, London 2006, pp. 16-17.

SD-KPIs important for business' development, position and expected development have to be explained in the MC meaning that they are relevant for certified public accountants. Only a reference to a separate environmental, CSR or sustainability report resp. contents on the internet or the disclosure in the voluntary part of the annual report is not sufficient. If a non-financial key performance indicator exceeds the economic barrier of materiality has to be decided individually. For most of the analysed SD-KPIs 1 to 3 in this study a duty to report should apply.

Outlook

The MC reporting about SD-KPIs will develop in an international, continuous process of improvements. The SD-KPIs analysed in this study are of current and future importance. However, this should not convey the impression that other SD challenges are unimportant. At present, the analysed SD-KPIs 1 to 3 are very important for a business' development, the position and its expected development. But currently not such important SD challenges could very well exceed the economic barrier of materiality in the years to come, so that a duty to report would apply, too.

If one considers the "Big Six", the six most important challenges for SD in the 21st century (climate change, freshwater scarcity, deforestation/desertification, absolute poverty, loss of biodiversity and global population growth/migration)[81] the most SD-KPIs of this study are determined by climate change. So far freshwater scarcity has only been mentioned several times by the chemicals and semiconductor industry. Deforestation/desertification has been addressed to only indirectly with FSC certified consumer goods. Just in a few sectors, the reduction of absolute poverty should be dealt with through "bottom of the pyramid" strategies, e.g. with access to medicines for the numerous poorer humans in developing countries or environmental and social standards in supply chains. In this context one should name the SD-KPI "job creation" as well. The bank Pictet evaluates this SD-KPI as the most important sector-overlapping social indicator, regardless of the fact if work places are created in industrial, emerging or developing countries.[82] The big challenge of the loss of biodiversity applied to SD-KPIs only indirectly through retail products from organic farming, even though biodiversity will certainly also be more important for pharmaceuticals or tourism companies in the future. Finally, the global population growth, which intensifies all SD challenges, has not been considered in SD-KPIs so far (most likely for insurance companies with increasing amounts of damages caused by natural catastrophes) - although sector-overlapping population growth is evaluated as the single most important SD challenge.[83]

In the future, further resp. adapted SD-KPIs are imaginable:

- Scarcity of resources
- Employment concerns (e.g. employee motivation, SD orientated incentive systems)
- Political, legal, technical and macro-economic general framework
- Exertion of influence towards an SD beneficial general framework through self-commitment or lobbying
- Impact of law suits with connections to SD
- Expenditures for the fight against poverty-inducing corruption (e.g. training measures and risk analysis)
- SD orientated purchasing behaviour of customers
- SD orientated behaviour of competitors in the same sector
- SD orientated behaviour of the most important investors for the company

The results of this study offer investors and analysts the opportunity to consider in the future among the circa 20 KPIs of a company the two to three most important, sector-specific SD-KPIs as a value driver to increase the sustainable company value. This facilitates the mainstreaming of SD aspects into the investment process and improves the information content of future MCs.

[81] See Hesse, A.: Big Six – The six most important global challenges for Sustainable Development in the 21st century, Münster 2006 as well as http://www.SD-M.de/Big_Six.htm.

[82] See Butz, C., Pictet (ed.): Do Stock Markets Reward the Creation of Jobs?, Geneva, June 2006.

[83] See Hesse, A., Deloitte (ed.): Added value, long term. Non-financial sustainability key performance indicators on their way into financial reports of German companies, Düsseldorf, Munich 2006, p. 16.

Involved investors and analysts

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F&C Asset Management[84], London, www.fandc.com

Innovest Strategic Value Advisors, Paris, www.innovestgroup.com

oekom research[85], Munich, www.oekom-research.com

Pictet, Geneva, www.pictet.com

scoris[86], Frankfurt/Main, SiRi Company Network Partner, www.scoris.de

UBS Global Asset Management, Socially Responsible Investments (SRI), Zurich, www.ubs.com

WestLB, Extra-Financial Research, www.westlb-em.de

84 The participating investors and analysts cover a broad spectrum of sustainable investment. F&C pursues an engagement strategy through its "responsible engagement overlay" (reo®). Transparent reporting by companies about environmental, social and governance factors is part of constructive dialogue between investors and companies. The SD-KPIs described here are no doubt important, but in no way sufficient to understand a company in its complexity. F&C believes that further narrative reporting by companies enables shareholders to understand which ESG issues the company considers significant and how it manages these.

85 oekom asked for the inclusion of the following passage: It has to be emphasised that the described SD-KPIs represent important non-financial sustainability key performance indicators. Because of the big variety of aspects of actions relevant for SD in enterprises, the described SD-KPIs could not meet the requirement to cover the central issues comprehensively. Therefore a greater degree of company information would have been necessary, e.g. about questions of management structures and the performance of economic ethics, employees, suppliers, products and the environment.

86 scoris named a selection of important criteria. However, neither the nomination nor the order of these criteria represent a ranking of the most important criteria, nor does this necessarily relate to the weighting of the respective criteria within the SiRi Methodology. In general, we doubt that sustainability related activities are to be divided into "performance- and non performance-drivers". See Kinder, P. D., Values and Money, Boston, March 2004. Accordingly, the mentioned criteria were not chosen primarily with regard to any SD-KPI norm. It is also important to note that in addition to sector-specific criteria, there do exist sector-overlapping criteria of high importance, which could be central for companies of all sectors and which could be partly of higher importance than the described sector-specific criteria.

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