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Research Report

A comparative study on the scope and quality of the sustainability reporting of the TecDAX30 companies

Beiträge zur Controlling-Forschung, No. 18

Provided in Cooperation with:
University of Kaiserslautern-Landau (RPTU), Chair of Management Accounting and Management Control Systems

Suggested Citation: Schönbohm, Avo; Hoffmann, Ulrike (2011) : A comparative study on the scope and quality of the sustainability reporting of the TecDAX30 companies, Beiträge zur Controlling-Forschung, No. 18, Technische Universität Kaiserslautern, Lehrstuhl für Unternehmensrechnung und Controlling, Kaiserslautern

This Version is available at:
https://hdl.handle.net/10419/57902

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Beiträge zur Controlling-Forschung

(www.Controlling-Forschung.de)

herausgegeben von
Univ.-Prof. Dr. Volker Lingnau

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Lehrstuhl für Unternehmensrechnung und Controlling · Technische Universität Kaiserslautern

Gottlieb-Daimler-Straße, Gebäude 42, 67663 Kaiserslautern

ISSN 1612-3875

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A comparative study on the scope and quality of the sustainability reporting of the TecDAX30 companies

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2011

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 ISSN 1612-3875

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List of abbreviations

CDP	Carbon Disclosure Project
DAX	German Stock Index
DFVA	Society of Investment Professionals in Germany
EFFAS	European Federation of Financial Analysts Societies
ESG	Environmental, Social and Governance
GRI	Global Reporting Initiative
IAASB	International Auditing and Assurance Standards Board
ISAE	International Standard on Assurance Engagement
ISO	International Standard Organization
IÖW	Institute for Ecological Economy Research
KPI	Key Performance Indicator
PWC	PricewaterhouseCoopers
SME	Small and Medium-sized Enterprises
TecDAX	Technology DAX
UNEP	United Nations Environment Programme

1 Relevance and state of sustainability reporting

In a world where ecological calamities, environmental pollution and the ongoing climate change are part of the daily news, a worldwide rethinking has begun. This puts pressure on companies to account for the impact of their business and actions on the environment, society and economy. Therefore many companies started to publish sustainability reports in recent years. The latest of KPMG´s international surveys about Corporate Sustainability Reporting of the world´s largest companies[1] provides evidence about this trend. In 2008, nearly 80% of the 250 largest companies worldwide issued a sustainability report. Compared to 2005 this is an increase of around 30%. Among the largest 100 companies in 22 countries, the average reporting rate is 52%, with the highest rate in Japan (88 %), followed by the United Kingdom with 84%.[2] Looking at Germany´s largest 100 companies, around half (47%) of the companies published a sustainability report in 2008, compared to 36% in 2005. By taking a closer look at the German DAX 30 companies, over 80% issued a sustainability report in 2008, in 2005 only 53%.[3]

With the rapidly growing number of sustainability reports, the variety of definitions and interpretations of sustainability increased. This research paper does not try to find the right definition of sustainability. Within this research paper, sustainability refers to every activity of a company that is supposed to have an impact on the environment, society or economy.[4] It does not define when exactly a company can be called ‘sustainable’ or when a company needs to be called ‘unsustainable’.

Nevertheless, the question that arises is: ‘What is the reason for the growing number of companies issuing a sustainability report?’ The overall drivers for reporting under the largest companies worldwide were revealed by KPMG.[5] In the first place ethical reasons are mentioned followed by economical ones and reputation and brand on third place. The situation under German companies is similar[6] and in accordance with the main goals of reporting stated by Herzig and Schaltegger, which are the license to operate, respectively the justification of

[1] These are the Global Fortune 250 along with the top 100 companies in 22 countries.
[2] See KPMG (2008), p. 13-16.
[3] See KPMG (2009), p. 9.
[4] See Clarke, T. (2007), p. 271- 272; See Bennett, M. / Burritt, R. / Schaltegger, S. (2006), p.2-3.
[5] See KPMG (2008), p. 18.
[6] See KPMG (2009), p. 20; See PricewaterhouseCoopers (2010), p. 34.

corporate activities which have social or environmental impact, followed by the increase of reputation and brand value.[7] Considering the goals and reasons for reporting, the assumption that the company not only needs to act responsibly but also needs to issue a reliable and outstanding report, is not far-fetched. A report should provide transparent information, which helps the reader to get an objective picture about the performance of the company. Here it is essential to mention the role of the Sustainability Reporting Guidelines G3 of the Global Reporting Initiative.[8] These Guidelines are the most commonly used and hence influential guidelines worldwide.[9] The published 'Reporting Principles' and 'Reporting Indicator' of GRI can help companies to improve their reporting as well as give guidance on the first steps towards sustainability reporting.[10] Besides the GRI guidelines, the European Federation of Financial Analysts Societies (EFFAS) and the Society of Investment Professionals in Germany (DFVA) published guidelines on general sustainability reporting topics, as well as industry-specific Key Performance Indicators (KPIs) for environmental, social and governance aspects.[11] Currently, there are no legally binding guidelines for sustainability reporting. Thus it is still up to the company which guidelines to use or to develop company own principles for reporting. Nevertheless, the quality of reporting has increased in recent years and many large companies worldwide have made significant progress in reporting.[12]

The importance of a transparent and qualitative reporting practice becomes evident by looking at a survey from SustainAbility, KPMG and GRI. The survey stated that 90% of the readers changed their view on the company after reading the report and 85% of them to a more positive one. In addition, the reading of reports helped the reader to decide which products to buy, with which companies to start a relationship or to make an investment in.[13] Thus, reporting can improve the competitiveness and therefore have positive effects for the company.

However, not only the quality of reporting improved, also a more sustainable performance can be recorded. This goes along with a greater emphasis to integrate sustainability aspects into the management process. The Corporate Sustainability Barometer, published by PWC

[7] See Herzig, C. / Schaltegger, S. (2006), p. 302.
[8] See GRI (2006).
[9] See O`Dwyer, B. / Owen, D. L. (2008), p. 394; KPMG (2008), p. 35.
[10] See GRI (2006), p. 4-5.
[11] The focus on Environmental, Social and Governance aspects is also called the ESG-approach. DFVA/ EFFAS (2010)
[12] See SustainAbility / Standard & Poor´s / United Nations Environment Programme (UNEP) (2004), p. 20-21; See AccountAbility / csrnetwork (2008), p. 3.
[13] See SustainAbility / KPMG / GRI (2008), p. 8.

confirms that more and more of the large German companies integrate sustainability aspects into their core business. They increased their efforts towards a sustainable product range and considered more sustainability aspects in their supply chain and production processes.[14] The same picture can be drawn from the analysis by Sustainalytics, which analyzed the DAX30 companies and came to the conclusion that most of the DAX companies achieved a solid performance.[15]

The reflection of the relevance and state of sustainability reporting shows that not only the number of companies that publish a report has risen but also the quality of reporting has improved. This leads to the assumption and therefore the hypothesis of this research paper that:

'High quality sustainability reports are the norm among the TecDAX 30 companies'

The TecDAX comprises 30 of Germany's largest companies by market capitalization and stock exchange turnover from the technology industry. The illustration 1 below gives an overview of the revenues in 2009.

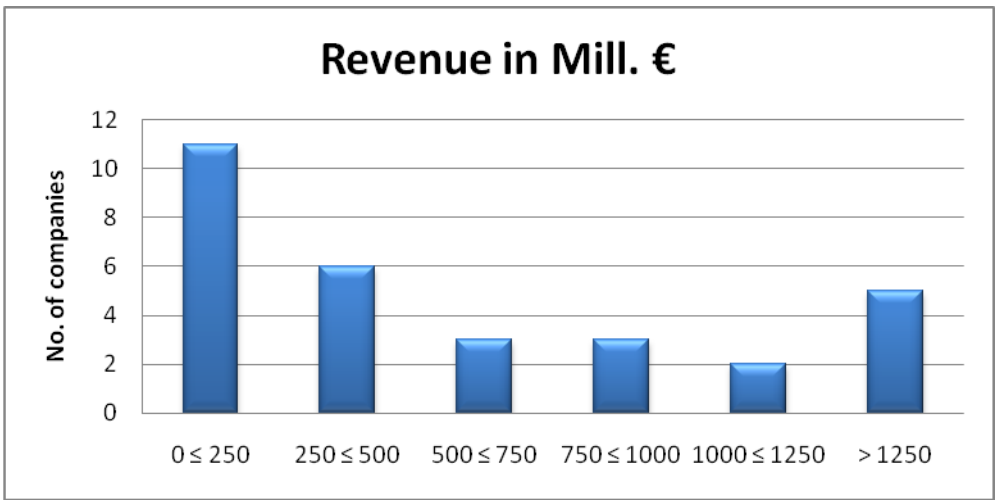

Illustration 1: Revenues of TecDAX companies in 2009.

Most of the TecDax companies are operating in the Photovoltaic industry, followed by the industries Telecommunication and Engineering, seen in illustration 2.

[14] See PWC (2010), p. 12.
[15] See Sustainalytics (2010), p. 3.

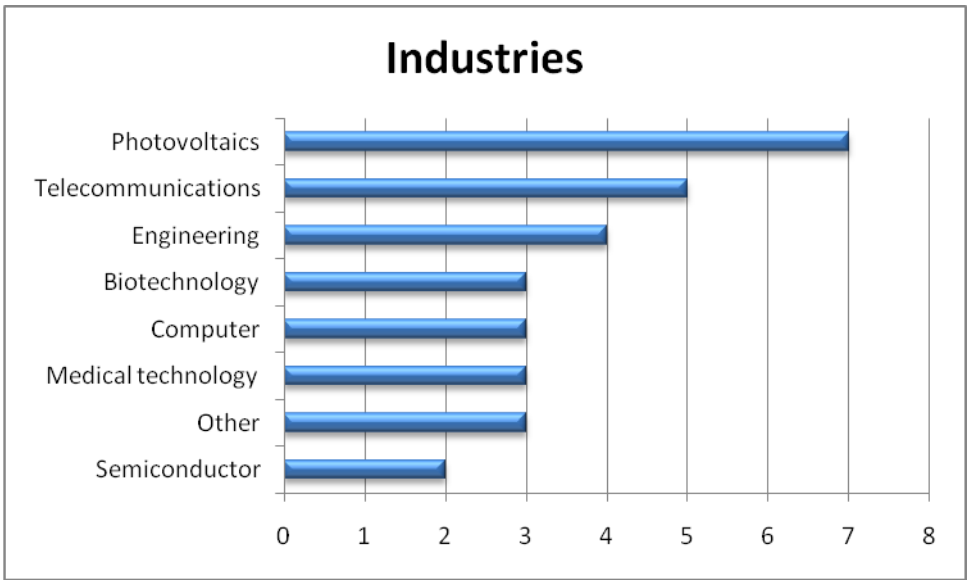

Illustration 2: TecDAX Industry Split.

The decision to evaluate the TecDAX companies is obvious since they are listed at the Frankfurt Stock Exchange, which means that they had to comply with higher transparency standards and therefore showed their willingness to an open and transparent reporting practice. Another reason to choose the TecDAX companies was an analysis by Quick and Knocinski in 2006 about the quality of reporting among the HDAX companies, which includes the DAX, MDAX and TecDAX. From the 110 HDAX companies, only 26 could be considered because the others did not provide enough information on sustainability aspects and none of these 26 companies was listed in the TecDAX. Furthermore and even more interestingly, the reporting performance of these 26 companies was not satisfying.[16]

This research paper's original intention was to show that the TecDAX companies had by 2010 not only understood the importance to publish a sustainability report, but had put enough effort into providing a reliable, transparent and complete report which helps stakeholders in their decision making process.

[16] See Kocinski, M. / Quick, R. (2006), p. 622, 632-634.

2 Methodology

The objective of this analysis was to evaluate and compare the scope and quality of the current practice in sustainability reporting within the TecDAX companies. For the evaluation, a set of different indicators had been developed and were embedded into a scoring system. It needs to be pointed out that this analysis did not evaluate the actual sustainable performance of the TecDAX companies.

2.1 Development of Indicators

The Reporting Guidelines served as a basis for the development of the relevant indicators.[17] A second source was the analysis by Quick and Knocinski about the reporting practice among the HDAX companies.[18] Furthermore, by choosing relevant indicators, the following thought helped: 'Which information should a report contain and how should those information be presented to enable the user to get an objective picture of the performance of the company and therefore support the decision making process in an adequate way?'

In total, 74 indicators were developed. These indicators are subdivided into 4 categories, 'Management Approach and Reliability', 'Communication', 'Completeness' and 'Presentation of Indicators'. The first category 'Management Approach and Reliability' was developed based on the question 'Can you believe what the company presents?' Certainly, many companies state their commitment towards sustainability; however it is difficult to find out from the outside whether sustainability is an integrated part of the management philosophy or has just been stated for image reasons. The first category wanted to observe this by analyzing whether the executive board of directors is stating their commitment, if the vision or mission of the company is based on sustainable aspects or the management system is based on those. It has also been analyzed voluntary participation in projects or associations and monetary support of initiatives, with social or environmental background. For the development of the category 'Communication' the central question was 'How does the company communicate their sustainability responsibility?'. Here structure, layout and accessibility of the report were evaluated along with stakeholder engagement. Stakeholder engagement is defined by the GRI 3 Reporting Guidelines as a very important part of preparing sustainability reports, since it can

[17] See GRI (2006).
[18] See Kocinski, M. / Quick, R. (2006), p. 641-644.

increase the quality of reporting.[19] The third category 'Completeness' is divided into three sub-categories, particularly economic, environmental and social performance. Each of these three sub-categories contains indicators that analyze if the company is reporting on the key topics of sustainability. The indicators are closely linked to the recommendations of material sustainability performance indicators of the GRI 3 Reporting Guidelines. While this category evaluates the quantity of reporting, the last category 'Presentation of Indicators', evaluates accuracy, comparability and clarity of reported performance indicators. The last category is seen as the most important one, since it is essential to give the user an overview of the current performance of the company and to enable him to understand changes in the performance. Hence, the category 'Presentation of Indicator' encompasses indicators such as 'Total amounts and year to year information given', 'Explanation for (un-) favorable trends given' and 'Classification by Indicator given'. The category also analyzes if the company is providing information and explanations on missing data or indicators. As on the one hand there are no binding regulations and on the other hand sustainability reporting is a very new topic for some companies, the company should at least give explanation for incomplete information or reports.

The allocation of all 74 indicators to the four main categories can be found in appendix 1.

2.2 Scoring System

A rating scale has been developed to get an overall picture of the current practice within the reporting of the TecDAX companies and to be able to determine best- practice in sustainability reporting. This rating scale helps to evaluate the degree of fulfillment of each indicator and is scaled from 0 to 2.

0 = indicator hast not been fulfilled and company does not provide any information

1 = indicator has been partly fulfilled and company provides partly information

2 = indicator has been fulfilled and company provides complete information

Since each indicator has different importance, it was weighted with the factor 0.5 or 1. For the total score within one category, the score of each indicator was multiplied with the weight of the indicator and summed up to get the total score. Accordingly, this scoring approach takes

[19] See GRI (2006), p. 10.

into account that not every category has the same importance within the maximum score of 136 points, which can be seen in illustration 3. The total scoring system and the weights of each indicator can be found in appendix 1.

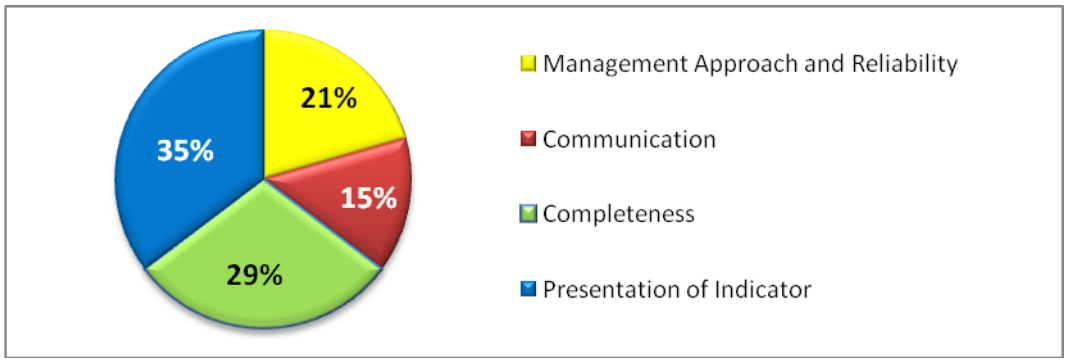

Illustration 3: Importance of each category

2.3 Object of research

All reports, statements and information of the social, environmental and economic performance that were publicly available from the 30 companies listed in the TecDAX were included in the object of research. Thus, 'stand-alone' sustainability reports as well as sections in the annual report dedicated to sustainability were analyzed. In case that none of the previous was published, information on websites was part of the object of research. The title 'Sustainability Report' was not a selection criterion. Everything that was reported under a heading related to sustainability, like 'Employees and social responsibility', 'Corporate Social Responsibility' or 'Sustainability' has been analyzed. Additional information that was not available within the report was only taken into consideration, if it had been referred to it explicitly. Information was evaluated that was available until 28th of February 2011, therefore all information refer to the reporting period of 2009.

A total of 18 companies was taken into consideration for the evaluation of their reporting performance. The remaining twelve companies of the TecDAX (40%) neither report on their sustainable performance nor state their commitment towards sustainability. One sustainability statement was not considered, because it did not provide any substantial information. Furthermore, one company had published an 'Environmental Report' which consistently only includes information on the environmental performance of the company. This raises the question, if sustainability reports can be compared at all, since there are no binding rules, regulations or definitions on sustainability reporting. This problem was also discussed by Daub &

Karlsson.[20] However, this research paper considered everything that has been published by the companies and headed under the approach of sustainability. Therefore, also commitment statements towards sustainability and very short and rather general reports have been considered.

[20] See Daub, C. / Karlsson, Y. (2006), p. 562.

3 Sustainability reporting of the TecDAX companies

The following illustration 4 provides an overview of the total scores of each company. Here it can be seen that the achieved scores strongly deviate from each other. The average score over all four categories is 49, which 12 companies did not achieve. Only 3 companies achieved a score of over 50% of the total possible score of 136. This is a rather disappointing result, especially considering that 12 companies did not publish any information. It can, however, serve as a first indication against the hypothesis, that high quality sustainability reports are the norm among the TecDAX 30 companies.

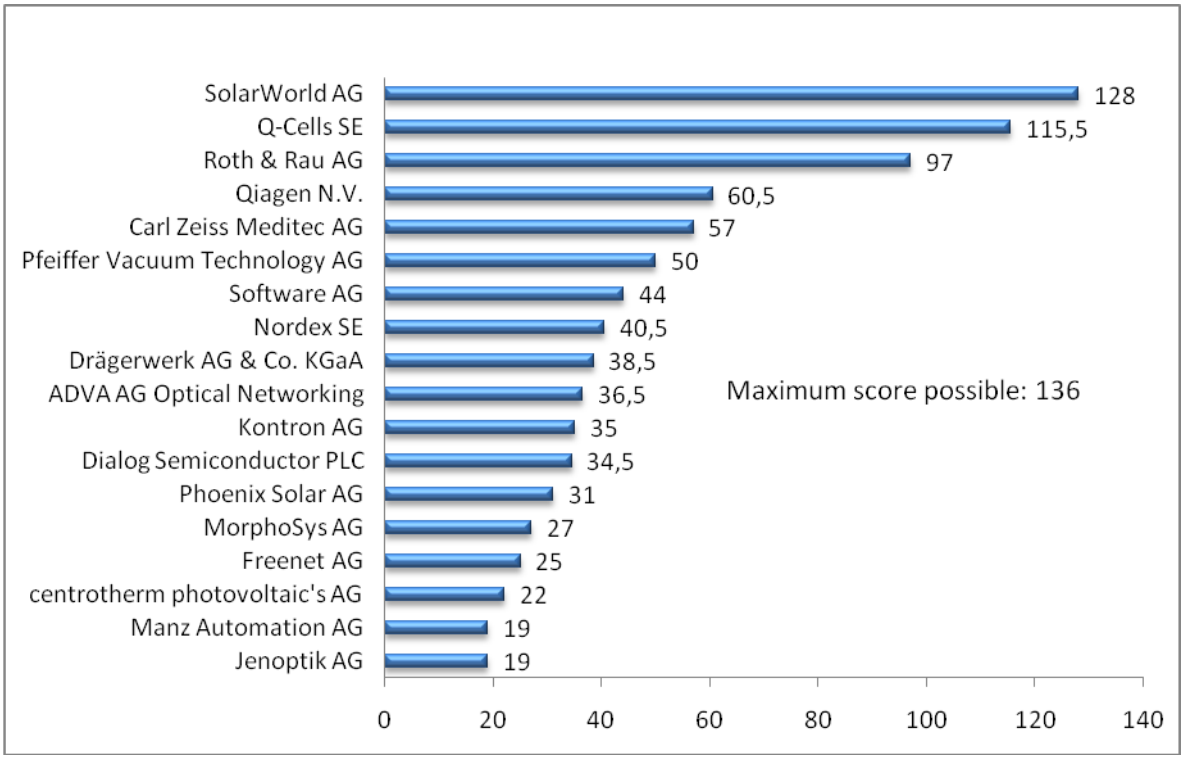

Illustration 4: Overall performance.

By having a look at the average achieved score per category, shown in illustration 5, the unsatisfying result can be especially explained by low scores in the category 'Presentation of Indicators'.

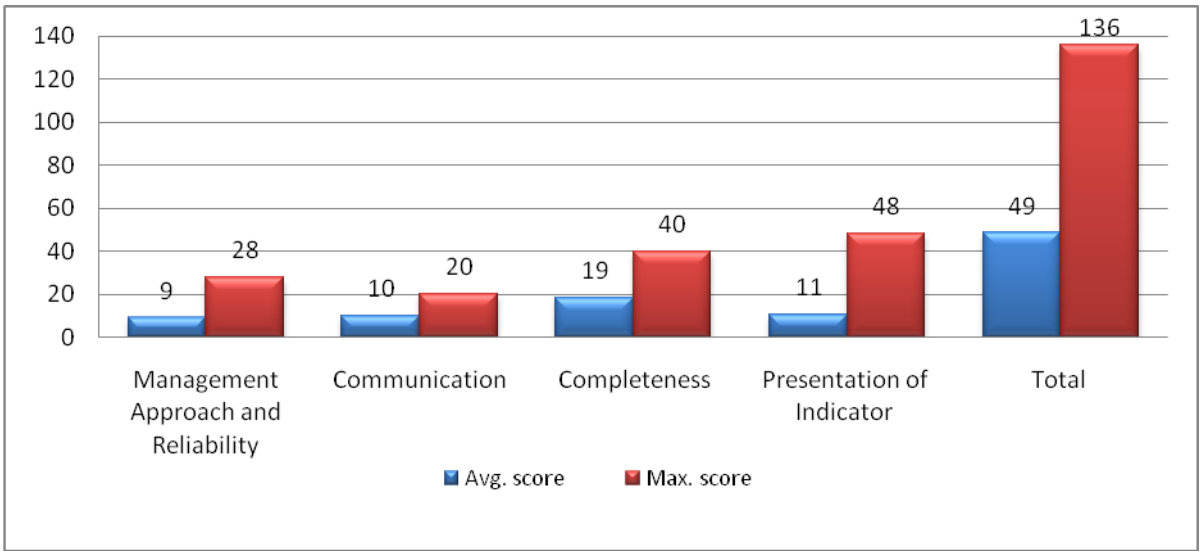

Illustration 5: Comparison of average score to maximum score.

A detailed overview of the scores of each category will be covered below, with the attempt to find answers for the low performance. The detailed score of each company and by indicator can be found in appendix 2.

3.1 Management Approach and Reliability

The average score in the first category of the scoring system is 9, with the highest score of 23.5 and the lowest of 2. The maximum possible score was 28, which leads to an achievement rate of 33%.

The majority of the companies did not report on their visions, missions, corporate strategies or company guidelines. Therefore, it is not observable if those are based on sustainability aspects. This fact raises questions about the management approach and the reliability of the report.

One indicator of this category analyzed the use of guidelines for reporting, like the GRI 3 guidelines. It can be stated that there is a link between the use of the GRI 3 guidelines and the quality of the report. The top two companies have used the guidelines and as shown in illustration 4, these companies have a very high score and achieved 94% and 85% of the maximum score.

Other Indicators asked for certifications on standards of the International Standard Organization (ISO). Here, special focus was on the standards ISO 14001 for an effective environmental management system, ISO 9001 for Quality management systems and 16001 for Energy man-

agement systems. Those standards are procedural standards with the main focus on the management process and therefore do not provide guidance on reporting.[21] However, the logic to include those indicators was the assumption that a certified management system could be an indicator for a more qualitative report, since the company already showed its commitment to facets of sustainability and hence be more likely able to provide a meaningful report. Even so, eleven companies are certified with the ISO 14001 and seven companies have a certified Quality management system, no correlation could be identified between a more qualitative reporting on sustainability aspects and a certified management system.

Unsatisfactory results have to be stated on the indicator 'internal' and 'external' assurance. Whereas six companies reported on internal assurance, for instance through compliance officers, only one company had sought external assurance through an independent third party. External assurance of reports worldwide and within Germany has increased and is mostly achieved by major accountancy organizations or through certification bodies, namely by the non-profit organization AccountAbility. The external assurance can be based on the assurance standard AA1000 AS or the International Standard on Assurance Engagements ISAE 3000 issued by the International Auditing and Assurance Standards Board (IASB).[22] However, apart from one company, none of the others have taken further steps to increase the credibility and hence the confidence in their reports.

The variety of different indicators were supposed to detect, if aspects of sustainability are integrated into the management and if there is a corporate commitment towards sustainability, which eventually would lead to a more reliable and meaningful report. However, the low average score of this category does not show a definite commitment. On the other hand, over 70% of the companies have reported on the indicator 'Voluntary participation or membership in projects, associations or initiatives' as well as 'Donations and incentives'. Certainly these are also aspects of corporate sustainability, but by putting so much emphasis on reporting on these indicators, the sustainability report might lose its credibility. The reader might come to the opinion that the company sees sustainability reporting as an instrument for 'green washing' or just as a 'nice to have'.

[21] See Adams, C. / Narayanan, V. (2007), p. 81.
[22] See KPMG (2009), p. 48-50; See KPMG (2008), p. 65-66; See SustainAbility / Standard & Poor´s / UNEP (2004), p. 32.

3.2 Communication

The highest average score compared to the maximum score has been achieved within the category 'Communication'. The average score was 10 compared to the maximum possible score of 20. Most reports had a good structure and tried to avoid unnecessary information. The layout as well as illustrations and pictures were used in a meaningful and visually appealing way. However, most companies did not refer to additional information nor provided contact information for further questions or feedback. This goes along with missing stakeholder engagement. Only 3 companies seem to be able to define their stakeholders. They disclosed information on who the stakeholders are and how they are involved in decisions of reporting, or how they influence the corporate strategy towards sustainability. Only these 3 companies engage in a dialogue with their stakeholders and publish concerns, questions or key topics raised by the stakeholder within the sustainability report. Stakeholder engagement could be a critical success factor and is regarded as important to build up trust and strengthen credibility. Furthermore, it can enhance the quality of reporting, since it can help to decide about scope, content and materiality of the report. The failure to engage stakeholders, will most likely result in inadequate reports that are not fully credible to all stakeholders.[23] The correlation between stakeholder engagement and the quality of reports, can also been seen in this research paper. The 3 companies that understood the importance of stakeholder engagement achieved the highest overall scores and are the top 3 companies.

Even the German corporate governance codex paragraph 4.1.1 has been restated to a more stakeholder orientated view, saying that the management should lead the company with the overall goal to sustainable value creation in the interest of the company, which means under consideration of the interest of not only shareholders, but all in the company involved groups (stakeholder orientation). The analysis by Lingnau and Kreklow about the realization of this change among the German DAX 30 companies shows that most of the companies still report more financial KPIs, which is an indicator for their shareholder orientation.[24] Therefore it appears that most of the companies do not see stakeholders, besides shareholders, as significant interest groups and hence not only miss the chance to engage with them but also neglect their interests.

[23] See Unerman, J. (2007), p. 86-87; See KPMG (2008), p. 31; See GRI (2006), p. 10; See Isenmann, R. / Kim, K. (2006), p. 533.
[24] See Lingnau, V. / Kreklow, K. (2011), p. 2, 10.

3.3 Completeness

The category ‘Completeness’ was divided into three sub-categories, to find out if the company provides information on every aspect of sustainability. The respective scores on the sub-categories, ‘Economic performance’, ‘Environmental performance’ and ‘Social performance’, can be seen in illustration 6.

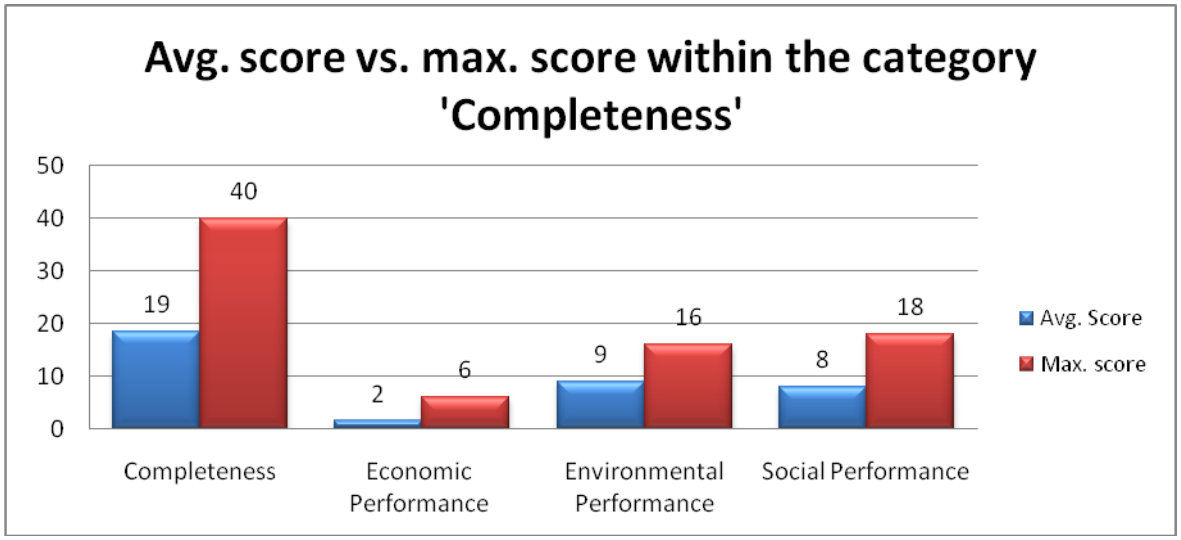

Illustration 6: Results within the category ‘Completeness’.

The lowest score is recorded within the economic performance, with an achievement rate of 26%, followed by social (45%) and environmental performance (57%).

To explain the reason for the low score within the economic performance, it needs to be mentioned, that most of the data were integrated into the annual report. Thus, it could be argued that the information on the economic performance could be found within the annual report and therefore do not need to be integrated in the sustainability report. However, for a complete picture of the sustainability reporting performance, the company needs at least to make references where to find this information. This was also the criteria for achieving a score within the scoring system of this research paper.

In the ‘Environmental performance’ sub-category, the majority of the companies have reported on the indicator ‘Emission’, ‘Energy’ and ‘Water’ as well as ‘Expenditure and projects related to environmental protection’. This is the reason for the high score of this sub-category. Some companies participate in the Carbon Disclosure Project (CDP), which is a nonprofit organization that works on a constructive discussion between shareholders and corporations about climate change and the need to disclose greenhouse gas emissions by large compa-

nies.[25] Other companies have developed individual projects or are member of projects with third parties, which besides of the high score, indicates that most of the companies have realized their high responsibility towards the environment.

Within the social dimension, most companies illustrate that 'Occupational health and safety', 'Training and education for employees' and 'Diversity and equal opportunity' are understood as important topics for the company. Also important seems to be the participation in projects or associations that are related to social aspects. Many companies support humanitarian associations, local initiatives like sport clubs, schools and universities or are engaged in projects in Third World countries.

With 19 out of 40 possible points, or 47%, the category 'Completeness' achieved the second highest score of all 4 categories. It proves that at least half of the TecDAX 30 companies are aware of the most common topics of reporting for economic, social and environmental activities.

3.4 Presentation of Indicators

With 48 achievable points the category 'Presentation of Indicators' was the most important, since here the concrete reporting is supposed to happen. The average score, however, is only 11 points (22%), with an average of 3 points in the economic dimension, 4 points in the environmental dimension and 3 points in the social dimension, which can also be seen in illustration 7.

[25] See Carbon Disclosure Project (n.d.).

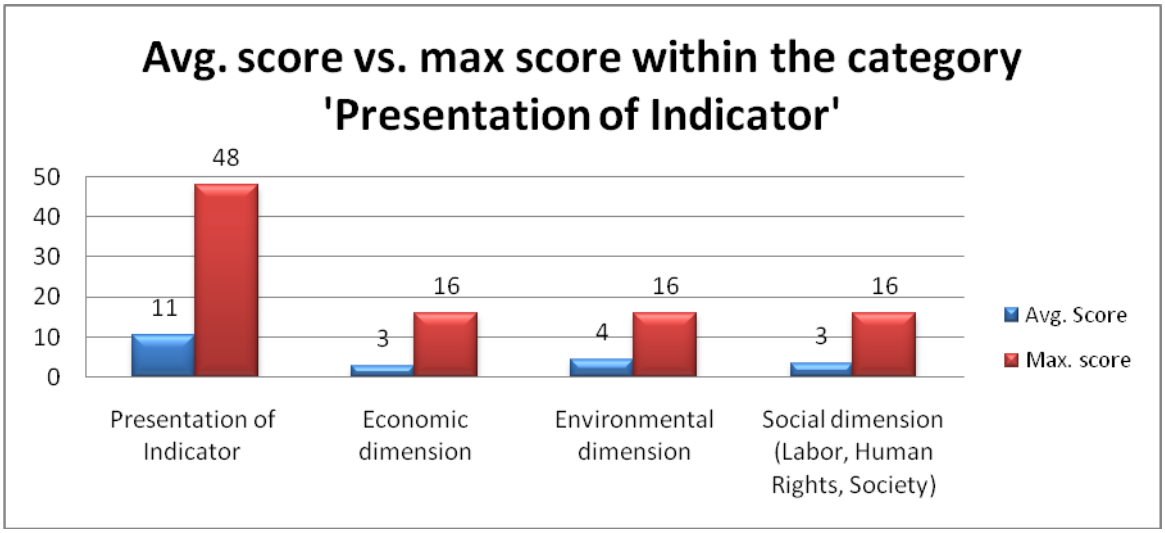

Illustration 7: Results within the category 'Presentation of Indicator'.

Over all 3 dimensions, the majority of the companies did not provide total amounts on indicators, nor information of recent years, to enable the reader to identify favorable or unfavorable trends. If the companies provided numbers of recent years, a lot of them omitted to explain the reasons for changes. A lower water consumption or CO_2 emission may look like a positive step towards a more responsible use of resources and a greater attempt to protect the environment. But if in the same reporting period the number of employees was cut down by half, this development could change into a negative trend since the water consumption or CO_2 emission per employee may have risen. Therefore, it would be even better to provide ratios.

In average only 7 companies got a score on the category 'Presentation of Indicators' with an average achievement rate of 22%. By comparing this result, with the result of the category 'Completeness', where 18 companies got a score which resulted in an average score of 19 points (47%), it seems that many companies state their commitment on several aspects of sustainability, but without providing any numbers or figures that prove their commitment. Just because a company does not provide any numbers or figures, of course, it does not mean that the company is not acting sustainably or in a responsible way. However, if sustainability is an integrated part of the management system and seen as important as many companies claim, it can be assumed that there is a measuring system to provide the management with numbers. And in that case, the company should be able to and actually have a self- interest of providing the reader with strong arguments.

In fact, it is stated in different analyses that departments like Controlling, Finance and Accounting are only slightly involved in sustainability management. Highly involved are the

Sustainability department, Health and Safety department, Environmental department and the Communication department. It seems like a lot of companies miss to link sustainability aspects with financial information. This lack of involvement can have a huge impact on the sustainability performance of the company. Considered that those departments not only could deliver decision- and success relevant information and numbers for the management, they could also provide relevant numbers for the report and hence improve the quality of reporting. [26] As a matter of fact, sustainability reporting is a new topic for many companies and therefore not all relevant data can be provided yet. However, the respective companies could at least try to give reasons for missing data as well as inform about measures for the availability of the data in the future.

3.5 Summary

With regard to the hypothesis 'High quality sustainability reports are the norm among the TecDAX 30 companies' which was stated in the beginning, the results of this research paper falsify the hypothesis, besides the fact that 12 companies did not publish any information with regard to corporate sustainability. Only assumptions can be made about reasons for the overall low result, as well as the in average low scores within each category. First of all, the majority of the companies do not engage their stakeholders neither in preparing the sustainability reports nor in discussions about corporate sustainability, although they are the users of the reports. Only if stakeholders are involved, meaningful reports that meet expectations of readers can be created. Secondly, most of the companies investigated do not publish meaningful and comparable indicators that clearly state their sustainability performance. Therefore, the reader is incapable of getting an objective picture of the company or to use the report for benchmarks. By publishing incomplete, meaningless and in-transparent indicators, the efforts of the company could be interpreted as a lack of management commitment towards sustainability and seen as just an attempt to go with the trend by using not too much time and money. This lack of commitment is also reflected by the result of the category 'Management Approach and Reliability'. Many companies do not provide information whether corporate visions, goals, strategies or management approach are based on aspects of sustainability. All of this criticism could lead to the impression of "green washing", which might result in an even more negative image of the respective company, compared to the effect of not reporting any information.

[26] See PWC (2010), p. 51-55; See Herzig, C. / Schaltegger, S. (2009), p. 31-33.

Furthermore correlations between the revenue or size of the company and the quality of reporting could not be identified. On the other hand, it has been noticed that the top 3 companies are active in the Photovoltaic industry, followed by companies from the Medical technology and Biotechnology. Companies from the Photovoltaic industry might already have a 'green' image because of their products or services, but it also looks as if these companies understand better to convince the shareholder of this 'green' image by publishing meaningful reports. A correlation between the size of the report and the overall quality is also evident. Some reports or rather statements towards sustainability only comprised two or three pages. Those statements were mostly integrated into the annual report and did not provide enough information for a qualitative report. Stand-alone reports were much more comprehensive and therefore got a higher overall score.

As mentioned before the analysis of sustainability reporting was not only intended to prove that high qualitative reports are the norm among the TecDAX companies, but also to give evidence that the trend to publish sustainability reports can be observed within the TecDAX companies. It remains to be seen whether this trend will lead to widespread and valuable sustainability reports, especially against the backdrop of announcements of some companies to publish a report for the first time in the near future.

4 Conclusion and Outlook

This research paper indicates that there is a huge gap between the requirements that literature and guidelines stated on sustainability reporting and the current practice within the TecDAX 30 companies. This gap might lead to incomparable, in-transparent and incomplete reports that do not meet the expectations and needs of the reader. The lack of binding guidelines, rules or regulations make it difficult for the company to decide how a sustainability report should look like. However, it can be expected that the current practice in reporting will change in the near future, either through binding guidelines or by companies orientating themselves specifically on "best practice reports" that are awarded by the rising numbers of awards and rankings like the CR Reporting Award by CorporateRegister.com[27], GRI Readers' Choice Awards[28], IÖW/future Ranking of Sustainability Reports[29] or the Accountability Rating[30]. Another driver higher quality reports could also be found in a stronger attempt to engage stakeholders, which has not been done with enough effort so far.

The results of this research clearly falsify the hypothesis 'High quality sustainability reports are the norm among the TecDAX 30 companies'. However, the mentioned analysis and findings of the relevance and state of sustainability reporting show that this topic is becoming increasingly important. Many large companies worldwide not only show that they act more responsibly in the use of resources but also understand to communicate their commitment and actions in a transparent way. Therefore, the TecDAX companies will have to put more emphasis on sustainability reporting.

Even though this research paper was focusing on large companies, under no circumstances should sustainability be considered as a topic that is only relevant for those. It could be argued that large companies might have the biggest impact on the environment and society, but the urgency to be more careful in the use of resources and with the environment, needs to be understood from every single person. Therefore, sustainability could also be addressed by Small and Medium- sized Enterprises (SMEs). To support SMEs in sustainability reporting and to fulfill their special requirements, the Global Reporting Initiative published a handbook,

[27] See CorporateRegister (2011).
[28] See GRI (2010).
[29] See Institute for Ecological Economy Research (IÖW) / future (2010).
[30] See AccountAbility (2008).

providing guidance on the whole process of sustainability reporting.[31] A survey by IÖW illustrates that SMEs, especially family businesses, already see the importance to go with the trend and to publish sustainability reports.[32]

In summary, more and more companies will be faced with the question of publishing a sustainability report. The pressure to report will increase no matter if this pressure is coming from shareholders, employees, suppliers, customers or other stakeholders. This goes along with an increasing number of high quality sustainability reports and therefore rising requirements of sustainability reporting. All this will result in an even tougher competition in the near future.

[31] See GRI (2010).
[32] See IÖW / future (2009), p. 4-5.

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Appendices

Appendix 1: Scoring System

			Score (0-2)	Weight-factor (0,5/1)	TTL score
	Management Approach and Reliability				
1		Statement from executive board	2	1	2
2		Vision/ Mission/ Philosophy based on sustainability aspects	2	1	2
3		Sustainability goal/strategy	2	1	2
4		Integration of sustainability aspects into management system	2	1	2
5	**Standards**	Environmental Protection ISO 14001	2	1	2
6		Quality ISO 9001	2	1	2
7		Energy management ISO 16001	2	1	2
8		Occupational Health and Safety OHSAS 18001	2	1	2
9	**Reporting Guidelines**	GRI (Global Reporting Initiative)	2	0,5	1
10		DVFA (German Society of Investment Professionals)	2	0,5	1
11		Code of Conduct	2	0,5	1
12		Company guidelines, principles based on sustainability aspects	2	1	2
13		Internal assurance	2	1	2
14		External assurance of report	2	1	2
15		Awards	2	0,5	1
16		Voluntary participation/membership in projects, associations and initiative	2	0,5	1
17		Donations, Incentives	2	0,5	1
				TTL score	**28**
				in %	**21%**
	Communication				
18		Structure of report	2	1	2
19		Layout, pictures, illustrations	2	1	2
20		Contact information for questions on report or content	2	1	2
21		Links/reference to additional information	2	1	2
22		Accessibility of report	2	1	2
23		Clarity (acronyms, jargon, glossary, abbreviations)	2	1	2
24		Avoidance of excessive & unnecessary details/ information	2	1	2
25	Stakeholder engagement	Stakeholder identification	2	1	2
26		Stakeholder communication & involvement	2	1	2
27		Publication of outcome & evaluation of stakeholder concerns (key topics and concerns raised by stakeholder)	2	1	2
				TTL score	**20**
				in %	**15%**
	Completeness				
28	**Economic Performance**	Directly generated financial value (revenue, sales..)	2	1	2
29		Distributed financial value (operating costs, other company expenditure, payments to capital providers, investments in communities...)	2	1	2
30		Salaries, wages, employee compensation, social benefits (Entry-level salaries in comparison to local minimum wage)	2	1	2
					6
31	**Environmental Performance**	Material	2	1	2
32		Energy	2	1	2
33		Water	2	1	2
34		Emissions	2	1	2
35		Waste	2	1	2
36		Training for Employees	2	1	2
37		Products and Services (environmental impacts of product and service; packaging material)	2	1	2
38		Expenditure and projects related to environmental protection, initiatives to reduce environmental impacts	2	1	2
					16
39	**Social Performance**	Employment (workforce by contract, region; turnover rate)	2	1	2
40		Occupational Health and Safety (rates of injuries; absenteeism; prevention and risk control programs; sport program)	2	1	2
41		Training and Education (soft skill training…)	2	1	2
42		Diversity and Equal Opportunity (ratio salary men to women; employees by age, gender…)	2	1	2
43		Discrimination (incidents of discrimination; prevention of discrimination)	2	1	2
44		Human Rights	2	1	2
45		Child Labor	2	1	2
46		Corruption	2	1	2
47		Expenditure and projects related to social aspects	2	1	2
					18
				TTL score	**40**
				in %	**29%**
	Presentation of Indicator (Accuracy, Comparability, Clarity)				
48	**Economic dimension**	Total amounts/ absolute data on indicator given	2	1	2
49		Year-to- year - information given (trends)	2	1	2
50		Classification of indicator by segment/type/function	2	1	2
51		Basis for calculation described	2	1	2
52		Explanations for unfavorable trends given	2	1	2
53		Explanations for favorable trends given	2	1	2
54		Reason for missing data/Indicator given	2	1	2
55		Targets set, Improvements in future	2	0,5	1
56		Presentation of indicator (text, graphs, charts..)	2	0,5	1
					16
57	**Environment dimension**	Total amounts/ absolute data on indicator given	2	1	2
58		Year-to- year - information given (trends)	2	1	2
59		Classification of indicator by segment/type/function	2	1	2
60		Basis for calculation described	2	1	2
61		Explanations for unfavorable trends given	2	1	2
62		Explanations for favorable trends given	2	1	2
63		Reason for missing data/Indicator given	2	1	2
64		defined goals,improvements in future	2	0,5	1
65		Presentation of indicator (text, graphs, charts..)	2	0,5	1
					16
66	**Social dimension**	Total amounts/ absolute data on indicator given	2	1	2
67		Year-to- year - information given (trends)	2	1	2
68		Classification of indicator by segment/type/function	2	1	2
69		Basis for calculation described	2	1	2
70		Explanations for unfavorable trends given	2	1	2
71		Explanations for favorable trends given	2	1	2
72		Reason for missing data/Indicator given	2	1	2
73		Targets set, Improvements in future	2	0,5	1
74		Presentation of indicator (text, graphs, charts..)	2	0,5	1
					16
				TTL score	**48**
				in %	**35%**
		Overall score			**136**

Appendix 2: Evaluation

	MAX	Jenoptik AG	Manz Automation AG	centrotherm photovoltaic's AG	Freenet AG	MorphoSys AG	Phoenix Solar AG	Dialog Semiconductor PLC	Kontron AG	ADVA AG Optical Networking
General										
Industry		Engineering	Engineering	Photovoltaics	Telecommunications	Biotechnology	Photovoltaics	Semiconductor	Computer	Telecommunications
Revenue (in €)		473.600.000	85.920.000	509.100.000	3.657.000.000	81.000.000	473.032.000	151.815.168	468.900.000	232.808.000
EBIT (in €)		-19.700.000	-15.910.000	37.200.000	121.700.000	11.400.000	12.176.000	20.023.416	30.100.000	2.281.000
Income (in €)		-37.900.000	-9.710.000	28.500.000	256.500.000	9.000.000	8.555.000	22.814.136	21.900.000	1.320.000
Return on Sale (in %)		-4%	-19%	7%	3%	14%	3%	13%	6%	1%
Employee		3.270	1.380	1.130	4.390	410	240	340	2.487	1.100
Founded		1992	1987	1976	2007	1992	1999	1981	1962	1994
Sustainability report published		Annual report p.63	Annual report p. 73-74	Annual report p. 26-27	Annual report p. 44-45	Annual report p. 31-33	Annual report p. 70-71	Annual report p. 23-24	on website	Annual report p. 72-77
Name		Sustainability report	Sustainability report	Sustainability report	Sustainability report	Sustainability & CSR	Corporate Social Responsibility	Corporate Social Responsibility	Environmental Management & CSR	Employees and social responsibility
Notes		Statement, report in future	Statement	Statement	Statement	Statement, state that they measure energy use, greenhouse gas emission, hazardous waste but give no numbers or indicators	Statement	Statement	Statement	Statement
Management Approach and Reliability										
1	2	0	0	2	0	0	0	0	0	0
2	2	0	0	1	0	0	0	0	0	0
3	2	0	0	0	0	0	0	0	2	0
4	2	1	0	0	0	0	0	0	2	0
5	2	2	0	0	0	0	2	2	2	2
6	2	2	0	0	0	2	2	2	0	0
7	2	0	0	0	0	0	0	0	0	0
8	2	0	0	0	0	0	0	0	0	0
9	1	0	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	0	0	0	0
11	1	0	0	0	0	0	0	1	0	0
12	2	0	0	0	0	0	0	0	2	0
13	2	0	0	0	0	2	0	0	2	0
14	2	0	0	0	0	0	0	0	2	0
15	1	0	0	1	0	0	0	0	0	0
16	1	0	1	0	1	1	1	0	1	1
17	1	1	1	1	1	1	1	1	0	1
TTL score	**28**	**6**	**2**	**5**	**2**	**6**	**6**	**6**	**13**	**4**
in %	**21%**	**21%**	**7%**	**18%**	**7%**	**21%**	**21%**	**21%**	**46%**	**14%**
Communication	**0**									
18	2	1	1	1	1	1	1	1	2	1
19	2	2	2	1	2	2	2	2	1	2
20	2	0	0	0	0	0	0	0	0	0
21	2	0	0	0	0	0	0	0	0	0
22	2	2	2	2	2	2	2	2	1	1
23	2	2	2	1	2	2	2	1	2	2
24	2	2	2	2	2	2	2	2	2	2
25	2	0	0	0	0	0	0	0	0	0
26	2	0	0	0	0	0	0	0	0	0
27	2	0	0	0	0	0	0	0	0	0
TTL score	**20**	**9**	**9**	**7**	**9**	**9**	**9**	**8**	**8**	**8**
in %	15%	45%	45%	35%	45%	45%	45%	40%	40%	40%
Completeness										
Economic Performance										
28	2	0	0	0	0	0	0	0	0	0
29	2	0	0	0	0	0	0	0	0	0
30	2	0	0	0	0	0	0	0	0	2
Environmental Performance	6	0	0	0	0	0	0	0	0	2
31	2	0	0	2	0	0	0	0	2	1
32	2	0	2	2	2	2	2	0	2	0
33	2	0	0	0	0	0	0	2	0	0
34	2	0	2	2	2	2	2	2	2	0
35	2	0	0	0	2	2	0	2	2	0
36	2	0	0	0	0	0	2	0	0	0
37	2	0	0	0	2	0	2	2	0	0
38	2	0	0	2	0	2	2	0	2	0
Social Performance	16	0	4	8	8	8	10	8	10	1
39	2	0	0	0	0	0	0	0	0	2
40	2	0	0	0	2	2	0	0	0	2
41	2	2	2	0	2	0	0	2	0	2
42	2	0	0	0	0	0	2	0	2	2
43	2	0	0	0	0	0	0	2	2	2
44	2	0	0	0	0	0	2	2	0	2
45	2	0	0	0	0	0	0	2	0	0
46	2	0	0	0	0	0	0	0	0	2
47	2	2	2	2	2	2	2	2	0	2
subtotal	18	4	4	2	6	4	6	10	4	16
TTL score	**40**	**4**	**8**	**10**	**14**	**12**	**16**	**18**	**14**	**19**
in %	**29%**	**10%**	**20%**	**25%**	**35%**	**30%**	**40%**	**45%**	**35%**	**48%**
Presentation of Indicator										
Economic dimension										
48	2	0	0	0	0	0	0	0	0	0
49	2	0	0	0	0	0	0	0	0	0
50	2	0	0	0	0	0	0	0	0	0
51	2	0	0	0	0	0	0	0	0	0
52	2	0	0	0	0	0	0	0	0	0
53	2	0	0	0	0	0	0	0	0	0
54	2	0	0	0	0	0	0	0	0	0
55	1	0	0	0	0	0	0	0	0	0
56	1	0	0	0	0	0	0	0	0	0
Environmental dimension	16	0	0	0	0	0	0	0	0	0
57	2	0	0	0	0	0	0	1	0	0
58	2	0	0	0	0	0	0	0	0	0
59	2	0	0	0	0	0	0	0	0	0
60	2	0	0	0	0	0	0	0	0	0
61	2	0	0	0	0	0	0	1	0	0
62	2	0	0	0	0	0	0	0	0	0
63	2	0	0	0	0	0	0	0	0	0
64	1	0	0	0	0	0	0	0	0	0
65	1	0	0	0	0	0	0	0,5	0	0
Social dimension	16	0	0	0	0	0	0	2,5	0	0
66	2	0	0	0	0	0	0	0	0	1
67	2	0	0	0	0	0	0	0	0	1
68	2	0	0	0	0	0	0	0	0	1
69	2	0	0	0	0	0	0	0	0	0
70	2	0	0	0	0	0	0	0	0	1
71	2	0	0	0	0	0	0	0	0	1
72	2	0	0	0	0	0	0	0	0	0
73	1	0	0	0	0	0	0	0	0	0
74	1	0	0	0	0	0	0	0	0	0,5
subtotal	16	0	0	0	0	0	0	0	0	5,5
TTL score	**48**	**0**	**0**	**0**	**0**	**0**	**0**	**2,5**	**0**	**5,5**
in %	**35%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**5%**	**0%**	**11%**
Overall score	**136**	**19**	**19**	**22**	**25**	**27**	**31**	**34,5**	**35**	**36,5**
in %		**14%**	**14%**	**16%**	**18%**	**20%**	**23%**	**25%**	**26%**	**27%**

	Drägerwerk AG & Co. KGaA	Nordex SE	Software AG	Pfeiffer Vacuum Technology AG	Carl Zeiss Meditec AG	Qiagen N.V.	Roth & Rau AG	Q-Cells SE	SolarWorld AG
General									
Industry	Medical technology	Wind power industry	Computer	Engineering	Medical technology	Biotechnology	Photovoltaics	Photovoltaics	Photovoltaics
Revenue (in €)	1.911.000.000	1.182.800.000	847.400.000	182.000.000	2.101.158.000	704.584.781	197.903.000	790.400.000	1.012.600.000
EBIT (in €)	80.100.000	40.000.000	218.200.000	37.744.000	67.407.000	125.734.360	16.100.000	-362.500.000	151.800.000
Income (in €)	14.900.000	24.200.000	140.800.000	27.693.000	55.544.000	96.124.112	12.929.000	-1.342.900.000	59.000.000
Return on Sale (in %)	4%	3%	26%	21%	3%	18%	8%	-46%	15%
Employee	11.070	2.270	6.003	725	12.872	3.500	874	2.780	2.000
Founded	1889	1985	1969	1890	1846	1984	1990	1999	1988
Sustainability report published	yes	Annual report p. 26-33	yes	Annual report p.53-55	yes	yes	yes	yes	Annual report p. 211-259
Name	We assume responsibility	Sustainability report	Corporate Social Responsibility	Social responsibility & Sustainability	Environmental report	The QIAGEN approach to sustainability	Sustainability Report	Sustainability Report	Sustainability report
Notes	0	Statement, report in future	0	Statement	No statements on social and economic dimension!	0	0	0	0
Management Approach and Reliability									
1	0	0	2	0	2	2	2	2	2
2	1	0	2	0	2	1	2	2	2
3	1	0	2	0	2	0	2	1	2
4	2	0	0	0	2	0	2	2	2
5	2	0	0	2	2	0	2	2	2
6	0	0	0	2	0	0	2	2	2
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	2	0	0
9	0	0	0	0	0	0	0	1	1
10	0	0	0	0	0	0	0	0	1
11	0	0	1	1	1	1	1	1	1
12	0	2	2	0	2	2	2	1	2
13	0	0	0	0	2	2	2	0	2
14	0	0	0	0	0	0	0	0	2
15	0	1	0	0	0	1	1	1	1
16	1	1	1	0	1	1	1	1	1
17	1	0	1	1	1	1	1	0	0,5
TTL score	**8**	**4**	**11**	**6**	**17**	**11**	**22**	**16**	**23,5**
in %	**29%**	**14%**	**39%**	**21%**	**61%**	**39%**	**79%**	**57%**	**84%**
Communication									
18	1	1	2	1	2	2	2	2	2
19	1	2	2	2	2	2	2	2	2
20	0	0	0	0	0	0	0	2	2
21	0	0	0	2	0	0	0	2	2
22	2	2	2	2	2	2	2	2	2
23	2	2	2	1	2	2	2	2	2
24	1	2	1	2	2	2	1	2	2
25	0	0	0	0	0	0	0	2	2
26	0	0	0	0	0	0	2	2	2
27	0	0	0	0	0	0	2	2	2
TTL score	**7**	**9**	**9**	**10**	**10**	**10**	**13**	**20**	**20**
in %	35%	45%	45%	50%	50%	50%	65%	100%	100%
Completeness									
Economic Performance									
28	0	2	2	0	0	2	2	2	2
29	0	2	0	0	0	0	0	2	2
30	0	2	0	0	0	2	0	2	2
Environmental Performance	0	6	2	0	0	4	2	6	6
31	0	0	0	2	2	2	0	2	2
32	2	2	0	2	2	2	2	2	2
33	2	0	0	2	2	2	2	2	2
34	2	2	0	2	2	2	2	2	2
35	2	0	0	2	2	2	2	2	2
36	0	2	0	0	2	2	2	0	0
37	2	0	0	0	2	2	2	2	2
38	2	2	2	0	2	2	2	2	2
Social Performance	12	8	2	10	16	16	14	14	14
39	0	0	2	2	0	2	2	2	2
40	2	2	2	2	0	2	2	2	2
41	2	2	2	0	0	2	2	2	2
42	2	2	2	0	0	0	2	2	2
43	0	2	2	0	0	0	2	2	2
44	0	0	0	0	0	0	0	2	2
45	0	0	0	0	0	0	0	2	2
46	0	0	0	0	0	0	2	2	2
47	2	0	2	2	0	2	2	0	1
subtotal	8	8	12	6	0	8	14	16	17
TTL score	**20**	**22**	**16**	**16**	**16**	**28**	**30**	**36**	**37**
in %	**50%**	**55%**	**40%**	**40%**	**40%**	**70%**	**75%**	**90%**	**93%**
Presentation of Indicator									
Economic dimension									
48	0	2	0	0	0	1	2	2	2
49	0	1	1	0	0	0	2	2	2
50	0	0	0	0	0	0	2	2	2
51	0	0	0	0	0	0	2	2	2
52	0	0	0	0	0	0	0	2	2
53	0	2	0	0	0	2	0	2	2
54	0	0	0	0	0	0	0	2	2
55	0	0	0	0	0	0	0	0,5	1
56	0	0,5	1	0	0	0,5	1	1	1
Environmental dimension	0	5,5	2	0	0	3,5	9	15,5	16
57	0	0	0	2	2	1	2	2	2
58	1	0	0	2	2	1	2	1	2
59	0	0	0	1	2	0	2	2	2
60	0	0	0	0	0	0	0	2	2
61	0	0	0	2	2	0	2	2	2
62	2	0	0	2	2	2	2	2	2
63	0	0	0	2	2	0	0	2	2
64	0	0	0	0	1	0	1	0,5	1
65	0,5	0	0	0,5	1	0,5	1	1	0,5
Social dimension	3,5	0	0	11,5	14	4,5	12	14,5	15,5
66	0	0	1	2	0	1	2	2	2
67	0	0	1	2	0	0	2	1	2
68	0	0	0	0	0	0	2	1	2
69	0	0	0	0	0	0	2	2	2
70	0	0	0	0	0	0	0	2	2
71	0	0	2	2	0	2	2	2	2
72	0	0	0	0	0	0	0	2	2
73	0	0	1	0	0	0	0	0,5	1
74	0	0	1	0,5	0	0,5	1	1	1
subtotal	0	0	6	6,5	0	3,5	11	13,5	16
TTL score	**3,5**	**5,5**	**8**	**18**	**14**	**11,5**	**32**	**43,5**	**47,5**
in %	**7%**	**11%**	**17%**	**38%**	**29%**	**24%**	**67%**	**91%**	**99%**
0									
Overall score	**38,5**	**40,5**	**44**	**50**	**57**	**60,5**	**97**	**115,5**	**128**
in %	**28%**	**30%**	**32%**	**37%**	**42%**	**44%**	**71%**	**85%**	**94%**

Beiträge zur Controlling-Forschung
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