

# Sustainable Bonuses: Sign of Corporate Responsibility or Window Dressing?

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**Abstract** Despite a strong plea for integrating sustainability goals into traditional corporate bonus schemes, a comprehensive implementation of these systems has been lacking until recently. This article explores four illustrative cases from the Netherlands, where several multinationals started to pioneer with sustainable bonuses in the past few years. The article examines the setups and the different elements of bonus programmes used, in terms of performance criteria (focusing in particular on external vs. internal benchmarking), their link to specific stakeholders, type and size of bonuses, target levels and transparency. While sustainable bonuses signal corporate awareness of responsibility vis-à-vis society and stakeholders, credibility varies considerably depending on these elements. Our case evidence sheds some light on the extent to which sustainable bonuses may be a credible sign of corporate responsibility or rather just another perverse mechanism meant to keep up bonus levels (window dressing). A definite assessment is hampered by the emergent state and lack of full transparency—while ‘justified’ by companies for competitive reasons, this raises questions. Insights are offered to appraise current and future systems and provide directions for further research.

**Keywords** Corporate responsibility · Stakeholders · Sustainable bonuses · Executive compensation · Shareholders

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In the past few years, executive bonuses and corporate incentives have been strongly criticised for encouraging excessive risk-taking and cost-cutting that created the conditions for the global financial crisis and the subsequent economic recession (Lorsch and Khurana 2010). Bonuses have become a symbol of ‘irresponsible’ behaviour and governance failure, in view of their in-built mechanism to reward short-term egoistic practices that go against broader often long-term societal goals, with shareholder value (i.e., the financial return that a shareholder is able to obtain from his or her investment in a firm) being prioritised to the detriment of stakeholder interests (Guerrera 2009a; Hahn et al. 2010; Lenssen et al. 2010; Jensen 2001). This can be seen to contradict the move towards a recognition of a much broader set of stakeholders rather than shareholders only, an evolution observed since Freeman (1984) introduced the stakeholder concept to a management audience (Laplume et al. 2008; Mitchell et al. 1997). Bonuses vividly illustrate the greed that has also been targeted in the recent Occupy movement that embodies protests of ‘the 99 %’ against the 1 % that ‘gets everything’ (cf. Lansley 2011).<sup>1</sup> In the aftermath of the financial crisis, media attention and regulatory responses focused on excessive bonuses earned for dealing in complex financial products and irresponsible practices such as lending without collateral. Condemnation has spread beyond the financial services industry, however, as incentive schemes for (top) managers have become common in many companies around the world.

In that context, bonuses started to be reconsidered, with the emergence of so-called ‘sustainable bonuses’ as a new trend that might signal a move towards corporate responsi-

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<sup>1</sup> See, for example, <http://www.occupywallst.org/>, <http://wearethe99percent.tumblr.com/>, or <http://www.occupytogether.org/>.

bility (WBCSD 2010; Conference Board 2012).<sup>2</sup> Integration of this instrument into employee incentives was also clearly recommended by top management of leading companies in several recent surveys (Lacy et al. 2010; Tonello 2010). Including social and environmental criteria in executive compensation in this way was seen as recognition of wider societal and stakeholder considerations in addition to the traditional focus on shareholder value and mere financial performance. While the importance of considering broader non-financial stakeholder criteria in executive compensation had been mentioned before (Berrone and Gomez-Mejia 2009a; Ceres 2010; Lorsch and Khurana 2010), only recently a few companies have started to implement sustainable bonuses in a more comprehensive manner as part of, so-called, Balanced Scorecards that recognize the interconnectedness between social, environmental and traditional business performance (Kaplan and Norton 2005). The academic literature on this topic is currently limited (cf. Berrone and Gomez-Mejia 2009a; Renwick et al. 2012), with empirical findings often inconclusive and largely focused on archival data from the North American context. This gives the opportunity to explore this new instrument using a qualitative case-based method aiming at generating detailed insights regarding initial setups and peculiarities, which is what this study will do.

This article analyses four illustrative cases from the Netherlands, where several large companies started to pioneer with bonus systems that reflect broader societal concerns. The Netherlands is a country with a disproportionate number of successful internationally operating companies, which are subject to the 'normal' demands for shareholder value in international financial markets. At the same time, the Netherlands has historically been a stakeholder-oriented country, known for its 'polder model', a social system of collaborative decision making that highly values consultation and includes concern for a range of stakeholder interests (Kolk and Pinkse 2006).<sup>3</sup> It is,

<sup>2</sup> In this article, we use the term 'sustainable bonuses' to identify the practice of linking (components of) compensation packages and incentive plans to non-financial dimensions of sustainability performance. We acknowledge the variety of possible reward packages (e.g., combination of cash, performance-related bonus, long-term incentives, and non-financial and intangible benefits, including job security, career development, company awards, tax exemptions and personal recognition), but we use a generic label for the purpose of this study.

<sup>3</sup> As part of its generic approach for collaborative decision making between stakeholders, the Netherlands also institutionalised multi-stakeholder processes in strategic environmental decision making. In the so-called Dutch 'green polder model' introduced a decade ago, social organizations were given the opportunity to air their views and present their arguments at an early stage in the decision-making process involving sustainability-related large-scale projects. For further details on the Dutch green 'polder model', see Glasbergen (2002).

therefore, a natural context within which to study initiatives to balance a shareholder orientation with a consideration of a broader set of stakeholders. More specifically, the four companies studied in this article (AkzoNobel, DSM, Shell and TNT) appear to represent best practices (albeit in an early experimental stage) of a move towards more stakeholder-oriented sustainable bonus systems, which may be perceived as more responsible than the 'regular' approaches that have prevailed thus far.

To what extent this is or can be the case is open to question, however. Doubts have been raised as to whether the introduction of sustainable bonuses is more than the replacement of one 'perverse system' by another, as targets are usually proposed by management and appear very easy to achieve (e.g., Aan de Brugh 2010; Keuning 2010). There are suspicions that sustainable bonuses have emerged just because regular bonuses have become controversial and untenable after the financial crisis, and thus simply embody a new way to serve managers' self interest. While managerial motivations are hard to establish, also in view of social desirability and reputational issues, an analysis of setup and criteria of sustainable bonus systems can help to shed some light on the degree of window dressing that may be involved. The article highlights in particular the role of benchmarking and contractability of sustainability performance measures in the design of sustainable bonuses and discusses inherent advantages and limitations. In this way, it aims to contribute to more insight into the (possible) substance of corporate responsibility practices and the feasibility of a stakeholder orientation. This broader debate and the related academic literature on executive compensation will be reviewed first, before moving to an examination of the sustainable bonus systems of the four companies. A discussion with theoretical and managerial implications from the case evidence, as well as its limitations, concludes the article.

## Stakeholders and Shareholders

There has been a longstanding debate on the question 'for whom' a company exists. The stakeholder approach was originally introduced to explain why business has responsibilities that go beyond the maximisation of profits to include the interests of non-stockholding agents. It thus clearly departed from agency theory, according to which managers should serve the interests of their shareholders as the suppliers of capital and as principals (Shleifer and Vishny 1997). If a company would focus solely on such narrow objectives, the expectations of other stakeholders would be neglected, and in turn their support could be compromised in the long term. Advocates of the stakeholder perspective consider as a starting point that 'all

persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and that there is no *prima facie* priority of one set of interests and benefits over another' (Mitchell et al. 1997, p. 58).

Freeman's (1984, p. 46) definition of stakeholders as 'any group or individual who can affect or is affected by the achievement of the organization's objectives' is most widely acknowledged (Laplume et al. 2008; Mitchell et al. 1997). It was refined by Starik (1994, p. 90) to also include those who 'are or might be influenced by, or are or potentially are influencers of, some organization'. The two definitions point first to individuals or groups who are sufficiently powerful to affect the proper functioning of an organization (e.g., employees, suppliers, lenders, customers or regulators). The motivation of the company to cater to the demands and concerns of these powerful stakeholders may be mainly instrumental: Unless stakeholders and their interests are 'dealt with' (Freeman 1984, p. 126), the organization cannot continue to function adequately. However, managers may deliberately choose to account for stakeholder demands out of a sense of moral duty as well. Freeman's and Starik's definitions also embrace those actors who are not in the position to alter corporate activities, but who are or might be affected by companies' operations (e.g., small suppliers of a large company, small investors and individuals living close to a large plant). The motivation underpinning corporate initiatives targeting these relatively powerless groups is ethical: Managers perceive that they have the moral duty to ensure that their activities do not negatively affect (or instead contribute positively to) the wellbeing of various actors. According to Carson (1993), companies have positive duties towards all stakeholders, which are only constrained by negative duties (such as not doing harm and not breaking the law), but some stakeholders can be more important than others.

It is regarding this stakeholder prioritisation that problems may arise. A company is a network of relationships between a variety of actors, with interests that are not always congruent. Actors have different motivations to engage in relationships with a company and expect different benefits from their collaboration. This means that dealing with stakeholders poses complexities for business in view of conflicting interests (cf. Daily et al. 2003). In the management literature, efforts have been made to assess stakeholder salience for managers by looking at stakeholder characteristics, for example, their power, legitimacy and urgency (Mitchell et al. 1997). However, while helpful as a descriptive tool to classify stakeholder groups, managerial perceptions are crucial in determining whom and what really counts most, and they thus shape the relative values that are attached to stakeholders in a particular situation and context (cf. Elms et al. 2003). The array of discretionary choices in the context of competing interests

means that managers have ample opportunity to pursue their own causes, just because there are so many 'masters' to serve (Jensen 2001; Sternberg 1997).

Stakeholder theory in that sense offers no solution regarding a prioritisation, as companies and their managers can pick and choose depending on their own preferences and what fits them best (cf. Fransen and Kolk 2007). This criticism led Jensen (2001) to plea for an 'enlightened stakeholder theory', which prescribes attention for those stakeholders that influence long-term market value. Taking a combined stakeholder agency perspective, Hill and Jones (2002) pointed at the diffusion and divergent interests of stakeholders and the information asymmetry between managers and stakeholders that usually leads to power differentials that benefit managers. Managers may profit by setting terms to their own advantage and increasing losses incurred by dispersed stakeholders who may have difficulty to oppose undesired steps collectively (cf. Kolk and Pinkse 2006).

At the same time, the shareholder value maximisation (SVM) model has fallen into disgrace after the financial crisis in particular, with its limitations being highlighted broadly, even from unexpected quarters. Consider, for example, the following quotes from Jack Welch, former CEO of General Electric and said to be the 'father' of SVM (Guerrera 2009b, p. 1), 'On the face of it, shareholder value is the dumbest idea in the world.' 'The idea that shareholder value is a strategy is insane.' 'Shareholder value is a result, not a strategy.' 'It is the product of your combined efforts—from the management to the employees. Your main constituencies are your employees, your customers and your products'. And the CEO of Unilever, Paul Polman, more recently phrased his view on the demise of SVM as follows (Stern 2010, p. 12): 'I do not work for the shareholder, to be honest; I work for the consumer, the customer.' 'I'm not driven and I don't drive this business model by driving shareholder value. I drive this business model by focusing on the consumer and customer in a responsible way, and I know that shareholder value can come'. The SVM targeted by both CEOs is one that focuses on short-term performance, often resulting from executive bonus systems that were structured accordingly, driven by 'principals' apparently lacking a long-term perspective.

This seems to point at a 'missing link' in this broader debate, and in stakeholder theory more specifically, which is the lack of alignment of incentive structures with stakeholder prioritisation. According to Elms et al. (2003), stakeholder theory provides normative principles to assess the relative importance of stakeholders but fails to look at the actual implementation that should come with it, that is the incentives to indeed serve priority stakeholders. Their exploratory case study showed a mismatch between 'ethics and incentives', a conflict between normative guidelines

and the system through which physicians generate income. Obviously, the US health care industry, on which they focused, is rather peculiar and different from large multinationals attuned to international financial markets. Still, the thesis proposed by Elms et al. (2003) seems very worthwhile to examine further in relation to the sustainable bonus systems developed recently to recognise wider societal and stakeholder considerations, i.e., whether the principles match the incentives to guide managerial behaviour. Before presenting our evidence, however, we next outline a review of extant literature on sustainable bonuses and provide the motivation behind the choice of specific aspects in our analysis relevant to understanding the alignment of incentive structures with stakeholder prioritisation.

### Linking Sustainability to Compensation: Emerging Practices and Review of Academic Research

While pay-for-performance is not a new phenomenon, in recent years there has been a growing pressure to consider sustainability performance as part of the executive compensation formula. An increasing number of multinationals, such as Intel, Alcoa, Group Danone, National Grid and Xcel Energy, have reportedly incorporated sustainability into their bonus structures. On the whole, however, these programmes remain a minority. According to a 2010 report by Glass Lewis (2011), which examined publicly traded companies in the United States, the United Kingdom, Australia, France, Germany and the Netherlands, 29 % of companies disclosed a link between compensation and sustainability. Results from a survey of US public companies by The Conference Board (2012) revealed that 11 % of respondents integrated sustainability objectives into business operations by linking compensation and sustainability. Furthermore, a recent report by Ceres (2012) found that only 39 out of 600 companies have formally tied sustainability performance to executive compensation, while an additional 53 companies are making such linkages without explicitly disclosing related targets. As of January 2012, only about 10 % of Standard and Poor 100 companies had directly linked sustainability to their incentive systems, thereby suggesting that most executive compensation schemes continue to be tied exclusively to financial performance.

With regard to the academic literature on this topic, while there is an extensive body of research in accounting and finance that empirically examines the relationship between firm performance and executive compensation (cf. Jensen and Murphy 2004), there is only a limited number of studies currently available on the link between compensation and sustainability (cf. Berrone and Gomez-Mejia

2009a; Renwick et al. 2012). Early research findings from 186 US firms on the Forbes list revealed a strong relationship between CEO compensation (total compensation and salary) and firms' environmental reputation, but also that CEOs are not necessarily rewarded for their firms' environmental record and, moreover, are not stimulated towards doing so by the structure of such firm compensation systems (Stanwick and Stanwick 2001). McGuire et al. (2003) compared the estimation of two measures of sustainability (total social weaknesses and total social strengths measured by KLD), using salary, bonus and long-term incentives as independent variables along with lagged return on assets and selected control variables, including employees and industry context. Only salary and long-term incentives are found to be statistically significant in the social weaknesses model. With a similar research design, Mahoney and Thorne (2005) provide evidence that only some elements of compensation matter to certain measures of sustainability.

More recently, Deckop et al. (2006) investigate the influence of short-term and long-term compensation in two distinct regressions of social performance. In line with the literature on executive compensation, they find that financial performance is positively related to social performance regardless of the compensation measure employed, but that the two measures of remuneration have opposing effects on social performance. A study by Cordeiro and Sarkis (2008) of 207 US firms from the Standard & Poor 500 finds that only in firms with an explicit linkage between environmental performance and executive contracts is there evidence for an impact of environmental performance on CEO compensation levels. Finally, Berrone and Gomez-Mejia (2009b) document stronger support for environmental performance being positively associated with CEO total pay in a sample of 469 US firms. The study also reveals that in practice companies with an explicit environmental pay-for-performance scheme reward environmental strategies more than without such programmes, therefore, suggesting that some of the mechanisms presently in place may play a merely symbolic (e.g., window dressing) role.

In summary, while prior findings initially contribute to understanding the empirical links between sustainability and executive compensation, three limitations from extant literature emerge. First, past studies document with mixed evidence the impact of sustainability performance on executive compensation (or vice versa in a reversed causality relationship) largely relying on archival (longitudinal) data from US corporations. Field studies that provide insights into the actual implementation of sustainability incentives, and in other contexts than the US only, are currently missing. Second, the studies available refer to a period preceding the global financial crisis, therefore not considering a modified scenario that may have altered the

underlying firms' motivations to integrate sustainable bonuses in their traditional incentive systems. Third, the embryonic stream of articles previously reviewed is not yet drawing on a more established body of research in management accounting and control that pays ample attention to the use of non-financial information in the design of incentives schemes. In particular, the academic literature on the Balanced Scorecard that examines a variety of non-financial drivers of firm performance has so far been largely overlooked in the area of sustainability.

The objective of our study is therefore twofold. We aim at further understanding the role of sustainable bonus systems by exploring this emergent practice in more detail on initial implementation and peculiarities compared with previous quantitative analyses mainly confined to the North American context. The discussion of recent company cases seems to be an appropriate research method of obtaining more insight into best practices, issues and dilemmas related to sustainable bonuses. Additionally, motivating managers to engage in sustainability requires the design of incentive systems that effectively balance the risk–reward relationship of the multiple possible decisions that a manager might take. Here, we focus our attention on key specific aspects affecting the design of sustainability incentives that remain underinvestigated, namely, the role of benchmarking and contractability of sustainability performance measures.

From the previous section, it appears that an important mechanism in the area of sustainability is to seek inclusion and legitimacy from relevant stakeholders. In particular, firms can target inclusion on one of the 'best in class' indices that serve to identify sustainability leaders in comparison with their industry peers. Among the available indices, the Dow Jones Sustainability Index (DJSI) is probably the most established because of its global reach, brand visibility and continuous monitoring of companies. It seeks to verify that a firm's goals and actions align with societal values such as environmental sustainability, labour and human rights, anti-corruption practices and community engagement (see a brief description of the DJSI objectives and methodology in the Appendix). In doing so, it provides meaningful signals of social legitimacy. Furthermore, because the indices rate firms' performance based on these criteria to decide whether to add or drop firms from their lists, indices such as DJSI serve as salient stakeholders that articulate changes in social legitimacy towards the market. In addition, institutional investors are increasingly relying on these indices to create their portfolios, albeit prior research that examined the effects of DJSI's addition/deletion is limited (López et al. 2007; Ziegler and Schröder 2010; Wai Kong Cheung 2011). More recently, Robinson et al. (2011) provide evidence that being added to the DJSI results in sustained increase in a firm's share price,

suggesting that the benefits of being included on the index outweigh the costs associated with complying with the ranking criteria. In this article, we are interested to document whether the DJSI is used as *external* benchmark in the design of sustainability incentives as alternative to *internal* benchmarks based on a set of specific firm sustainability metrics. Staying on top of the DJSI has also a temporal dimension that is clearly linked to the issue of legitimacy and stakeholder saliency. Drawing on the recent study by Wang and Choi (2010), our attention will also be focused on the *temporal consistency* of inclusion in a sustainability index like DJSI, referring to the reliability of a firm's sustainability performance over time with respect to a particular stakeholder group or domain. High temporal consistency indicates that how a firm treats its stakeholders today strongly predicts how they can expect to be treated tomorrow. In case a firm's treatment of a stakeholder group markedly varies with time, it can be argued that the firm's sustainability performance demonstrates low temporal consistency.

Next, it can be inferred that measuring sustainability performance is problematic in comparison with other (nonfinancial) performance measures because of several limitations that potentially hinder the contractibility associated with these metrics for incentive purposes. In this respect, multi-task agency theory (Holstrom and Milgrom 1991) provides a rich conceptual framework that is useful to understand the role of incentive schemes designed to align the interest of the manager with a firm's sustainability objectives. Hence, in our analysis, we consider two core properties of performance measures that are examined in previous studies on environmental management (cf. Berone and Gomez-Mejia 2009b; Cordeiro and Sarkis 2008; Lothe et al. 1999, Lothe and Myrtveit 2003) and management control/Balanced Scorecard (cf. Luft 2009; Perego and Hartmann 2009). First, we address the *verifiability* of sustainability measures, meaning that measures can be substantially duplicated by independent measurers using the same measurement methods. Verifiability implies thus a small measurement dispersion, high reliability and limited personal bias or subjectivity. Second, we consider the *controllability* of sustainability performance, a property that captures the influenceability of a performance measure through a manager's action. In agency theory terminology, it reflects the change in the mean of a performance measure in response to a change in the agent's action. When measurement processes cannot ensure verifiable and controllable performance measures, the contractibility of these measures is hindered because they make it more difficult to elicit managerial effort and therefore become less suitable as basis for optimal incentive mechanisms.

The next section further explores these aspects. The four qualitative cases from the Dutch context introduced in the



beginning of this article represent most comprehensive attempts at implementation so far and will form the empirical input for our analysis. Seen in the context of the debate 'for whom' a company exists, the literature has pointed at a mismatch between the prioritisation of main stakeholders on one hand and the actual managerial incentive scheme put in place on the other (Elms et al. 2003). By analysing the setup and criteria of the different incentive systems that they have introduced, our case analysis aims to help shed some more light on the extent to which sustainable bonuses might be seen as a credible sign of corporate responsibility or rather as window dressing.

## The Sustainable Bonus Cases

### Background and Context

We consider four Dutch multinationals that have started to pioneer with sustainable bonuses in recent years: AkzoNobel (chemicals), DSM (life and materials sciences), Shell (oil and gas) and TNT (transportation and distribution). In April 2009, AkzoNobel was the first, also a pioneer worldwide, because it linked the level of the sustainable bonuses to the company's average position in the DJSI during a period of 3 years; an approach it changed in 2011 though, as will be explained in the following. Before examining the different systems in somewhat more detail, it should be noted that there was no mainstream shareholder pressure on these companies to introduce sustainable bonuses at the time. Shell was targeted in May 2009, but that related to ('regular') executive compensation being paid despite the fact that the required (financial) performance targets had not been met. A majority of shareholders voted against the company's executive pay plan because these objectives had not been realised. This was a rather unusual event disregarded by the company as bonuses were paid anyway. A year later, Shell introduced a new bonus system that included sustainability criteria. Interestingly, it followed the example of AkzoNobel, whose CEO chaired Shell's remuneration committee, by initially taking the company's position in the DJSI as main criterion as well. DSM and TNT also started with sustainable bonuses in 2010, but took a rather different approach relying on internal benchmarks, as will be discussed in the next section.

More generally, looking at the societal setting, the Netherlands witnessed a broader debate on the (un)desirability of bonuses following the financial crisis. Shareholder domination as well as the need to consider wider stakeholder interests came to the fore, with a plea to move away from the Anglo-Saxon model, back to the Dutch 'polder model' that includes concern for a broad set of

stakeholders. So that context may have played a role in changes in bonus systems, but it was not targeted at sustainability and these four companies specifically. To the contrary, large institutional investors in the Netherlands as well as the main Dutch retail shareholders' association opposed the introduction of sustainable bonuses. Their standpoint was in favour of sustainability as part of regular business, not a separate dimension to be separately addressed. They also raised objections that a range of indicators would disperse efforts and was likely to be opaque because some targets will always be met. Only a small Dutch association of sustainable investors was strongly in favour, and proposed in 2010 that companies should have a minimum of one third of their bonus based on sustainability, with at least 60 % of variable pay targeting long-term aspects (Aan de Brugh 2010; Hol et al. 2010; Schiffers 2010a). In the Dutch media, reactions to AkzoNobel's move towards incentives tied to an external benchmark were mixed. While some praised the introduction of a sustainable bonus in recognition of the firm's commitment to societal longer-term considerations, others pointed at the fact that the company had consistently ranked high in the DJSI and that management could thus reach sustainability targets without much effort (Aan de Brugh 2010; Keuning 2010). Issues related to the substance, and thus whether this might be seen as a sign of corporate responsibility that includes a better recognition of societal and stakeholder considerations, or rather as window dressing, will be explored next by looking in some more detail at the bonus systems themselves. We will highlight the main elements of the incentive programmes as they were adopted and evolved. The four cases illustrate differences mainly between two types of approaches, one based on an external benchmark and another with firm-specific internal criteria. Reflections on sustainable bonuses are influenced by the type of system chosen, so the two will be presented consecutively.

### Focus on External Benchmarking Criteria

Comparing the two companies that initially selected DJSI as external benchmark, clear differences can be seen. AkzoNobel was very explicit about how the DJSI ranking translated into bonus levels, involving long-term variable pay (50 % of total). An average number 3 position during a 3-year period translated into a 100 % bonus, rising to 125 and 150 % in case of average number 2 respectively number 1 position. In the case of Shell that was different: During 2009, performance on the sustainable development indicator (which included safety and DJSI in just 1 year) was rated as outstanding, even though Shell was not the sector leader. There was a clear difference here in terms of transparency. Furthermore, only 10 % of short-term

variable pay was at stake in the case of Shell. Concurrently, it can be argued that reaching the targets was relatively easy for AkzoNobel, as the company had consistently ranked high: It was number 1 in 2007 and number 2 in both 2008 and 2009. This thus feeds the idea that new sustainable bonus systems are meant to keep up bonus levels in times of declining financial performance related incentives (Aan de Brugh 2010).

In this context, it is very interesting to note what happened in the following year. In September 2010, both AkzoNobel and another company in the Netherlands, Royal Dutch Philips had been designated as leaders in their respective sectors, but this turned out to have been a mistake 2 months later. Allegedly because of a software bug, DJSI had to revise the ranking, and both companies became second in their respective sectors. The errors led the CEO of AkzoNobel (and also member of Shell's Board of Directors and chair of its remuneration committee) to criticise both DJSI and SAM, the organization responsible for the corporate sustainability assessment. He warned that this was something that 'could not happen again'.<sup>4</sup> Subsequently, at the end of 2010, Shell was removed from the DJSI altogether because of its involvement in oil spills in Nigeria. After the shareholders made explicit their preference for a downward adjustment of the bonuses, the company announced to modify once more the whole bonus system (Burgess and Steen 2009; Schiffrers 2010a, b). In the Appendix, we report the final DJSI rankings of the four case companies in 2010 and 2011.

The ranking lapses raised many questions regarding the reliability and transparency of the DJSI. This has been a broader debate, as DJSI's limitations were highlighted before: The fact that it is a conglomerate of indicators, which assesses not only performance but also the mere existence of policy documents, with environmental and social issues counting for less than half of the score in a mix of metrics that lacks full transparency; that information provided by companies themselves plays a large role (with non-reporters usually scoring lower); and that positions in the ranking are relative to competitors in the sector ('best in class'). This means, for example, that there may be opportunity for companies to check, or others might say influence, the evaluation and that a top ranking can be easy if competitors are much less active (at the same time, it can be very hard as well if the opposite is the case).

The DJSI has thus been subject to controversy, also in other cases. What attracted attention in 2010 as well was the removal of BP from DJSI following the Gulf of Mexico oil spill, while a few months later Halliburton (a company

also involved in Deepwater Horizon), qualified as both North American and world leader—commented upon by an environmental activist under the heading 'when pigs fly' (Siegel 2010). Still, a recent survey found DJSI to be most credible out of 16 sustainability indices: 48 % said it had high credibility, 19 % medium credibility and 12 % low credibility (with the remainder indicating 'don't know/not applicable') (Sadowski et al. 2010). It may, therefore, be difficult to find an alternative for those interested in using an external global indicator (FTSE4good, for example, scored 34, 16 and 9 % on high, medium and low credibility, respectively).

In 2011, both AkzoNobel and Shell moved to a new system for the sustainability components of their bonuses. Shell fully departed from DJSI and SAM and announced to rely instead on internal measures related to operational spills, energy efficiency and fresh water use. As the chairman of the remuneration committee (and CEO of AkzoNobel) put it in a letter to the shareholders: 'These targeted measures (...) reflect improvement opportunities identified through DJSI/SAM benchmarking and priorities agreed in consultation with the Corporate and Social Responsibility Committee'.<sup>5</sup> A month earlier, AkzoNobel had announced to use only SAM's assessment that contained measurable indicators and not the DJSI ranking that was also based on 'subjective' judgments made by an index committee.

AkzoNobel's move raised questions (even to the Secretary of Economic Affairs by Dutch parliamentarians), but did also receive support from sustainable investors who had labelled the DJSI index as a 'black box' before (Sprengers and Groen 2010). A major ('mainstream') institutional investor saw it as a small step forward compared with the DJSI system (AkzoNobel 2011), but noted a clear preference for just a few very specific criteria linked to the company's strategy, and requested transparency about targets. According to the chairman of the remuneration committee, full openness was not possible as the company regarded the information as 'commercially sensitive' (AkzoNobel 2011, p. 28–29). The criteria of AkzoNobel's system were and still are broadly in line with what the Dutch sustainable investors association recommended (accounting for a relatively large part of long-term variable pay). Nevertheless, specific stakeholders are not targeted; in that sense, the goals may be seen as a reflection of societal concerns in a broad sense at best, through an indirect consideration of a conglomerate of stakeholder concerns.

Shell's immediate reaction of reconsidering its bonus system after its removal from DJSI raised doubts as to the

<sup>4</sup> <http://www.between-us.nl/525/dow-jones-sustainability-index-akzonobel.htm>.

<sup>5</sup> <http://www.annualreportandform20f.shell.com/2010/directorsremunerationreport.php?cat=m>.

actual integration of the sustainable bonus in executive incentive schemes. Referring back to the arguments discussed in the previous section, Shell did neither seem to explicitly address specific stakeholders, so one might suggest that the sustainable bonus has been predominantly driven by management. While its criteria were not fully transparent in 2010, when it used DJSI as criterion, this has become even less the case in the new setup. In effect, Shell moved to a system with internal criteria, albeit rather different than the ones used by DSM and TNT, to which we now turn.

#### Focus on Internal Benchmarking Criteria

Different from AkzoNobel and Shell that started with DJSI, DSM and TNT designed firm-specific measurements from the very beginning. The latter two companies apparently deliberately choose to take another path in 2010, as their DJSI scores had been consistently high: DSM was sector leader in earlier years (2004, 2005, 2006 and 2009), and among the top leaders in the intervening years, while TNT had been global sector leader in transportation since its inclusion in 2005, as well as super sector leader in the larger industrial goods and services cluster since 2007. The sustainable bonus systems of both DSM and TNT relied on multiple criteria from the start.

Interestingly, it is here that we find attention to ‘main constituencies’ mentioned by Jack Welch, as quoted in a preceding section. DSM includes metrics on (ecoinnovative) products, the environment and employees; TNT on customers, and also employees and the environment. In that sense, both use a multistakeholder approach. It might be argued that these are ‘stakeholders’ that contribute to (long term) market value: For employees and particularly products and customers, this seems relatively straightforward. For the environment, identified sometimes as ‘stakeholder’ as well, this appears less obvious. However, the criteria selected by both DSM and TNT seem to be directly relevant to their core business as lower carbon dioxide/greenhouse gas emissions and higher energy efficiency is likely to reduce both costs and risks, and valued by investors concerned about climate change as well (Kolk et al. 2008).

Both DSM and TNT have an equal balance between long-term and short-term bonuses and, like AkzoNobel, award half of their variable pay to non-financial targets. In Shell’s case, only the annual bonus (10 % of short-term variable pay) was involved for the sustainability criteria (and another 10 % for safety performance). DSM and TNT clearly explain these non-financial components, but do they not reveal exact targets; this is invariably labelled as ‘commercially sensitive information’. It is therefore unclear how easily top managers of both companies can

reach the objectives and obtain bonuses. Hence, while there is transparency about the system itself, and the components are rather specific and appear to be closer aligned to just specific stakeholder interests and longer-term market value than in the cases of AkzoNobel and Shell, what leads to fulfilment of objectives and what not remains obscure. So it is here that DSM and TNT managers have the possibility to set terms to their advantage.

This particularly differed from AkzoNobel’s old system that was explicit about rewards associated with specific DJSI rankings. In its new approach, still focused on an external benchmark but a different one (SAM), this has become less clear though—as a large Dutch institutional investor also noted at the 2011 shareholder meeting that approved the proposed change (AkzoNobel 2011). Under Shell’s old system (based on DJSI ranking), it could still be argued that, while the company did not disclose the exact link between position and variably pay levels, its ranking was publicly disclosed at the time. The newly introduced systems seem therefore less transparent, even in comparison with bonus systems at DSM and TNT where percentages for the sustainability components are disclosed and some information is available for each of them.

## Conclusions

### Discussion and Conclusions

Table 1 provides a summary of the case findings organized around main aspects on a comparative basis. Our case evidence documents that some leading companies start to recognize sustainability factors into their rewards and incentives. For the four companies examined, there is already an established practice of using a sustainable bonus as part of a Balanced Scorecard approach which integrates sustainability factors into their business strategies. Interestingly, the firms analysed here have implemented rather different first steps in this area, with two (DSM, TNT) that developed multiple firm-specific benchmarking criteria, and two others (AkzoNobel, Shell) that started with a system that took the DJSI as the single non-financial performance indicator. The former, with an internal focus, offers the opportunity to gear performance more directly to specific stakeholders and, as Jensen’s ‘enlightened stakeholder theory’ and even Jack Welch’s denunciations of shareholder value maximisation suggest, consider main constituencies that may have a positive influence on longer-term market value as well.

This ‘key stakeholder’ recognition seems to be visible in the systems designed by both DSM and TNT, and half of the bonus earned this way is long-term in nature. In that sense, main stakeholders appear to match some of the incentives



**Table 1** Summary of case findings

	Benchmarking		Measurement properties of sustainability indicators		Sustainable bonus		
	Criteria used	Temporal consistency	Verifiability	Controllability	Short-term incentives	Long-term incentives	Eligibility
Akzo Nobel	2010: DJSI, 3-year average performance 2011: DJSI's SAM-score only (instead of DJSI's total ranking)	High; excellent DJSI ranking compared to peer group	Ranking publicly available (revised annually)	Low	30 % of short-term cash bonus consist of personal targets, among which sustainability targets Remaining targets are linked to EVA	Long-term incentives is performance share plan: 50 % of the conditional grant of shares is linked to the DJSI ranking	Board of directors: 64 % (CEO) and 57 % (Board members) of total remuneration based on variable elements
Shell	2010: DJSI, one year's performance 2011: internal indicators related to operational spills, energy efficiency and fresh water use	Not temporally consistent; high but not excellent DJSI ranking in 2010	Ranking publicly available (revised annually)	Low in 2010, high in 2011	10 % of short-term cash bonus linked to sustainability targets Another 10 % linked to safety performance	Long-term incentives in performance share plan: 20 % of the conditional grant of shares is linked to hydrocarbon production	Board of directors
DSM	Environmental indicators and targets include: ECO+ product development, energy efficiency improvement, employee engagement Greenhouse gas emission reduction	High; excellent DJSI ranking compared to peer group	Limited, targets are not disclosed and treated as 'commercially sensitive information'	High	50 % of short-term cash bonus consist of personal targets, among which sustainability targets (re first set of indicators mentioned)	Long-term incentives is performance share plan: 50 % of the conditional grant of shares is linked to greenhouse gas emission reduction (re second indicator mentioned)	Board of directors
TNT	Environmental indicators and targets includes CO <sub>2</sub> efficiency improvement, and health & safety	High; excellent DJSI ranking compared to peer group	Limited, targets are not disclosed and treated as 'commercially sensitive information'	High	15 % of short-term cash bonus linked to environmental targets Another 20 and 15 % for respectively customer and employee satisfaction targets	Long-term incentives is performance share plan: 50 % of the conditional grant of shares is linked to non-financial targets (employees, customers and environment)	Board of directors

Source: our elaboration from company websites and annual reports

given to managers to indeed serve them. This is different for the systems with an external benchmark, as set up by Akzo-Nobel and Shell, where the link with stakeholders was much vaguer and not directly noticeable, with DJSI being at best a

more indirect representation of 'society' and a conglomerate of diffused stakeholder interests. In this respect, research that examined the relationship between DJSI and long-term market value is sparse and not conclusive (cf. Robinson et al.

2011); therefore, adding doubts about the ability of this external benchmark to send credible signals to the investor community.

At the same time, DJSI is an external sustainability rating that has considerable credibility, also more than other comparable ones, even though full transparency about weights and exact assessments is lacking. DSM and TNT disclose information about the components included in their firm-specific systems but not about actual targets as these are seen as commercially sensitive proprietary information. This makes it more difficult for outsiders to check whether objectives are realised and how easy it is to realise a bonus, as an external assessment body is lacking. In the system used by AkzoNobel in 2010, there was full transparency as to what ranking would lead to which bonus, while for Shell this was much vaguer. After DJSI became subject to controversy following lapses and Shell was removed from the index because of controversial practices in Nigeria, both AkzoNobel and Shell dropped the ranking from their incentive systems. AkzoNobel retained an external indicator (the SAM assessment that is part of the DJSI process) but without full clarity about scores in relation to bonus levels. Shell moved instead to firm-specific operational and environmental criteria that had no obvious relationship to stakeholders and with much less transparency (low verifiability) than DSM and TNT. As a trade-off, relying on internal firm-specific criteria allows managers a much higher level of controllability in their ability to influence sustainability performance as result of their decisions. Overall, it seems that for both AkzoNobel and Shell setting up a sustainable bonus with an external benchmark was crucial to the incentive system's credibility. The DJSI was an attractive solution because of its breadth and global branding, although both soon realised that this choice did not provide an appropriate fit to the company's sustainability strategy.

The size of the bonus is also something to be carefully considered, in connection with worries that the introduction of sustainability criteria may have been meant to keep up variable pay levels in times of declining financial performance related incentives. In the case of Shell, given the short-term nature only and the lack of clarity as to which DJSI position led to what bonus in their 2010 system (and continuing vagueness about the new system), such a motivation might be suggested; however, the fact that it only covers 10 % of the variable pay component diminishes the impact considerably. For the other companies, the sustainability bonus amounts to 50 %, thus forming a much more substantive part. How difficult it is to achieve the target is not always easy to assess though, as explained earlier for DSM and TNT. For AkzoNobel, this was clear in its initial system, and given its record in the DJSI, it can be concluded that realisation was not hard. Sustained

rankings as 'best in class' for quite some time may signal a high temporal consistency that could however become detrimental in terms of credibility of the underlying incentive system. Such a 'performance paradox' (cf. Meyer 2002) can be explained by the inevitable decay of using performance measurement systems linked to evaluation and compensation mechanisms: once firms rank consistently high, the informativeness of the signal embedded in the benchmark becomes weaker because the ability to differentiate among low and high performers is reduced. Staying on top of an external sustainability index for firms like AkzoNobel may thus have drawbacks over time in terms of a credible benchmark.

In summary, it may be a bit too early for a definite assessment as to whether the introduction of sustainable bonuses is a credible sign of corporate responsibility or window dressing, given the emergent state of the instrument. It also seems to be still evolving following initial experiences with two types of benchmarking systems. One can argue that the move towards sustainable bonuses signals a broader awareness of responsibility vis-à-vis society and stakeholders; at least that is what that CEOs and boards of the respective companies have stated repeatedly. DSM and TNT have linked the new type of incentives to prioritised stakeholders, thus attempting to align principles with actual firm-specific measures. Shell has been least consistent among the firms considered, moving from an external benchmark to internal criteria, and with only a relatively small percentage of short-term variable pay involved. The credibility of the corporate responsibility sign therefore appears to be very limited, and gives rise to suspicions about window dressing. Whereas sustainable investors have praised AkzoNobel for its sustainability strategy, of which the bonuses were part, its CEO's frustration with DJSI has led to a move away from this ranking towards a benchmark that is still externally oriented but not fully verifiable and transparent.

It must be further noted that AkzoNobel, DSM and TNT acted in line with recommendations of a Dutch sustainable investor association by awarding a relatively large percentage of (long term) variable pay for sustainability. Such a move witnesses an interesting case of how managers assess stakeholder salience in a particular context and situation (Mitchell et al. 1997). Among the array of discretionary choices in the context of competing interests, our case evidence suggests that managers may be inclined to implement a sustainable bonus mechanism as a new way to serve their own interest at a time when 'regular' bonuses became too controversial and untenable. This suspicion increases when there is a lack of transparency about the exact criteria and targets, and what actual effort it takes (or not) to achieve bonus targets. In the current setup of the incentive systems, such a prioritisation applies to all

companies, which they legitimise by pointing at the fact that internal benchmarking performance criteria and detailed information cannot be publicly disclosed for reasons of competitiveness. It is hard to establish to what extent this is a valid argument if one does not know the sector in detail, because the type of social and environmental impacts differ substantially per industry. Still, while understandable to some extent for customer issues (e.g., customer satisfaction rates or customer base characteristics may be directly useful input for competitor moves), it is less easy to see the alleged argument of proprietary information for employee matters (e.g., outcomes of satisfaction surveys) and particularly for specific environmental aspects, which are highly firm-specific and often rather technical. At this stage, the argument is easily used but not sufficiently substantiated, so it seems.

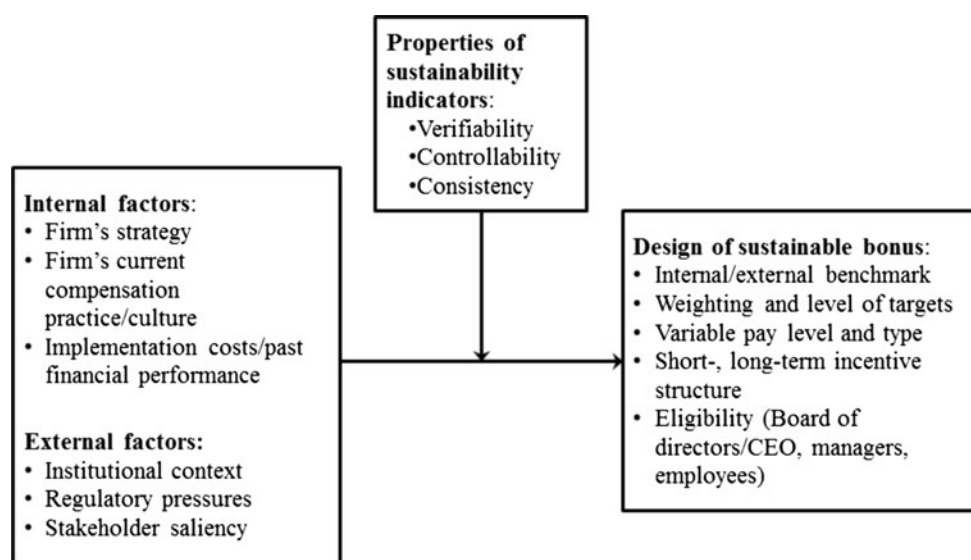
### Theoretical and Managerial Implications

This article explored the potential role of sustainable bonuses, which has emerged as one of the new corporate responsibility trends in recent years. ‘Regular’ bonuses became rather controversial after the financial crisis exposed that managers earned excessive amounts for dealing in complex financial products and other irresponsible practices such as lending without collateral. Condemnation spread beyond the financial sector though as incentive schemes for top managers had become common in most companies around the world, with an in-built mechanism to reward short-term individual behaviour rather than longer-term societal interests. In that context, ‘sustainable’ bonuses started to emerge as a possible way of including wider societal and stakeholder considerations in addition to the

traditional focus on shareholder value and financial performance only. While the importance of considering such broader sets of criteria and stakeholders had been mentioned before, a more comprehensive implementation was lacking until recently.

This article examined four illustrative cases from the Netherlands, where several large multinationals started to pioneer with such sustainable bonuses in the past few years. Analysing the setup and criteria of the different systems that they have used aims to shed some more light on the extent to which sustainable bonuses might be seen as a credible sign of corporate responsibility or rather as window dressing. Theoretically, a sustainable bonus system might help to address this via a better alignment of sustainability objectives into a business strategy. To explore this for the four case companies (AkzoNobel, DSM, Shell and TNT), the performance criteria, their link to stakeholders, the size and type of rewards and the transparency of the system and its elements were taken into account. On the basis of the case insights and prior literature on incentive systems, we propose a conceptual framework depicted in Fig. 1 that has both theoretical and managerial implications.

The framework proposes that the design of a sustainable bonus depends on a set of contingent variables that vary per company. In the first place, it can be argued that the optimal alignment of sustainability incentives is a consequence of a combination of internal and external factors. Among the internal variables, the fit between a firm’s strategy and the incentive systems in place seems crucial. Poorly aligned incentives pose conflict of interest challenges in dealing with possible risks inherent to sustainability objectives. A more balanced reward structure that assists in



**Fig. 1** Proposed conceptual framework of sustainable bonus alignment

overcoming the conflict of interest challenges and makes it easier for executives to behave appropriately is only possible if shareholder value and stakeholder value can be coherently aligned in a firm's strategy in the long term. This fit extends to broader elements of corporate culture and contingent-specific issues related to short-term costs associated with the implementation of sustainable incentives. Among the external factors that are likely to affect the choice of incentives in this area, institutional variables (e.g., regulatory and stakeholder pressures), stakeholder saliency (exemplified by the role played by the Dutch association of investors in our context) and current levels of both financial and sustainability performance (especially in the aftermath of the financial crisis) seem to play a significant role in a dynamic combination.

The contribution of our article is especially focused on the role of benchmarking (internal vs. external criteria) as a relevant element in the choice/design of sustainability incentive programmes. In this respect, three specific variables (verifiability, controllability and consistency of sustainability metrics) are expected to influence, as moderators, the actual design of sustainable bonuses within common approaches based on the Balanced Scorecard. Similar to an established literature in management control, it can be argued that differential incentive schemes can be more or less optimally designed depending on (a combination of) these measurement properties. The concurrent emergence of trade-offs, for example, in the presence of highly controllable but poorly verifiable internal benchmarks (like in the case of DSM and TNT), provides the type of tension that makes the fit of incentive schemes in multi-tasking contexts particularly complex to accomplish, with effects that are hard to predict. In this respect, we posit that theoretical advances in the area of sustainability incentives should be more strongly integrated in the extant debate on the measurability and contractability of performance measures, particularly of non-financial information (cf. Luft 2009).

While exploratory and incomplete, the conceptual framework can be additionally helpful in identifying the core elements that managers should carefully consider when deciding to setup incentives linking sustainability to executive pay. It is clear that there is no common blueprint for sustainability bonuses, although recent guidelines provide some useful steps (e.g., WBCSD 2010). Timing in the implementation seems a crucial aspect to be initially considered. For instance, for AkzoNobel, aligning incentives to sustainability goals represented a final step in reinforcing sustainability commitments and performance measurement processes already established. Other firms and contexts may require a different strategic role of incentive alignments in accelerating change, for example, in response to a crisis or in anticipation of competitive and regulatory pressures.

Establishing the 'right' performance measure, assessed and aggregated at the appropriate level, carries several managerial implications. The case evidence documents inherent trade-offs in the choice of benchmarks, showing how the adherence to external indexes such as the DJSI, while enhancing credibility, may simultaneously hamper the ability of managers to influence the ranking linked to peer group performance. The shift from external to internal benchmarks by Shell, for example, points at the increasing need of firms to balance transparency of their incentive schemes with a better alignment to their own firm-specific targets tied to local and global impacts. As a rather clear take-away point from the cases investigated, lack of temporal consistency or shifting incentive approaches seem to undermine the credibility of these practices, thereby lending credit to an act of window dressing rather than a serious attempt to integrate sustainability in traditional business strategies.

Furthermore, the level/type of rewards schemes and inherent eligibility may generate unintended effects that must be anticipated. While in one firm linking incentives to a corporate-wide metric may be seen as acceptable, the same approach may be received with frustration and eventually not be internalised if bonuses were traditionally linked to individual or team performance. One consideration that made Shell decide to shift back to a set of firm-specific sustainability metrics is related to the issue of controllability of these types of performance measures. Finally, similar to the challenges of incorporating leading indicators of corporate strategy success into compensation schemes, designing business models that cascade sustainability objectives into individual targets is far from trivial. In the target-setting process, it seems indeed inevitable that individual accountabilities cannot be disaggregated, because objectives are shared or delivered collectively. This potential lack of controllability and inherent risk is particularly true of sustainability-related actions, which often involve collaboration with commercial parties outside the company and across the whole supply chain. The complexity of defining boundaries and responsibility of sustainability performance should not be taken lightly.

#### Limitations and Opportunities for Future Research

While there is a strong case for sustainable bonuses, relatively few firms are apparently explicitly linking sustainability performance and compensation. One reason is the inherent conservatism of the remuneration governance process. The complex combination of regulatory push and peer benchmarking makes executive compensation an area of conformity rather than differentiation between companies. It definitely requires a larger number of companies to

implement similar systems (or perhaps a new mixed form that uses a combination of benchmarking/balanced scorecard approaches) before more transparency and openness about details becomes common. Specialists in compensation and benefits, remuneration committees and boards, investors and regulators should be part of the debate, demonstrating how sustainability can deliver long-term value through a better alignment of traditional incentive programmes in this area. In this respect, the main limitation of our study is the analysis of only four illustrative cases exclusively based on publicly available information (company websites, annual reports and press articles). We have focused our attention on the initial phase of implementation with the objective to shed light on main aspects that play a role in the decision to adopt/change sustainable bonus schemes. Additional evidence could be further collected, for instance, matching qualitative insights (e.g., through interviews with managers and firm's stakeholders) with longitudinal data on sustainability performance, to further explore the issues previously discussed.

It would be interesting to extend our study by examining other companies that have recently started with sustainable bonuses, as well compare incentive systems and their specific components in line with the theoretical model proposed, also considering different societal contexts (e.g., stakeholder vs. shareholder-oriented countries) and types of industries. The need for additional research applies more generally to the topic of sustainable bonuses as a specific emergent approach within comprehensive Balanced Scorecard systems comparable to the ones implemented by the four companies investigated. The management control literature stresses the importance of non-financial indicators as leading indicators of future financial performance (cf. Luft 2009). This philosophy emphasises the functional effects of non-financially related incentive schemes as an effective antidote against managerial myopia, defined as managers' dysfunctional inclination to only pay attention to immediate rather than distant future effects of their decisions. Clearly, in the area of sustainability performance myopia may be prominent. This means that future studies on sustainable bonuses may be inspired by the Balanced Scorecard literature in at least two ways.

First, further attention should be given to better understand the cause-and-effect relationships between sustainability performance indicators and financial performance measures. The debate taking place in management control literature on the 'information content' of non-financial performance measures such as customer satisfaction or operational efficiency could be expanded to include firms that adopted sustainability schemes and compare them with non-adopters in the refinement of extant theoretical modeling and empirical specifications in management control systems (Dikolli and Sedatole 2007). Improving our

understanding of the complex lead-lag relationships among sustainable performance and financial performance would also be useful in practice to shift the attention of short-horizon managers towards the long-term interests of the firm in alignment with sustainability strategies.

Second, there is a need to understand how sustainability indicators potentially subject to all kinds of measurement problems and biases affect managerial effort and decision making (cf. Berrone and Gomez-Mejia 2009a, b; Perego and Hartmann 2009). In absence of access to field data on the actual decisions and effects associated with a sustainability scheme, experimental research seems particularly appropriate in such an emergent state of practices. For example, experiments that manipulate a combination of measurement properties previously discussed (such as controllability or verifiability) and types/level of bonus schemes (e.g., individual vs. team based; single vs. multiple targets) could provide fruitful insights in structuring effective managerial incentives for sustainability efforts. A key advantage of an experimental design is the ability to disentangle complex effects among a set of variables, testing predictions from extant multi-tasking agency models on informativeness and effects on risk-bearing or managerial reputation. Such an endeavour would particularly contribute to shift the focus on current CEO-level research in the area of compensation and sustainability to middle management and employee levels of analysis.

### Appendix: Some Background on the Dow Jones Sustainability Indexes

The Dow Jones Sustainability Indexes (DJSI) were launched in 1999 as the first global sustainability benchmarks. The indexes are offered cooperatively by SAM Indexes and Dow Jones Indexes. They track the stock performance of the world's leading companies in terms of economic, environmental and social criteria. The indexes serve as benchmarks for investors who integrate sustainability considerations into their portfolios and provide an effective engagement platform for companies who want to adopt sustainable best practices.

The indexes' best-in-class approach means that they include only companies that fulfill certain sustainability criteria better than the majority of their peers. No sectors are excluded from this process. To be included or remain in the index, companies have to continually intensify their sustainability initiatives (source: <http://www.sustainability-indexes.com/>).

The Table 2 outlines the DJSI rankings in 2010–2011 of the four case companies investigated in this article.



**Table 2** DSIJ sector rankings for the four case companies

	Sector	2010	2011
AkzoNobel	Chemicals	#2 <sup>a</sup>	#2 <sup>b</sup>
Shell	Oil and gas	#2	Deleted
DSM	Chemicals	#1 <sup>a</sup>	#1
TNT	Industrial goods and services	#1	#1

<sup>a</sup> After changes because of a software bug discovered in September 2010

<sup>b</sup> As the article explains, for 2011 and onwards, sustainability performance is measured as AkzoNobel's average score in the SAM (sustainable asset management) ranking

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