

# Eyes on ESG scores: Unlocking the power of CEO letters

CEOs may have diverse objectives when communicating financial and ESG performance. We examine CEO letters as a source of information for evaluating ESG performance. Twenty-four participants to an experiment evaluated ESG performance of two FTSE 350 companies based on their reading of CEO letters. The participants' evaluation of the companies' ESG performance is consistent with LSEG's ESG score. Readers' trust and cognitive style influence their evaluation of ESG performance. Participants with a higher level of institutional trust evaluate ESG performance higher than the average of the participant group. Only participants with an adaptive cognitive style were able to clearly distinguish between the company with the low ESG score and the company with the high ESG score. If the CEO letter contains little information on ESG, readers will mainly focus on the top left paragraphs. If the evaluation of ESG performance is based on reading a CEO letter that contains comparatively more ESG information, readers will shift their focus to the paragraphs that contain ESG information. If, on average, readers are able to evaluate a company's ESG performance based on reading the CEO letter, the variability of ESG ratings may be an issue that users can manage.

Keywords: ESG score; CEO letter; eye-tracking; cognitive style

## Introduction

More and more investors are aligning themselves with the UN Principles for Responsible Investment (UN PRI, 2023). Among other things, signatories to the PRI are committed to integrating ESG aspects into the investment analysis and decision-making process as well as into ownership policies and to requiring appropriate disclosure of ESG aspects by the companies in which they invest. The demand for ESG information is increasing, as evidenced by the growth of PRI signatories' assets under management: at the end of 2016, ten years after the launch of the PRI, there were 1,400 signatories managing \$60 trillion (Amel-Zadeh & Serafeim, 2018), and by the end of 2023, the number of PRI signatories worldwide will rise to 5,372 (more than half of them, 2,843,

in Europe) managing more than \$121 trillion (UN PRI, 2023). On the supply side of ESG information, Stolowy and Paugam (2018) examined the expansion of non-financial reporting in the period between 2006 and 2016 and found that the scope of non-financial reporting has increased and the relative importance of financial information in corporate reporting has decreased significantly over the same period. They also found that constituents of the S&P 500 index were less likely to report sustainability information than constituents of EuroStoxx 600 index. The communication of financial, accounting, and, more recently, ESG information is largely regulated due to the information asymmetry between company management and external stakeholders. According to Delaney and Stewart (2021), the EU is the most ambitious regulator in the field of sustainable finance (European Green Deal, Non-Financial Reporting Directive, Corporate Social Reporting Directive, EU Taxonomy Regulation, etc.), while sustainability-related products and services (raw data, ratings and rankings, screening services, indices and benchmarks, and climate-specific products) are currently generally not regulated by authorities. As a result, ESG ratings vary considerably between different providers (Berg et al., 2022; Christensen et al., 2022). The European Commission (EC) has proposed new regulation to increase transparency in the disclosure of methodologies used and the integrity of ESG rating providers.

Companies can use their communication to legitimise their actions, decisions and results (Merkl-Davies & Brennan, 2011; Reverte, 2009). When CEOs communicate their financial and ESG performance externally, they may have other (discretionary) objectives or even potentially want to mislead their audiences, although one of the goals of corporate communication is to build trust between companies and their audiences. We use CEO letters as a source of information for evaluating the company's ESG performance, as the CEO letters in the annual reports are aligned with the information

presented in the annual report and consistently convey the companies' results and events (Merkel-Davies et al., 2011). In line with the calls by Gödker and Mertins (2018) and Merkel-Davies and Brennan (2017) for further research into the 'audience' perspective of non-financial communication, users of financial reports are at the centre of our research.

In this study, we first analyse the extent to which the assessment of companies' ESG performance based on the reading and interpretation of CEO letters is consistent with one of the many ESG score providers. We selected the CEO letters from two FTSE 350 companies in the same sector for the same time period, one with the lowest ESG score as provided by a commercial provider and the other with the highest. Then, twenty-four business students evaluated the ESG performance of the two companies based on their reading of the CEO letters. We find that, on average, the users' assessment of the company's ESG performance is in line with LSEG's ESG score: For the company with the low ESG score, average participants' evaluation was 0.2 points lower than LSEG's ESG score and for the company with the high ESG score, average participants' evaluation was 1 point lower than LSEG's ESG score on a scale of 0-10.

Second, we examine whether readers' trust and cognitive style (on a continuum ranging from intuitive to analytical ways of perceiving, thinking, remembering, and problem solving) influence readers' evaluation of the company's ESG performance after reading a CEO letter. We measure trust and cognitive style using validated questionnaires. We stratify the results of our participants based on their trust levels and cognitive styles. Individuals with higher levels of institutional trust rate ESG performance higher than the average of the participant group: for the company with the low ESG score, participants with stronger institutional trust evaluate the company with low ESG performance 0.2 points above the average of all participants and the company

with high ESG performance 0.4 points above the average of all participants on a scale of 0-10. The relationship between participants' cognitive style and their ESG evaluation is not so clear. We divided respondents into three groups based on their cognitive style: intuitive and quasi-intuitive, adaptive, and analytic and quasi-analytic. On average, only participants with an adaptive cognitive style were able to clearly distinguish between the company with a low and ESG score and the company with a high ESG score.

Participants with adaptive cognitive style largely agreed in their evaluations of both, low and high ESG performing company. When we compare the groups on the different sides of the cognitive style spectrum, we observe that participants on the intuitive side give lower grades for both low and high ESG performing companies than participants on the analytic side. The difference between the evaluations for the low ESG performing company and the high-ESG- performing company is smallest when they are evaluated by individuals on the intuitive side of the cognitive style spectrum.

Individuals with the adaptive cognitive style evaluate the low-ESG- performing company lower than participants on average (by 1.2 points on a scale of 0-10) and high ESG performing company higher than participants on average (by 0.8 points on a scale of 0-10). Individuals with the adaptive cognitive style also felt the need to justify their evaluation, which was generally not the case for individuals with other cognitive styles.

Finally, we are interested in what parts of the CEO letters readers focus on when evaluating the company's ESG performance. While reading the CEO letters, readers were recorded using an eye-tracker, so that we could gain insight into the parts of the CEO letter that readers focused on when evaluating the company's ESG performance. When reading a letter from the CEO of a low performing company, which contained mainly financial information, participants focused on the first paragraph of each page. When reading the letter from the CEO of a high performing company, which contained

more non-financial information, participants focused more on the paragraphs containing the non-financial information.

The most important contribution of our work is that it provides an insight on the less researched audience perspective of ESG communication and ESG ratings. It appears that readers of CEO letters recognise the fact that events and results more are presented more positively in these letters than in other parts of annual reports (Boudt & Thewissen, 2019; Merkl-Davies et al, 2011) and ‘discount’ for this fact in their evaluation of companies’ ESG performance. We propose further investigation of influence of mental discounting in the use of ESG information. We have confirmed that individual levels of institutional trust are related to the evaluation of ESG performance. The question arises whether personal characteristics of experts employed by ESG rating providers are related to ESG ratings and whether this could explain part of the variability in ESG scores between different ESG rating providers (Berg et al., 2022; Christensen et al., 2022). We believe that our findings are relevant for regulators in their attempts to increase the transparency of ESG ratings, for ESG rating providers and for investors.

In the next section, we develop research questions, followed by a description of the process, instruments and methods used in our study. After the results we present the discussion and limitations of the study.

### **Development of research questions**

Legislation (e.g., the Non-Financial Reporting Directive (NFRD) followed by the Corporate Sustainability Reporting Directive (CSRD) in the EU; the Companies Act 2006 in the UK) requires companies to disclose information on how they address ESG challenges. The required disclosures on ESG issues are also referred to as non-financial reporting. According to the EC, sustainable and responsible investment accounted for

46% of global investment in 2018 (Delaney & Stewart, 2021). Non-financial information is important for building trust in society by addressing society's expectations and needs, as well as to communicating with external stakeholders, including investors, about the company's medium and long-term value creation (Dinh et al., 2021). As a result, and due to market demand, more and more providers are offering a variety of sustainability-related products and services, including ESG ratings, rankings, indices and benchmarks, all of which are unregulated (Delaney & Stewart, 2021). Drempetic et al. (2020) raised the question of whether the way the ESG score measures corporate sustainability gives an advantage to larger companies with more resources, while not providing the necessary information for sustainable and responsible investment decisions. Recent research has shown that the ESG ratings of different rating providers differ significantly. Berg et al. (2022) investigated the reasons for the differences in ESG ratings. They were able to break down the divergence between different ESG rating methodologies into contributions to scope, measurement, and weighting. Christensen et al (2022) agree that the causes of disagreement between different rating providers are not clear, but come to the surprising conclusion that greater ESG disclosures of companies lead to greater disagreement of their ESG score among different ESG rating providers. Similar to other non-financial indicators, most ESG analyses leading to different ESG scores are performed manually by experts (Lyndberg et al., 2010). The EC has recognised that the market for ESG ratings is not functioning properly, which is limiting the transition of European financial markets to a fully sustainable and inclusive economic and financial system in line with the European Green Deal and the UN Sustainable Development Goals. The EC therefore proposes measures to increase the transparency of ESG rating methodologies and the integrity of providers through the Proposal for a Regulation of the European Parliament and of the

Council on the Transparency and Integrity of Environmental, Social and Governance (ESG) Rating Activities (2023).

According to Merkl-Davies et al. (2011), managers present the organisation's performance in line with their own perception of performance and provide explanations for management decisions and actions to give them meaning. They find that the narratives in the CEO letters presented the company's results and events consistently with the information in the annual report. We need to add that the results and events are presented more positively in CEO letters than in other parts of the annual report (Boudt & Thewissen, 2019; Merkl-Davies et al., 2011). In their communication on ESG-related topics, CEOs adapt over time to the expectations of regulators, policy makers, and civil society (Arvidsson, 2023; Arvidsson & Sabelfeld, 2023). Arguably, the above findings apply to both financial and non-financial information, and the CEO letter can be used as a reliable source for assessing a company's ESG performance. Given that the ESG scores of different providers vary considerably (Berg et al., 2022; Christensen et al., 2022) and regulators are not seeking to standardise methodologies (thus ESG scores) but rather to increase the transparency of methodologies used by different providers, we have selected to use ESG scores of LSEG (formerly Refinitiv) as one of the six prominent ESG score providers (Berg et al., 2022; Del Vitto et al., 2023) to answer our first research question:

RQ1: To what extent does the assessment of the company's ESG performance, based on reading the CEO letter, match the ESG score?

Merkl-Davies & Brennan (2017) set out a theoretical framework for external financial reporting communication, including CEO letters in annual reports. They summarise that accounting communication can be seen as a legitimisation tool in the socio-cultural tradition and that legitimacy theory has been widely used to analyse the

use of accounting communication to restore organisational legitimacy after a crisis or public controversy or to legitimise change. This is the reason for the wide use of legitimacy theory in research on voluntary ESG reporting, where the disclosure of environmental, social and governance aspects of corporate performance can be used as a legitimacy tool to manage relationships between an organisation and wider society (Usmani et al., 2020; Mio et al., 2020; Michelon et al., 2015; Cho & Patten, 2007; Patten, 1992). In the context of ESG reporting, legitimacy theory suggests that poorer ESG performers may have provided a higher level of ESG disclosures (Cho & Patten, 2007). When ESG reporting became mandatory in many regions, including EU countries and the UK, Mio et al. (2020) challenged the idea that legitimacy theory is relevant for analysing ESG disclosures in the context of non-voluntary reporting and found that it retains its predictive power in this context. They also confirmed that the predictive ability of agency theory increases to some extent when ESG disclosures are analysed in the context of mandatory reporting. Agency theory is primarily concerned with the principal-agent relationship between the managers and the owners of the organisation, with the main frictions arising from information asymmetry (Fama & French, 1997) and has been predominantly used in analysis of managerial impression management (Merkl-Davies & Brennan, 2011).

The provision of information is arguably an important factor in strengthening trust between groups that have access to different information. In the context of corporate reporting, this would mean that organisations build trust with interested parties (stakeholders), which includes owners, potential investors, employees or wider society. In this respect, trust could play an important role in both, agency and legitimacy theory. Fukuyama (1995) claims that cultural characteristics such as people's ability to trust each other and co-operate in groups have an important influence on the differences



in industrial culture and the level of development in different geographical areas. He also claims that trust can drastically reduce transaction costs and increase the efficiency of organisations. In justifying CSRD (2022), the European Parliament and the Council note that non-governmental organisations (NGOs), social partners, communities affected by the organisations' activities and other stakeholders are less able to hold organisations accountable for their impact on people and the environment, which could reduce citizens' trust in organisations. The situation is similar with ESG ratings, where trust in ESG rating providers should ensure the proper functioning of the market. The basis of social trust are unwritten ethical rules that differ from person to person and from country to country (Fukuyama, 1995). The OECD defines trust as 'a person's belief that another person or institution will act consistently with their expectation of positive behaviour' (OECD, 2017) and provides methodologically aligned trust surveys around the world, mainly to better understand how trust influences economic performance and well-being and what drives people's trust in government (OECD, 2022). To assess whether an individual's trust level has an impact on their evaluation of ESG performance, we need to observe the users of ESG information. According to Merkl-Davies & Brennan (2017), this users' perspective is still under-researched. Therefore, we formulate the following research question:

RQ2a: Is there a relationship between a reader's trust and their evaluation of the company's ESG performance?

Within communication theories, cognitivism is one of the dominant theoretical perspectives (Greene & Hall, 2013). In accounting communication research, the socio-psychological tradition is based on cognitivism as it deals with the actions and behaviour of individuals who participate in accounting communication either as producers (senders) or consumers (receivers) of accounting information (Merkl-Davies

& Brennan, 2017). From the perspective of the producers of accounting information, Subrahmanyam (2005) argues that CEOs need better cognitive skills to lead large corporations. However, these better cognitive abilities may increase the tendency to (successfully) misrepresent corporate disclosures. Cognitive style can be defined as ‘a person’s characteristic mode of perceiving, thinking, remembering, and problem solving’ (American Psychological Association, 2023). There are many different classifications of cognitive styles. Allinson & Hayes (1996) propose five cognitive styles: intuitive, quasi-intuitive, adaptive, quasi-analytic and analytic. The authors have developed a cognitive style index (CSI) based on the theory of cognitive continuum. This states that individuals alternate between the poles of the cognitive continuum, which ranges from intuition (for which assessment of whole, synthesis and simultaneous thinking, problem solving, perceiving is typical) at one end to analysis (for which focus on detail, logic and linear thinking, problem solving and perceiving is typical) at the other end. We focus on CEO letter users and their cognitive efforts, particularly cognitive style, in disentangling CEO messages on ESG performance and formulate additional research question on the relationship between the readers’ personal characteristics and their ESG evaluation:

RQ2b: Is there a relationship between a reader’s cognitive style and their evaluation of the company’s ESG performance?

Although attention has many meanings (Hommel et al., 2019), it can be defined as ‘a state in which cognitive resources are focused on certain aspects of the environment rather than on others’ (American Psychological Association, 2018). Researchers can analyse eye fixations and movements as an indicator of attention to stimuli, but eye data can also reflect other psychological constructs, such as cognitive load (Lynch & Andiola, 2019). In disciplines such as marketing and consumer

behaviour, eye-tracking is often used to observe the attention, judgements and decisions of consumers (Ladeira et al., 2019) and is considered to be a mirror of consumers' behaviour (Popa et al., 2015). Eye-tracking is still rarely used in accounting and organisational sciences (Cho et al., 2017; Lynch & Andiola, 2019; Meißner & Oll, 2019) but is arguably ideal to investigate the following question:

RQ3: Which parts of CEO letters do users focus on when they want to evaluate the company's ESG performance?

## **Method**

Research on ESG ratings, particularly from the user's perspective, is still in the early stages. The research questions raised in the previous section are exploratory in nature and aim to gain new insights and knowledge. Standard exploratory research is suitable for exploring unknown topics (Swedberg, 2020). As suggested by Swedberg (2020), we use more than one method to investigate our research questions, namely a survey and an experiment. The instruments and the procedure for both are described in this section.

### ***Instruments***

#### ***CEO letters***

In 2014, the European Parliament and the Council published the NFRD, which required certain large companies to disclose relevant non-financial information, e.g. on a company's business model, policies, principal risks and key performance indicators, including in relation to environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery. The UK Corporate Governance Code and the UK Companies Act 2006 incorporated the requirements of the Non-Financial Reporting Directive (NFRD) in 2016. It is evident that ESG disclosure has changed over time due to regulatory requirements as well as stakeholder awareness of climate change and

social inequalities, and that sustainability communication has become a priority for CEOs (Arvidsson, 2023). We chose 2018 as the year of observation based on the analysis of the variability of ESG topics due to regulatory reporting requirements (NFRD) and other factors (Covid-19 and Brexit have not yet distorted the results in 2018) (Ichev et al., 2023) and based on the assumption that ESG disclosure levels should be aligned to a greater extent between different companies in 2018, after a first significant change in 2017 due to the regulatory change in reporting (Mio et al., 2020). From the list of UK FTSE 350 companies with an ESG score belonging to the same sector (General Industrials)<sup>1</sup>, we have selected a CEO letter from one company with the highest score (Mondi<sup>2</sup> with a score of 0.9067 on a scale of 0 to 1 with a grade of A, representing excellent relative ESG performance and a high level of transparency in public reporting of ESG data) and a company with the lowest score (Bunzl<sup>3</sup> with a score of 0.3755 on a scale of 0 to 1 with a grade of C, indicating satisfactory relative ESG performance and a moderate level of transparency in public reporting of ESG data) for the 2018 annual reports. None of the selected companies are generally known to the participants in the experiment, so their assessment of ESG performance is not influenced by previous judgments.

#### *ESG score*

We use ESG scores sourced from LSEG Workspace<sup>4</sup>, where the ESG score is defined as ‘an overall company score based on the self-reported information in the environment, social and corporate governance pillars’ (LSEG Data & Analytics, 2023). To determine

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<sup>1</sup> Bunzl, Coats Group, Melrose Industries, Mondi, Smiths Group, Smurfit Kappa GP.

<sup>2</sup> See: MONDI CEO letter in Appendix II.

<sup>3</sup> See: BUNZL CEO letter in Appendix I.

<sup>4</sup> <https://www.lseg.com/>

the ESG score, LSEG employs over 700 analysts who collect more than 630 data points, ratios and analyses from annual reports, company websites, NGO websites, stock exchange filings, news sources and CSR reports. To ensure the quality of the data, they use combination of algorithmic and human processes. (LSEG Data & Analytics, 2023)

The ESG scores of different providers vary widely (Berg et al., 2022). We are aware of the possible differences in the results in case of using a different ESG rating provider, but as the regulation does not aim to align the methodologies of different ESG rating providers, but will rather require sufficient transparency of the methodologies used (European Parliament and the Council of Europe, 2023), we consider that we can use this rating provider for our investigation. We support our choice with the findings of Del Vitto et al. (2023) who showed that LSEG's ESG score can be replicated with a satisfying level of accuracy. LSEG is also listed as one of the key ESG rating providers in a study supported by the European Commission (Delaney & Stewart, 2021).

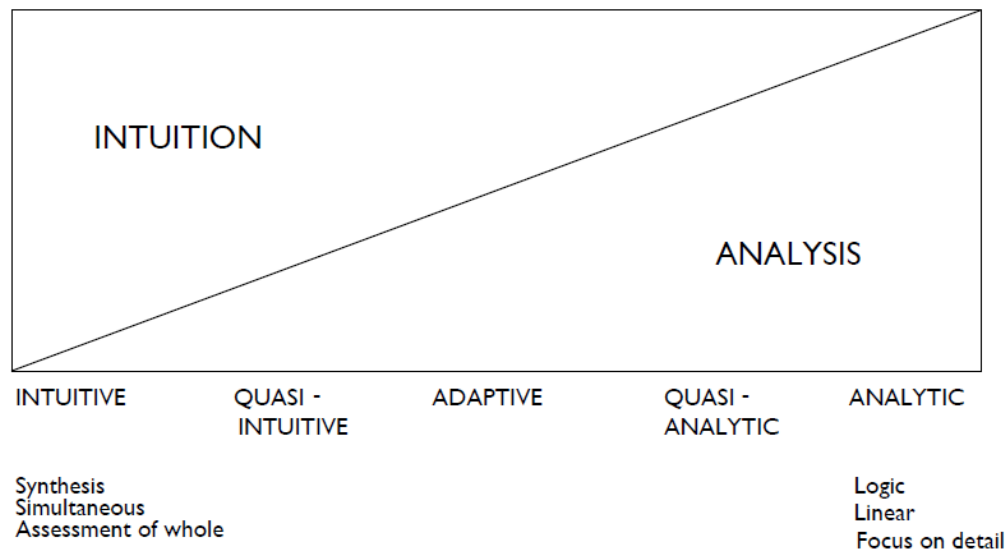
### *Trust*

We use the OECD guidelines on measuring trust (OECD, 2017). Due to international comparability and availability of data for many countries, core measures of interpersonal and institutional trust were selected (OECD, 2017; pp. 196-199). The questionnaire consists of five questions on a scale of 0-10, where 0 indicates 'Not at all' and 10 indicates 'Completely'.

### *Cognitive style*

Among the many existing dimensions of cognitive styles and the corresponding instruments to measure them, we selected Allinson & Hayes' (1996) CSI because it was designed primarily for use with professionals, managers and students and because it can be completed unsupervised by respondents. CSI's continuum of cognitive style is presented in Figure 1.

Figure 1. CSI's continuum of cognitive style (Allinson & Hayes, 1996, p. 4)



The questionnaire consists of 38 statements which should be marked by participants as 'true', 'false' or 'uncertain'. There should be no time limit for the respondents and they should be asked to work quickly and giving their first reaction in each case. The responses to each of the statement are scored with 0, 1 or 2, therefore the maximum possible total is 76 and the minimum is zero. Scoring differs from statement to statement, depending on whether the statement refers to analytic or intuitive items.

#### *Eye-tracker and lab*

Tobii's screen-based eye-tracker<sup>5</sup> installed in the Behavioural Lab of the School of Economics and Business at the University of Ljubljana (SEB LU), was used to measure the number and duration of fixations on specific paragraphs, images and titles of selected CEO letters.

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<sup>5</sup> Tobii Pro X3-120 device with a binocular tracking and a sampling rate of 120Hz was used together with Tobii Pro Lab software, version 1.207.44884 released 11/25/2022.

The laboratory room with the eye tracker has a large north facing window and natural light entering the room from the left side. No artificial light was used during the experiments, as all experiments were conducted during the day with sufficient daylight.

### *Subjects*

Elliott et al. (2007) point out that in experimental research in financial accounting, graduate business students are a good proxy for non-professional investors in tasks with relatively low integrative complexity. Reading CEO letters is a simple task, and during their studies, students at the School of Economics and Business at the University of Ljubljana are familiarised with the United Nations Sustainable Development Goals in various courses. Sustainable finance and sustainability reporting requirements are covered in Corporate Finance and Financial Accounting courses, so we assume that they have sufficient knowledge of ESG concepts. Younger generations are more open to ESG issues as younger managers (Millennials) hold portfolios that are more ESG oriented than managers of older generations (Luu & Rubio, 2023). Based on the protests organised by Greta Thunberg against inaction on the climate crisis, we can see that Gen Z will be at least as focused on ESG goals as Millennials. Therefore, we believe that the participants in our experiment are suitable for the purpose of our study.

24 students took part in our study, of which 8 men and 16 women. The majority of the participants had their permanent residence in Slovenia (79%), the others came from Serbia (13%), the Republic of North Macedonia (4%) and Italy (4%). All participants were given the opportunity to participate in a career-development workshop organised exclusively for the participants of our experiment.

There were no specific exclusion criteria other than those directly related to the limitations of an eye-tracking device<sup>6</sup>. All participants completed all required tasks. No participant was excluded due to exclusion criteria. The eye-tracking results of one participant were excluded from the analysis of the eye-tracking results in sections ‘Attention of participants with different cognitive styles’ and ‘Which parts of CEO letters do users focus on when evaluating the company’s ESG performance?’ because the data loss during the eye-tracking process was so high that the eye-tracker did not recognise fixations for this participant.

### ***The procedure***

Before the start of the study, the research procedure was approved by the Ethics committee for research at SEB LU. After developing the research question and selecting the instruments for our study, we designed the study using the Tobii Pro Lab software. The eye-tracking research design begins with a calibration process (a technical procedure). This is followed by short instructions, then the letter from the CEO of the company that received the lower ESG rating (Bunzl) was displayed, followed by the letter from the CEO of the company with the higher ESG rating (Mondi). After the two CEO letters, we have included a link to a survey<sup>7</sup> in which participants were first asked to rate the ESG performance of the two companies whose CEO letters they had read on a scale from 0 to 10<sup>8</sup> and then answer the questionnaires on CSI and trust. The CEO letters were included in the Tobii Pro Lab page by page. Since we had 5 pages of text to

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<sup>6</sup> We followed exclusion criteria proposed by Tobii:

[https://connect.tobii.com/s/article/Participant-management-and-recruitment?language=en\\_US](https://connect.tobii.com/s/article/Participant-management-and-recruitment?language=en_US)

<sup>7</sup> We used 1KA web survey software: <https://www.1ka.si/d/en>

<sup>8</sup> We used 0-10 scale to enable comparability with LSEG’s ESG score.



analyse, which are relatively small on the computer screen, and since paragraphs contain thematically related content, we decided to define paragraphs as AOIs (areas of interest). Images, titles and subtitles were defined as separate AOIs.<sup>9</sup> We tested the performance of the survey and the study design prior to the actual study.

Direct invitations to participate in an experiment were sent to first-year Master's students from various disciplines<sup>10</sup> at the School of Economics and Business at the University of Ljubljana. Posters with an open invitation were printed and publicly displayed on the premises of SEB LU.

Students who wanted to participate in the experiment booked a 60-minute appointment for the experiment via Picktime©<sup>11</sup>. When the participants visited the lab, we first asked them if they wore contact lenses, had had eye surgery, if their eye movements or alignment were disturbed, if they had wet eyes, or they had eyelid ptosis. If the participant wore glasses, we asked if they wore glasses with more than one power. If none of the exclusion criteria<sup>12</sup> were met, we proceeded with preparing the participant for participation in the study. For participants who wore glasses, we provided cleaning cloths for the glasses, and for participants whose hair covered their eyes, we provided hairpins and ribbons. Each participant was given a number (to link the eye-tracker data to the questionnaire data), which was followed by an explanation of contents of the consent form before asking them to sign it. We then explained the procedure of the

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<sup>9</sup> Defined AOIs are included in Appendix III.

<sup>10</sup> International Masters of Business (IMB), Banking and Financial Management, Accounting and Auditing; including both, local and international students.

<sup>11</sup> Free online appointment scheduling software: [www.picktime.com](http://www.picktime.com)

<sup>12</sup> We followed exclusion criteria proposed by Tobii:  
[https://connect.tobii.com/s/article/Participant-management-and-recruitment?language=en\\_US](https://connect.tobii.com/s/article/Participant-management-and-recruitment?language=en_US)

experiment to the participants step by step using a ‘Testing checklist and instructions’<sup>13</sup>: calibration process, aim of our study and the task itself (reading two CEO letters, evaluating the quality of ESG in the two respective companies based on them and answering the two questionnaires) as well as the importance of not moving their heads while reading but moving their eyes. We also asked participants not to share their assessment of the ESG quality of the two companies studied with their colleagues.

The experiment was conducted between January 26 and March 22, 2024 in the Behavioural Lab of the School of Economics and Business at the University of Ljubljana. All experiments were administered by one of the authors of the study.

## **Results**

### ***Relationship between ESG score and participant evaluation of ESG performance***

To answer our first research question, to what extent the assessment of the company’s ESG performance based on reading the CEO letter corresponds to the ESG score, we compared the mean value of the respondents’ ESG evaluations for two selected CEO letters and compared these with the LSEG ESG scores for the companies observed.

Figure 2 illustrates the results. We found that the mean of 24 respondents’ ESG performance evaluations for two selected companies, based on reading the CEO letters of these companies (3.6 for a company with a low ESG score and 8.1 for a company with a high ESG score), closely matched the LSEG ESG scores (3.8 for a company with a low ESG score and 9.1 for a company with a high ESG score). The distribution of participant evaluations is shown in Figure 3.

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<sup>13</sup> Appendix IV.

Figure 2. Comparison of LSEG ESG scores and participant evaluations for the observed companies

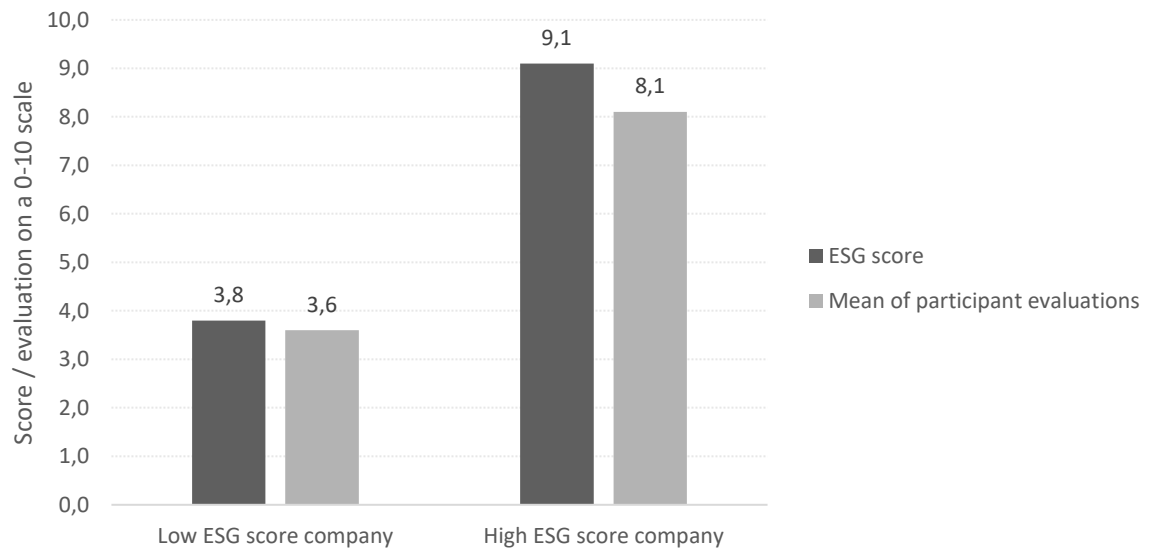
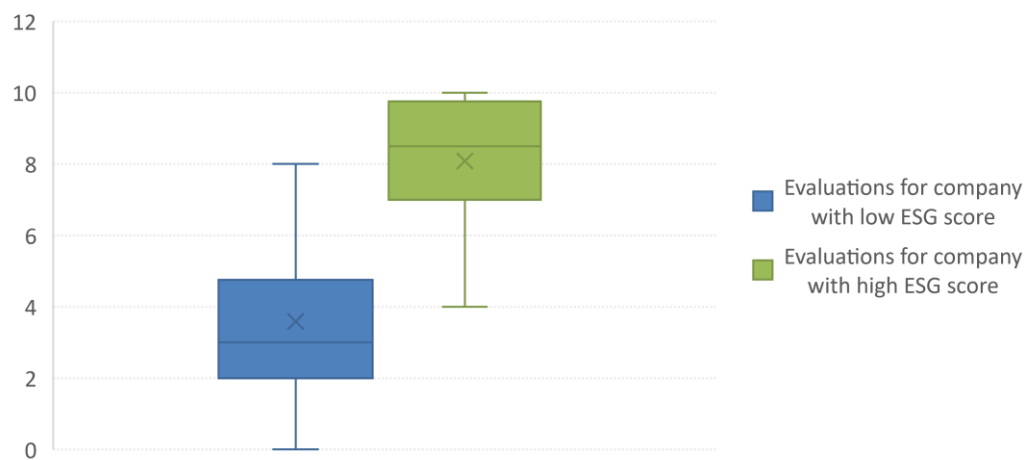


Figure 3. Distribution of participant evaluations of companies' ESG performance



The results are surprising for at least two reasons. First, since our sample was quite small, we did not expect the mean of the evaluations from a sample of this size to correspond so well with the ESG score. Second, we were surprised that the average ESG performance evaluation of the participants was slightly lower than the LSEG ESG score. Since results and events are presented more positively in the CEO letters than in other parts of the annual report (Boudt & Thewissen, 2019; Merkl-Davies et al, 2011), a

of possible explanation could be that our participants somehow ‘discounted’ their ESG performance evaluations to reflect the fact that companies’ ESG performance is not as good as presented in the CEO letter.

### ***Relationship between participants’ personal characteristics and their evaluation of ESG performance***

#### *Relationship between participant trust and their evaluation of ESG performance*

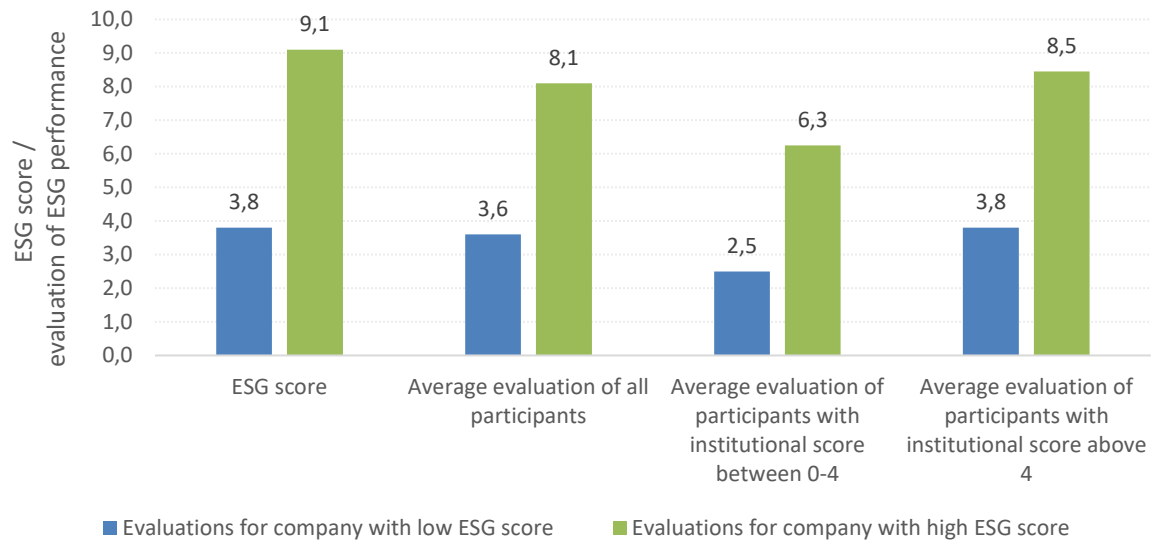
To investigate whether there is a relationship between readers’ trust and their evaluation of the company’s ESG performance, we divided participants into subgroups based on their level of interpersonal and institutional trust. The measurement of interpersonal trust is intended to form the basis for international comparisons (OECD, 2017). The interpersonal trust of the survey participants (79% of whom are Slovenians) is 6.8 on a scale of 0-10, which is closely aligned with the official statistical data on interpersonal trust in Slovenia from 2013, namely 6.5 (OECD, 2017; p.161). According to OECD (2017; p. 198), the data can be presented as the mean of responses or as the proportion of the population reporting trust below a certain threshold, with the OECD suggesting a score of 0-4 as a potentially appropriate measure. Due to the limited number of participants, we believe that for further analyses a segmentation of the population based on a specific threshold is more appropriate than the mean of the responses.

Corporate reporting is intended to reduce information asymmetry between company management and stakeholders and is therefore highly regulated (Accounting directive in the EU, the Companies Act 2006 in the UK, IFRS). Regulation is intended to strengthen trust in communication between companies and their addressees. Therefore, we assume that the users of financial and non-financial corporate information treat this information with a similar level of trust as they do with important state institutions (the parliament, the police and the civil service) and not with a level of trust that is typical for their

interpersonal relationships. On this basis, and also due to the fact that out of 24 participants only 2 (8%) rated interpersonal trust with a score between 0 and 4 and the average evaluation of the remaining participants is close to the average evaluation of all participants, we did not continue our analysis by forming subgroups based on interpersonal trust.

According to OECD guidelines, institutional trust should be disaggregated according to the degree of trust in different public institutions and not summarised into a single measure of institutional trust. For our analysis, where we need to divide participants into subgroups, we calculated institutional trust as the average of the three trust measures (trust in parliament, the police and the civil service). There were 4 participants (17%) with institutional trust scores between 0 and 4. Their ESG performance evaluation for both companies is below LSEG's ESG score and also below the average ESG performance evaluation of all study participants. This is to be expected, as we assume that people with a lower level of trust in institutions evaluate the corporate communications driven by the institutions in which the participants have a low level of trust more strictly. The results are shown in Figure 4.

Figure 4: Relationship between participants' institutional trust levels and their evaluation of company's ESG performance



### *Relationship between participants' cognitive style and their evaluation of ESG performance*

We group participants in our study in five groups based on their cognitive styles using Allinson & Hayes' (1996) CSI as shown in Table 1.

Table 1: Participants based on their cognitive styles

Cognitive style	Number of participants with a specific cognitive style	Number of participants who provided additional explanations to their evaluations
Intuitive	1	1
Quasi-intuitive	3	1
Adaptive	8	4
Quasi-analytic	3	1
Analytic	9	1
Total	24	8

According to the CSI interpretation guidance (Cognitive Style Index, 2021b), a score of 0 indicates a very strong preference for intuitive ways of processing information and a score of 76 indicates a very strong preference for analytical ways of thinking. Intuitive and quasi-intuitive individuals often experience a sudden, immediate sense of knowing, where they see a solution without realising why or how they made the connection. In contrast, analytic and quasi-analytic individuals prefer to gather as much relevant information as possible and apply rule-based, systematic procedures,

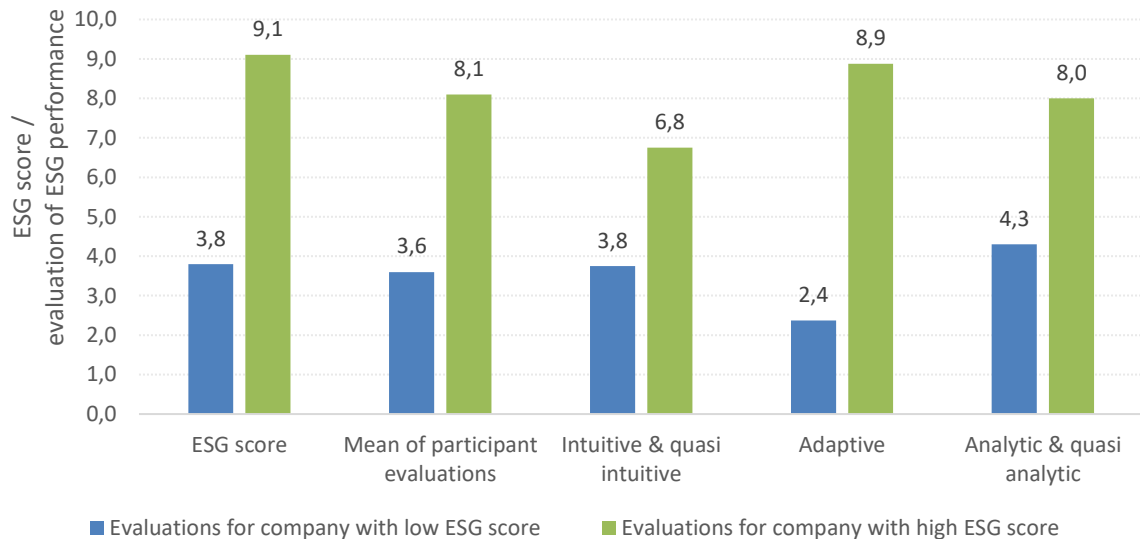
using proven models, templates, and formulas to recognise logical connections and guide their analysis. Adaptive individuals, on the other hand, prefer neither the intuitive nor the analytic way of processing information. They are comfortable using both approaches, depending on which combination seems most suitable for the situation at hand (Cognitive Style Index, 2021b).

The mean CSI score for all participants in our study is 47.46 on a scale of 0 to 76. This result shows that our students are more on the analytical side of the cognitive style scale, as scores above 45 represent quasi-analytical and analytical thinking styles. This result is among the top ten when compared to the 107 mean scores obtained with the CSI score in various studies where the number of participants ranged from 9 to 1203 (Allinson & Hayes, 1996, pp. 45-48).

The participants in our study had the opportunity to provide additional comments on their evaluation of the ESG performance of the two companies based on the CEO letters they had read. Based on the description of cognitive styles (Cognitive Style Index, 2021b), it is not surprising that individuals with an adaptive cognitive style provided half of the comments, as shown in Table 1, as they can use either an intuitive or an analytic way of processing information and subsequently felt the need to explain which way they chose when evaluating ESG performance.

To observe the relationship between participants' cognitive style and their evaluation of the company's ESG performance, we grouped intuitive and quasi-intuitive and analytic and quasi-analytic participants. Figure 5 shows the mean score of participants' evaluations of ESG performance after reading the CEO letters when participants are grouped into three groups.

Figure 5. Relationship between participants' cognitive style and their evaluation of company's ESG performance



LSEG uses more than 360 data points from six different sources to determine the ESG score (LSEG Data & Analytics, 2023) and the CEO letters only contain general information about a company's financial and non-financial performance on a few pages. The task for participants (evaluation of ESG performance based on reading the company's CEO letter) was largely unstructured and judgmental in nature. According to the Cognitive Style Index (2021a), the key factor influencing effectiveness in problem-solving is the degree of match between the way a person processes information (cognitive mode) and the information processing demands of the task. We would expect analytic and quasi analytic individuals to lack information and structure to make informed evaluation of ESG performance, and intuitive and quasi intuitive individuals to perform more effectively. Analytic and quasi analytic readers would likely require a greater amount of structured information that cannot be provided in the CEO letter, as well as more information on the ESG assessment methodology. On this basis, we would also expect the ESG ratings of readers on the intuitive side of the CSI to be more in line with the LSEG ESG scores than those of readers on the analytical side of the CSI.



From Figure 5, we cannot see a clear relationship between cognitive style and ESG performance evaluation. Even though our sample is too small for statistical analysis, the basic sample statistics in Figure 6 help us to better understand our results.

Figure 6. Sample statistics on evaluation of ESG performance based on participants' cognitive style

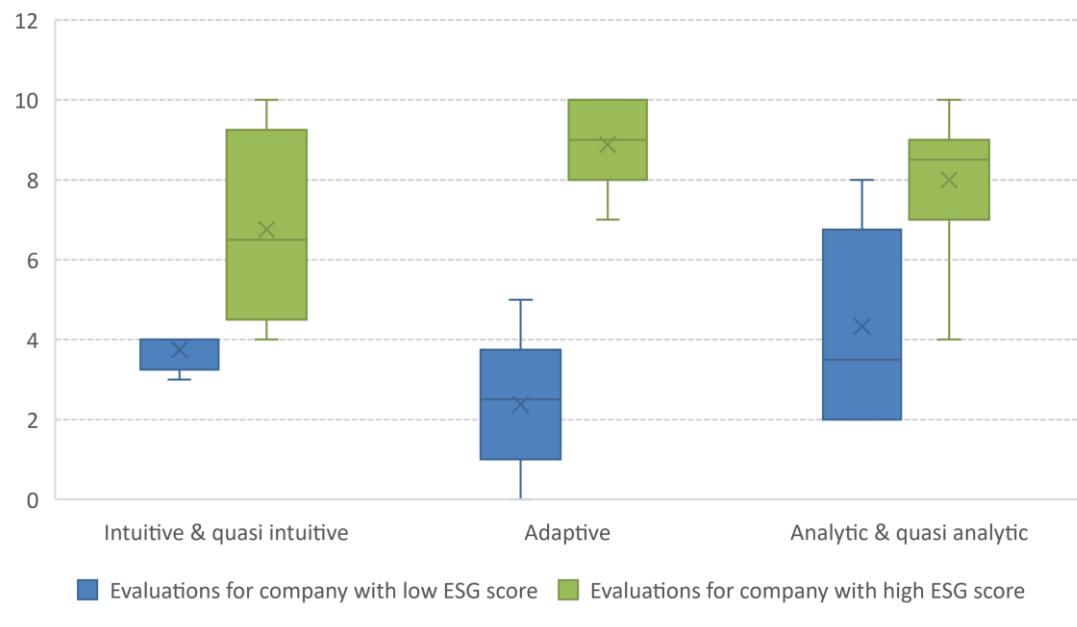


Figure 6 shows that there are no outliers in any of the cognitive style groups. Figure 6 also shows that evaluations of both low and high ESG performing companies are largely consistent in the group of participants with adaptive cognitive styles. It is interesting to observe the differences in the dispersion of ESG evaluations between intuitive and quasi intuitive on the one hand and analytic and quasi analytic on the other. Intuitive and quasi intuitive participants agree very well with their evaluation of low ESG performing company but show high variability of ESG performance evaluations for high ESG performing company. The exact opposite is true for participants with analytic and quasi analytic cognitive styles. They agree with their evaluation of high ESG performing company but show high variability of ESG performance evaluations of the company with low ESG performance.

The actual data does not confirm our expectations. When we compare the groups on the different sides of the cognitive style spectrum, we see that readers of the CEO letters on the intuitive side give lower evaluations for both low and high ESG performing companies than readers on the analytic side. We also see that the difference between the evaluations for low ESG performing companies and high ESG performing companies is smallest when they are evaluated by those on the intuitive side of the cognitive style spectrum. It is not so surprising that analytic and quasi analytic readers evaluate company with lower ESG performance at the highest average rate, as the letter from the CEO of a company with lower ESG performance contains extensive financial information that can be analysed using proven models and rules.

It is surprising to see that, on average, only participants with an adaptive cognitive style were able to clearly distinguish between the low and high ESG performing company. They evaluated the low ESG performing company lower than average (by 1.2 points on a scale of 0-10) and the high ESG performing company higher than average (by 0.8 points on a scale of 0-10) and their individual evaluations for low and high ESG performing companies did not overlap or meet as for the other two cognitive style groups.

#### *Attention of participants with different cognitive styles*

Measuring participants' eye fixations allowed us to observe participants' attention while reading the CEO letters (Tobii, 2023). Of the 24 eye-tracking recordings, we excluded one due to data loss, as explained in section 3.2. Apart from this and the low number of fixations and duration of fixations of the only participant with intuitive cognitive style, the other participants had on average a similar number of fixations and a similar average duration of fixations, as can be seen in Figure 7. Although the average duration of fixations is similar for participants in all cognitive style groups, we can see that the average duration of fixations is highest for adaptive participants. This is true for all

pages of the text, as can be seen in Table 2. Overall, we can say that participants with different cognitive styles performed the reading of CEO letters with a similar level of attention on average, if we consider the result of the only intuitive participant as an outlier.

Figure 7. Average number and average duration of fixations of participants with different cognitive styles while reading CEO letters

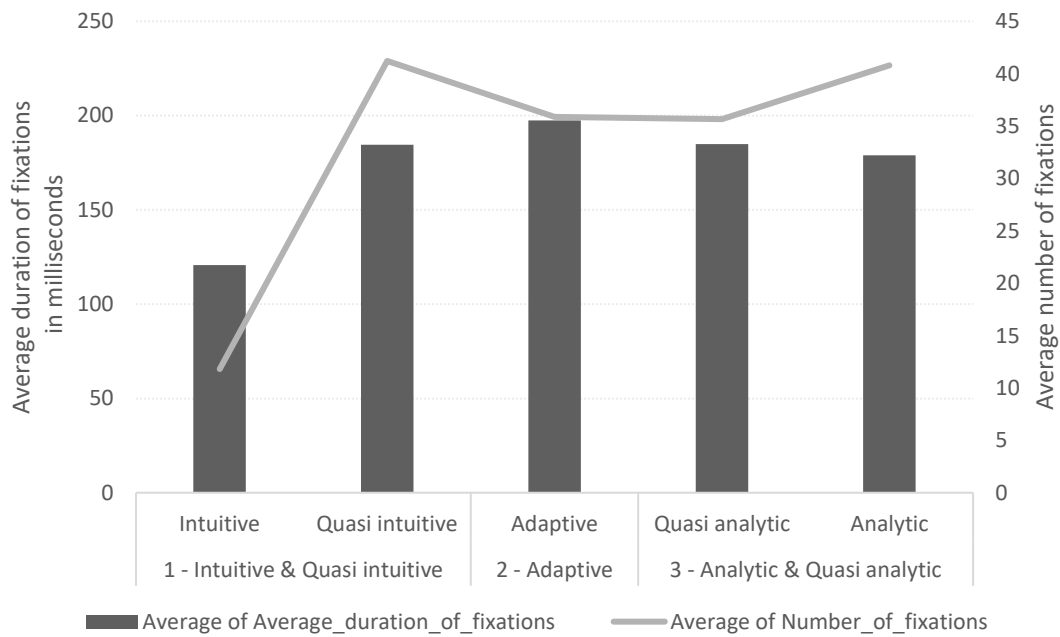


Table 2. Average number of fixations and average duration of fixations per page of the CEO letter and per cognitive style

Metrics by cognitive style and by page of the CEO letter	Average number of fixations	Average duration of fixations in milliseconds
<b>BUNZL 1</b>	<b>4</b>	<b>175</b>
1 - Intuitive & Quasi intuitive	3	146
2 - Adaptive	3	186
3 - Analytic & Quasi analytic	5	180
<b>BUNZL 2</b>	<b>44</b>	<b>197</b>
1 - Intuitive & Quasi intuitive	50	162
2 - Adaptive	46	216
3 - Analytic & Quasi analytic	41	196
<b>BUNZL 3</b>	<b>57</b>	<b>175</b>
1 - Intuitive & Quasi intuitive	59	161
2 - Adaptive	51	187
3 - Analytic & Quasi analytic	60	171

Metrics by cognitive style and by page of the CEO letter	Average number of fixations	Average duration of fixations in milliseconds
<b>BUNZL 4</b>	<b>36</b>	<b>185</b>
1 - Intuitive & Quasi intuitive	31	165
2 - Adaptive	33	196
3 - Analytic & Quasi analytic	39	184
<b>MONDI 1</b>	<b>9</b>	<b>213</b>
1 - Intuitive & Quasi intuitive	7	227
2 - Adaptive	9	245
3 - Analytic & Quasi analytic	10	187
<b>MONDI 2</b>	<b>46</b>	<b>179</b>
1 - Intuitive & Quasi intuitive	37	161
2 - Adaptive	46	193
3 - Analytic & Quasi analytic	49	175
<b>MONDI 3</b>	<b>40</b>	<b>180</b>
1 - Intuitive & Quasi intuitive	33	184
2 - Adaptive	37	188
3 - Analytic & Quasi analytic	43	173

***Which parts of CEO letters do users focus on when evaluating the company's ESG performance?***

All participants in our experiment came from countries where people read from top left to bottom right. Given this and the findings from consumer research that we pay attention primarily to elements at the top of the page (Popa et al., 2015), the question is whether readers focus primarily on the first paragraphs of CEO letters<sup>14</sup> and on the top paragraphs on each page of CEO letters, or whether they focus more on the paragraphs containing ESG information and not on paragraphs containing financial information and outlooks due to the nature of the task (evaluating ESG performance). We would expect participants to focus mainly on the AOIs that contain ESG information.

The letter from the CEO of the company with the low ESG score (BUNZL) contained only one paragraph with ESG related information, namely the first paragraph on the last page of the CEO letter. The letter from the CEO of the company with high

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<sup>14</sup> Defined AOIs are presented in Appendix III.

ESG score (MONDI) contained ESG related information throughout the CEO letter: all paragraphs on the first page contained ESG related information and only 4 out of 10 paragraphs on the last page were not mainly dedicated to ESG related information.

Figure 8 shows heatmaps based on the reading of the two CEO letters by 23 participants, and Figure 9 contains information on the average total fixation duration per AOI in milliseconds. The duration of fixations for paragraphs containing ESG related information is coloured green, for other paragraphs blue.

For the company with the low ESG score, we can see from Figure 8 and Figure 9 that participants mainly focused on reading the first paragraph of text on each page of the CEO letter. The average of total fixation time of 23 participants for all first paragraphs of the company with a low ESG score is significantly higher than for other paragraphs on the page. This could also be due to the fact that the company with a low ESG score provides little information on ESG in the first paragraph of the last page of the CEO letter.

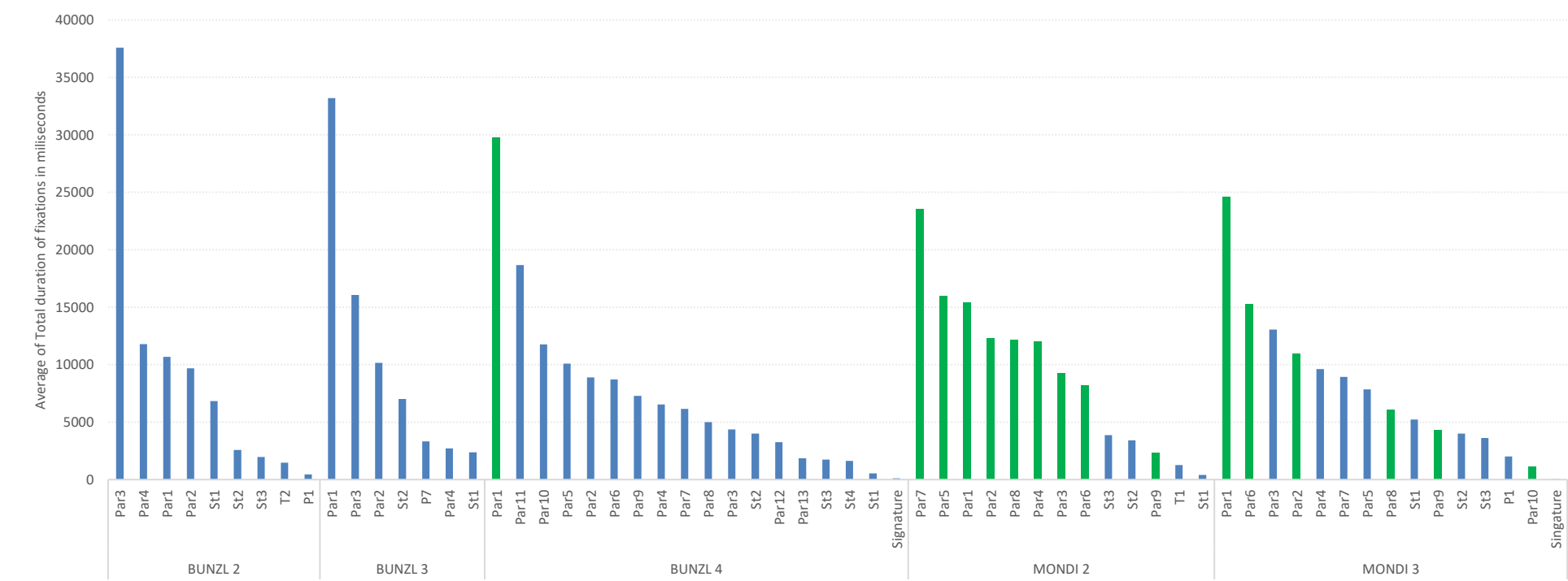
In contrast, the company with the high ESG score provided more information on environmental, social and governance issues. On the first page of the CEO letter, the first paragraph (strong results in the context of ‘disposable society’) ranks only third in terms of total fixation time (after paragraph 7, in which the CEO describes the company’s commitment to fight climate change, and after paragraph 5 with a description of the development of a circular economy).

From our experiment with 23 observations, we can conclude that when CEO letters contain sufficient ESG information, readers focus on the paragraphs that contain ESG information (and not just the top or top left paragraphs) when evaluating ESG performance. When CEO letters do not contain sufficient ESG information, readers focus on the first (top left) paragraph.

Figure 8. Heatmaps based on the reading of two CEO letters by 23 participants; BUNZL on top (4 pages) and MONDI bottom (3 pages)



Figure 9. Average of Total duration of fixations per AOI (top 5 items; excluding title pages); AOI containing ESG information are in green, other AOI in blue



## **Conclusion**

### ***Discussion***

In an era of increasing supply (Stolowy & Paugam, 2018) and demand (Amel-Zadeh & Serafeim, 2018; UN PRI, 2023) for ESG information, the number of providers of sustainability-related products and services has increased. Due to a lack of guidelines and rules for these providers, ESG ratings vary considerably (Berg et al., 2022; Christensen et al., 2022). Based on the findings that CEO letters are consistent with information from annual reports (Merkel-Davies et al., 2011) and that the user perspective of such information has not been sufficiently researched (Gödker & Mertins, 2018; Merkel-Davies & Brennan, 2017), we provide insight into the ability of readers of CEO letters (i.e. the users) to evaluate the ESG performance of companies.

Our experiment with 24 business students, whose task was to read CEO letters from two FTSE 350 companies, one with the lowest and the other with the highest LSEG ESG score within the same sector and for the same period, reveals that, on average, users are able to evaluate ESG performance of the companies (assuming that ESG scores are measured ‘objectively’ by external providers, LSEG in our case). In our sample, participants’ evaluation was 0.2 points lower than LSEG’s ESG score for the company with the low ESG score and 1 point below LSEG’s ESG score for the company with the high ESG score on a scale of 0-10. Further research could investigate whether this can be explained by the concept of mental discounting. If readers recognise that information is presented more positively in CEO letters than in other parts of the annual report (Boudt & Thewissen, 2019; Merkel-Davies et al, 2011), it is likely that they will take this into account in their overall evaluations of ESG performance.



By analysing the relationship between participants' personal characteristics and their evaluation of ESG performance, we confirm our expectation that readers with higher levels of institutional trust evaluate companies' ESG performance better than the average of the participant group. The results show that participants with higher levels of institutional trust evaluate the company with low ESG performance 0.2 points above the average of all participants and the company with high ESG performance 0.4 points above the average of all participants on a scale of 0-10.

The relationship between participants' cognitive style and their ESG evaluation is more intriguing and would benefit from further investigation. Our expectation that, due to the limited amount of structured information in the CEO letters, analytical readers would require a larger amount of structured information to infer the ESG performance of companies than intuitive readers was not confirmed. On average, only the participants with an adaptive cognitive style made a clear distinction between the company with a low and the company with a high ESG score. They evaluated the low ESG performing company lower than average (by 1.2 points on a scale of 0-10) and the high ESG performing company higher than average (by 0.8 points on a scale of 0-10), and their individual evaluations for low and high ESG performing companies did not overlap or meet as with the other two cognitive style groups. Adaptive participants also felt the need to justify their evaluations, which is not surprising given their ability to use both analytical and intuitive approaches to problem solving, depending on which combination seems most appropriate (Cognitive Style Index, 2021b).

### ***Contribution and areas for further research***

We contribute to the discussion on ESG ratings by shedding light on the less researched perspective of the audience. If, on average, readers are able to evaluate a company's ESG performance based on reading the CEO letter, the variability of ESG ratings may

be an issue that the users are able to manage. This finding is in line with the proposed changes to the European regulation (Proposal for a Regulation of the European Parliament and of the Council on the Transparency and Integrity of Environmental, Social and Governance (ESG) Rating Activities, 2023), which does not aim to harmonise the methodologies of different ESG rating providers, but rather requires transparency in their disclosures. With the variability of ESG ratings in the spotlight, it may be worthwhile to find out whether some of the variability in ESG ratings can be explained by personal characteristics of the individuals employed by ESG rating providers. Our research shows that personal characteristics of a reader of a CEO letter, such as trust and cognitive style, are related to evaluation of a company's ESG performance. This is also likely to be true for individuals employed by ESG rating providers.

Building on previous research showing that information in CEO letters is presented more positively than in other parts of the annual report (Boudt & Thewissen, 2019; Merkl-Davies et al, 2011), and on the surprising results of our exploratory survey showing that readers of CEO letters 'discount' for this fact in their evaluation of companies' ESG performance, we propose to use the concept of mental discounting to further analyse this relationship.

The use of eye-tracker provides additional insights into how people with different cognitive styles, on a range between intuitive and analytic, approach to solving tasks.

Our findings are relevant not only for policy makers and government bodies seeking to increase the transparency of ESG ratings through the introduction of new regulations but also for investors and ESG rating providers.

## ***Limitations***

Our work is subject to limitations. First, we conducted the experiment in 2024 with selected CEO letters from two FTSE 350 companies from 2018, but we know that the sustainability discourse changes over time (Arvidsson & Sabelfeld, 2023). Second, due to the exploratory nature of our experiment, our participant sample is not large enough to derive statistically significant conclusions. Third, the selection of participants from different backgrounds (despite the findings of Elliott et al. (2007) and Luu & Rubio (2023)) and from different regions (OECD, 2017) could lead to different results. Fourth, as we know that the ESG scores of different providers vary (Berg et al., 2022), the results reflect our choice of ESG score provider.

## **Caveat**

We selected CEO letters from publicly available annual reports of two FTSE 350 companies, as described in the CEO letters section. The selection was driven by our research questions. The highlighting of the selected companies should not be taken as our evaluation of the reporting or performance of these companies.

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## Appendices

### Appendix I: CEO letter of BUNZL (low performing ESG company)

[Strategic report](#)[Directors' report](#)[Financial statements](#)













# Delivering business solutions

Bunzl plc Annual Report 2018

# Chief Executive's review

“ We have once again demonstrated the strength of our value proposition and shown our ability to grow both organically and by acquisition across our international portfolio of businesses.

## Key highlights

- Good increases in revenue, adjusted operating profit and adjusted profit before income tax.
- Adjusted earnings per share increased by 12% at constant exchange rates to 129.6p.
- Strong organic revenue growth of 4.3% with all business areas contributing growth of 4% or more.
- Group operating margin of 6.8%, down 10 basis points principally due to decreases in North America and UK & Ireland, partly offset by increases in Continental Europe and Rest of the World.
- Committed acquisition spend of £183 million, following a record year in 2017.
- Continued strong cash conversion of 94%.

## Operating performance

With 87% of the Group's revenue generated outside the UK, the strengthening of sterling against many currencies, particularly the US dollar, has had a negative translation impact of approximately 3% on the Group's reported results. As in previous years, the operations, including the relevant growth rates and changes in operating margins, are therefore reviewed at constant exchange rates to remove the distorting impact of these currency movements. Changes in the level of revenue and profits at constant exchange rates have been calculated by retranslating the results for 2017 at the average rates used for 2018. Unless otherwise stated, all references in this review and the operating review to operating profit are to adjusted operating profit while operating margin refers to adjusted operating profit as a percentage of revenue. Details of the adjustments made to operating profit are set out in Note 3 to the financial statements.

Revenue increased 9% (6% at actual exchange rates) to £9,079.4 million due to the benefit of acquisitions, partly offset by the impact of disposals, as well as strong organic growth of 4.3% with good contributions from all business areas. Operating profit was £614.0 million, an increase of 7% (4% at actual exchange rates). Operating margin of 6.8% was down 10 basis points at both constant and actual exchange rates, principally due to decreases in North America and UK & Ireland, partly offset by increases in Continental Europe and Rest of the World.



# 87%

of the Group's revenue was generated outside the UK



# “

As the global leader and expert in our industry, we are proactively working with customers, suppliers and other stakeholders to promote and support a sustainable approach to the products we sell.

In North America revenue rose 8% (4% at actual exchange rates) due to the impact of organic growth together with the effect of acquisitions, while operating profit increased 3% (unchanged at actual exchange rates) as the operating margin declined 30 basis points at both constant and actual exchange rates to 6.0%, principally due to the impact of the significant additional lower margin grocery business which was fully absorbed during the second quarter of 2018 and higher operating costs. Revenue in Continental Europe rose 12% at both constant and actual exchange rates as a result of organic growth and the impact of acquisitions, partly offset by the disposal of OPM in France in February 2018. Operating profit was up 18% (17% at actual exchange rates) as the operating margin improved 50 basis points at constant exchange rates (40 basis points at actual exchange rates) to 9.8% principally due to the impact of higher margin acquisitions. In UK & Ireland revenue was up 6% due to the impact of organic growth and acquisitions, partly offset by the disposal of the marketing services business in June 2018, but operating profit decreased 2% with the operating margin reducing by 50 basis points to 6.9% principally due to challenging market conditions in the UK. In Rest of the World revenue increased 12%

(3% at actual exchange rates) and operating profit was up 15% (5% at actual exchange rates) as a result of both organic growth and acquisitions, with the business area operating margin increasing 20 basis points (10 basis points at actual exchange rates) to 7.6%.

Adjusted profit before income tax was £559.0 million, up 6% (3% at actual exchange rates) due to the growth in operating profit, partly offset by an increase in the net interest charge. Profit before income tax was £424.8 million, an increase of 7% (4% at actual exchange rates). Basic earnings per share were 8% higher (4% at actual exchange rates) at 98.4p. Adjusted earnings per share were 129.6p, an increase of 12% (9% at actual exchange rates), principally due to the increase in adjusted profit before income tax and a significantly reduced effective tax rate largely caused by the reduction in the US federal tax rate from 1 January 2018.

Operating cash flow remained strong with cash conversion (the ratio of operating cash flow to adjusted operating profit) at 94%. The ratio of net debt to EBITDA calculated at average exchange rates decreased from 2.3 times at the end of 2017 to 2.0 times.



## Chief Executive's review continued

Over the course of the year, I am delighted that we have been able to make significant progress on investment in IT and digital projects and have rolled out further digital platforms which have enhanced our customers' experience when interacting with our businesses. We have also continued to focus on collaboration and sharing of best practice around the world which has brought additional benefits for our customers. Finally, I am pleased that we have stepped up our efforts to work in partnership with both customers and suppliers to develop the sustainability agenda by providing specialist advice and assistance promoting alternatives to plastic products and supporting the development of innovative products to increase the compostability and recyclability of many of the items that we sell.

### Acquisitions

During the year we agreed to purchase six businesses for a total committed spend of £183 million. These exclude Aggora and Talge, which we agreed to purchase in 2017 and completed in early January 2018, but include Volk do Brasil which we agreed to acquire in October 2018 and completed in January 2019.

In January 2018 we acquired Revco which supplies workplace safety and personal protection equipment to redistributors in the US. Revenue in 2017 was £28 million.

QS, a provider of hygiene solution services primarily for washrooms in the Netherlands with a focus on customers operating in the government, healthcare and foodservice sectors, was acquired in March. Revenue in 2017 was £5 million. Monte Package Company, which was also purchased in March, is engaged in the distribution of a variety of packaging products to fresh food growers and packers, principally in the Eastern US. Revenue in 2017 was £44 million.

Enor in Norway was purchased in July. The business is engaged in the supply of a broad range of catering equipment to end user customers in Norway. Enor represents our first step into the Norwegian market and means that we now have businesses operating in 31 countries globally. Revenue in 2017 was £27 million.

During October we entered into an agreement to acquire Volk do Brasil which is a leading distributor of personal protection equipment, principally gloves, to redistributors and end users in Brazil. As mentioned above, the acquisition was completed in January 2019. Revenue in 2018 was £42 million.

In early December we purchased CM Supply in Denmark. The business is engaged in the supply of own brand and customised foodservice products and packaging to customers operating in the hotel, restaurant and catering sector. Revenue in 2018 was £4 million.

Today we are announcing the acquisition of Liberty Glove & Safety, a supplier of safety products to distributors based in the US. The business supplies a full range of personal protection equipment with a focus on gloves. Revenue in 2018 was £70 million.

### Disposals

During the year we sold OPM in France and our marketing services business in the UK. These were non-core businesses that were no longer considered to be a strategic fit within the Group. The aggregate revenue of these businesses in 2017 was £94 million. The total cash consideration received was £59 million with a pre-tax profit on disposal of £14 million and an associated tax charge of £3 million which have not been included in calculating adjusted profit before income tax and adjusted earnings per share.

### Prospects

Although we continue to face mixed macroeconomic and market conditions, including uncertainties concerning global trade, our strong competitive position, diversified and resilient businesses and ability to consolidate our fragmented markets further are expected to lead to continued growth.

In North America, the combination of organic revenue growth, which returned to more normal levels during 2018, and the impact of acquisitions should lead to growth. We continue to face inflationary pressures on operating costs but these will be mitigated by our recently implemented, more focused and streamlined organisation structure. In Continental Europe, we expect to develop further due to the benefit of organic growth and acquisitions. Growth in UK & Ireland will be impacted by the disposal of the marketing services business in June 2018 and by future economic conditions in the UK, which at this time are unclear. In Rest of the World, we expect to see continued growth for the year.

Acquisitions are a key part of our strategy and, with an active pipeline of opportunities and ongoing discussions taking place, we expect to complete further transactions during 2019.

The Board believes that the prospects of the Group are positive due to its strong market position and well established and successful strategy to grow the business both organically and by acquisition.

### Frank van Zanten

Chief Executive  
25 February 2019



Appendix II: CEO letter of MONDI (high performing ESG company)



## Chief Executive Officer's letter

# Contributing to a better world

2018 has been an exceptional year for Mondi on a number of levels, not least because we have delivered another strong set of results. However, it will also be remembered as the year the spotlight on plastics and the challenges thrown up by our disposable society came into focus – driven in part by a welcome surge in media and consumer interest. The reaction by government and business has been extensive.

The Mondi Way is our framework for creating sustainable value, with our culture and values guiding the way we work. It's important for our stakeholders to understand how Mondi is responding to the needs of our evolving global society and the role we choose to play in addressing the challenges. We have defined our vision for the future to:

- Contribute to a better world
- Be an employer of choice
- Be the global industry benchmark in quality, customer service, innovation and productivity

These are big ideas.



### Contributing to a better world

At Mondi, we are pleased that the need for sustainable packaging has moved sharply into focus. We are uniquely positioned, as a manufacturer of paper, but also flexible plastic packaging, to create the best solutions for forward-thinking consumer brands in collaboration with sustainable materials suppliers and recyclers.

Our paper and flexible plastic packaging solutions regularly win awards, but commercial demand for some of our most innovative sustainable packaging was limited before this year.

The public focus on the impact of plastic waste is changing that. This momentum gives us an important opportunity to lead our industry with innovative sustainable paper and plastic packaging. By taking a holistic view, we can develop packaging that considers the needs of customers, their products and the planet.

The development of a circular economy, which is restorative and regenerative by design, requires deep collaboration. During 2018 we strengthened existing partnerships and built new ones, for example:

- Through the Ellen MacArthur Foundation's New Plastics Economy Initiative we're working with partners from across the value chain as part of a Mondi-led pioneer project to innovate a new sustainable FMCG packaging solution that will prove the concept of design for recycling.
- We continue to contribute as a member of the WBCSD's Forest Solutions Group and as WWF International's corporate partner in the paper and packaging industry.

In 2018 our Consumer Packaging and Fibre Packaging business units increased their collaborative efforts to fast-track the development of EcoSolutions with a focus on:

- replacing plastic packaging with renewable fibre-based paper packaging, e.g. EcoVantage shopper bags and EcoComp food waste bags;
- replacing rigid plastic packaging with flexible plastic packaging, typically reducing plastic consumption by 70%; and
- optimising plastic packaging for recycling, e.g. BarrierPack Recyclable and the Frosch pouch – both 100% recyclable.



**Business review: Consumer Packaging**  
Page 76-79

Another key focus area is our commitment to fighting climate change. Our aim is to reduce emissions, improve energy efficiency and replace fossil fuels with renewable biomass-based energy, where it is practical and economically feasible. We combine strategic energy-related investments across our pulp and paper mills with good management and sharing of best practice. For example, over the past 10 years Mondi has invested in five new highly efficient recovery boilers at Frantschach (Austria), Ružomberok (Slovakia), Štětí (Czech Republic), Świecie (Poland), and Syktyvkar (Russia), as well as biomass boilers at Syktyvkar and Świecie. As a group, we have reduced our specific CO<sub>2</sub>e emissions by 38% since 2004 and 64% of Mondi's pulp and paper mills' fuel consumption came from renewable biomass-based sources in 2018.



**Sustainability performance**  
Page 48-53

### Being an employer of choice

Our primary responsibility as an employer of choice must be the safety of our employees. We have made significant progress in recent years in our goal to zero harm, but 2018 started tragically with the death of a contractor in Syktyvkar and the year saw five incidents leading to life-altering injuries. Unfortunately we suffered another fatality in January 2019 during drilling works at the construction site of our new paper machine in Ružomberok. Our deepest condolences have been extended to family members and colleagues.

There isn't a single solution to this, but zero harm remains our first priority and we have plans in place to address the challenge. We are proud of our passion for performance, and as CEO I am more determined than ever to make this a passion for safe performance.



Mondi's focus on key global industry trends in sustainability, digitalisation and empowering brands continues to drive value accretive growth.

**Peter Oswald**  
Chief Executive Officer



Low unemployment in many of our core markets and changing aspirations of millennials means we have to be smart and responsive in attracting and retaining the talent we need to achieve our business ambitions. In 2018 we held our first global Diversity & Inclusion conference, from which we created targeted plans across Mondi. Gender diversity is important, but so are age, ethnicity and all other forms of diversity. We have made progress in broadening representation in some areas, but at the heart of our ambition is the creation of an environment where all voices are heard and new ideas rise quickly to the surface. At Mondi, we recognise that leading for innovation requires a different approach to leading for change, and we need the skills and agility to do both. I look forward to communicating our progress in 2019.

Leading with our hearts and minds, combined with clear strategic direction is the key to our ongoing success. So, in addition to our regular interactions, Mondi's senior leaders come together every few years for our Leadership Forum – in 2018 we met in the energetic city of Berlin. The goal was to align around the priorities for Mondi's growth journey – with inspiring leadership and employee engagement. It is where we launched our vision for the future, and celebrated excellence with the culmination of the Mondi Diamond Awards. Our 12 finalists presented their projects in person, showcasing the very best of Mondi out of a diverse and impressive range of 100 entries from across the world.



**Business reviews**  
Page 68-83

### Global industry benchmark – delivering excellence

We intend to set the standard for customer service, innovation, quality, and productivity. This means delivering excellence across all our work streams and there were many positive milestones in 2018. We have also seen strong progress on our capital expenditure projects, in particular the modernisation of our Štětí mill and our planned new kraft top white machine in Ružomberok.

We completed the acquisition of Powerflute in Finland and two industrial bag plants in Egypt. Over the past five years we have completed a limited number of smaller acquisitions as we struggled to meet sellers' expectations on valuation. Looking forward, with our strong financial position and depth of management resources, we are well placed to move should the right assets become available at reasonable values.

Mondi has a strong track record of operational performance and comprehensive programmes to eliminate costs. Going forward we believe that digitalisation will play an important role. We have been piloting projects that will accelerate our digital journey and identify the best way to harness technology: data science and advanced analytics will help us to improve productivity and lower costs, and be key to connecting better with our customers. Technology can make us efficient, but it's our employees that make us smart!



**Strategic performance**  
Page 28-35

### Driving future growth

I am confident that Mondi's focus on key global industry trends in sustainability, digitalisation and enhancing brand value will continue to drive growth. Geographically we remain well-placed for opportunities in Europe and North America, which account for around half the global packaging market. Our leading position in central and eastern European markets, as well as exposure to growing markets in Africa and Asia also provide strong opportunities for our continued growth.

While we cannot predict the impact of the current heightened geo-political and macro-economic uncertainties, our industry leading margins and strong cash generation, coupled with a strong balance sheet make us resilient and provide us with the strategic flexibility to exploit opportunities as and when they arise.

Our proposal to simplify our dual listed structure into a single holding company structure under Mondi plc will, subject to shareholder approval, simplify cash and dividend flows; enhance our strategic flexibility; increase transparency; and remove the complexity associated with the current structure.

With our robust business model and integrated value chain, strong cost management, and focus on partnering with our customers to deliver innovative and sustainable solutions, I am convinced we are well positioned for the future.

Overall 2018 was a year of strong progress for Mondi across all fronts. At the heart of this success is our people and it is to them that I extend my thanks, for their passion, their innovation and their commitment.

**Peter Oswald**  
Chief Executive Officer

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Mond andi

P1

P2

P3

Title: Subtitle

Title: Subtitle

Picture: General pictures

Sustainable packaging and paper by design

[illegible][illegible]



## Appendix IV: Testing checklist and instructions

TESTING CHECKLIST AND INSTRUCTIONS (print one for each participant; will be stored as a research evidence, together with informed consent for each participant)

Inventory needed:

- Cleaning wipes
- Cleaning cloth for glasses
- Hairpins and bands (for long hair not to disturb the eye-tracker device)

# of participant: \_\_\_\_\_

1. Exclusion criteria – ask participants:

	Yes	No
If participants wear glasses: do you have glasses with more than one power (bifocals, trifocals, progressives)?		
Did you have an eye surgery (LASIK, RK) cataract, intraocular implants?		
Do you have eye movement or alignment abnormalities, such as lazy eye, strabismus, nystagmus?		
Do you have eyelid ptosis?		
Do you have epiphora (wet eyes)?		

2. Other relevant information – ask participants:

	Yes	No
Do you have any problems related to reading (dyslexia, similar)?		

3. Ask participant to sign the informed consent.

4. Describe the steps of experiment:

- We will set-up the eye-tracker (input the number of the participant and prepare everything for the recording)
- We will start the calibration process: on the screens there will be dots, moving on the screen. Your task is to follow the dots with your EYES, HOLDING YOUR HEAD STILL.
- We will check whether the calibration was successful. If not, we will repeat the calibration process
- We will start the recording.
- Then we will change the presentation screen and enable the use of mouse for participant
- The task is to read 7 pages of CEO letters for two UK companies to later assess the quality of ESG in those companies based on reading CEO letters. You take as much time as you need for reading.
- From page to page you move with clicking on left mouse key.
- Once you finish reading you move to 1KA survey, where you will assess the ESG quality of both companies based on what you have read and answer additional question to identify your cognitive style, trusting belief and demographic questions. Cognitive styles tell us how we approach to things (intuitive, analytical) and is useful for understanding how we work in groups, for recruitment...

5. Stress the importance of not moving the head during the calibration and during reading the documents.

6. Start eye-tracking:

- Select eye-tracker
- Select presentation screen
- Input the participant number
- Start recording

7. Do you want us to send you the invitation to the CAREER DEVELOPMENT WORKSHOP? Leave us your e-mail:

8. Tell participants not to share their assessments with others that might participate in the study. They can explain in general, how the experiment looks like, but not the content of the documents and their assessment of the documents.