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The Impact of Combating Bribery and Corruption Report Assurance on Financial Analysts' Decisions

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ABSTRACT

There is an increasing pressure on companies to provide nonfinancial information. An important element of related nonfinancial reports is information on combating bribery and corruption. This study examines the impact of voluntary assurance on such reports on financial analyst perceptions and decisions. Moreover, it investigates whether the type of assurance provider (financial statement auditor vs. another audit firm) and the assurance level (limited vs. reasonable assurance) exert an influence. For this purpose, we conducted an experiment with a 2 × 2 + 1 between-subject design and financial analysts from Turkey as participants. The extent of financial analyst reliance on the combating bribery and corruption report of a fictitious company, their likelihood to recommend the purchase of shares of the fictitious company, their related credit risk assessment and the likelihood that they purchase shares in the fictitious company served as dependent variables. The analyses are based on 116 responses after the elimination of manipulation check failures. Our findings indicate that assurance on combating bribery and corruption reports results in perceptions and decisions which are more favourable to the fictitious company. Moreover, they do not indicate a significant impact of the type of assurance provider. However, our participants' perceptions are more positive in the case of reasonable assurance.

1 | Introduction

Corruption is the abuse of power for personal gain, often in an illegal manner (e.g., Jain 2001). Bribery refers to the act of promising, giving, receiving or agreeing to receive money or some other thing, usually in exchange for some form of influence or advantage (e.g., James 2002). This study examines the impact of voluntary assurance on combating bribery and corruption reports on the decision-making behaviour of financial analysts from Turkey. It investigates to what extent the assurance provision, the type of assurance provider and the assurance level impact on the perceptions and decisions of informed users.

Corporate social responsibility (CSR) has become an inescapable priority for business leaders (Porter and Kramer 2006). However, there are information asymmetries between a company's management and its stakeholders who cannot completely observe the company's CSR performance. CSR reports provide information and therefore reduce the information asymmetries. Research on the influence of CSR over a firm's economic output shows some support for a positive impact through positive correlations between CSR reports and access to finance (Cheng, Ioannou, and Serafeim 2014), lower equity capital costs (Dhaliwal et al. 2011) and lower bank loan costs (Goss and Roberts 2011). The European Union has also recognized the need for managing change towards a sustainable

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global economy and has established minimum legal requirements for nonfinancial reporting, thereby mandates CSR reporting, and in doing so raises the profile of CSR reporting within organizations. EU Directive 2014/95 requires public-interest entities with more than 500 employees during a given financial year to disclose a nonfinancial statement. At a minimum, this statement must provide information on specific environmental, social, employee, human rights, anticorruption and bribery matters (European Parliament and Council of the European Union 2014). However, CSR reports are prepared by management and stakeholders are unable to assess their credibility. Therefore, the key function of related assurance services is to increase the credibility of such reports.

Recently, the EU enacted its new Corporate Sustainability Reporting Directive (CSRD). It substantially increased the number of companies that are obliged to report and imposed mandatory assurance on sustainability reports and stressed disclosures on governance factors, including business ethics and corporate culture which encompasses anticorruption and antibribery. Concerning the assurance level, the EU decided for a progressive approach to enhance the level of assurance required for sustainability information. It starts with limited assurance and 2 years later requires reasonable assurance. This gradual approach from limited assurance engagements to reasonable assurance engagements allows for the progressive development of the assurance market for sustainability information and of undertakings' reporting practices. Moreover, the Directive allows member states to offer companies a broader choice of independent assurance service providers for the assurance of sustainability reports and to accredit independent alternative assurance providers. Assurance provision on sustainability reporting by the statutory auditor would help to ensure the connectivity and consistency of financial and sustainability information. However, it is associated with a further concentration of the audit market, which could threaten auditor independence and increase audit fees and fees related to the assurance on sustainability reports. In addition, member states have the option to allow a statutory auditor, other than the one carrying out the statutory audit of financial statements, to express an assurance opinion on sustainability reporting (European Parliament and Council of the European Union 2022).

Until now, the GRI standards represent global best practice for reporting publicly on a range of economic, environmental and social impacts and allow organizations to report information about their impacts consistently and credibly (GRI 1: Foundation 2021, 1.1). GRI 205: Anticorruption 2016 contains disclosures for organizations to report information about their corruption-related impacts and how they manage these impacts. Topic disclosures include operations assessed for risks related to corruption, communication and training about anticorruption policies and procedures and confirmed incidents of corruption and actions taken. The United Nations Global Compact provides an alternative framework that includes 10 principles. These principles are derived, among others, from the United Nations Convention Against Corruption. The EU mandated the European Financial Reporting Advisory Group (EFRAG) to develop a set of European Sustainability Reporting Standards (ESRS). According to the draft of ESRS G1 on business conduct, companies must provide information about their system

to prevent and detect, investigate and respond to allegations or incidents to corruption and bribery included the related training (G1-3). Furthermore, they must provide information on confirmed incidents of corruption or bribery during the reporting period (G1-4). Simultaneously, the International Sustainability Standards Board is developing standards for a global baseline of sustainability disclosures, but just has published two exposure drafts so far (general requirements and climate-related disclosures) but not on anticorruption and antibribery.

In Turkey, sustainability reporting is voluntary, and reporting companies most frequently refer to the GRI Standards or the UN Global Compact. The public company accounting oversight authority (Kamu Gözetimi Muhasebe ve Denetim Standartları Kurumu) has recently been authorized to develop and publish Turkish Sustainability Reporting Standards (Türkiye Sürdürülebilirlik Raporlama Standartları) in line with the ESRS and the ISSR standards. Voluntary assurance on those services usually applies Güvence Denetimleri Standardı 3000, a Turkish version of ISAE 3000 on assurance engagements other than audits or reviews of historical financial information. Alternatively, assurance providers refer to the AA 1000 Assurance Standard (v. 3) from AccountAbility. It is not uncommon that such assurance services only cover some aspects of sustainability reports (e.g., Intesa Sanpaolo 2023, 326; Mercedes-Benz Group 2023, 245; Schneider Electric 2023, 200) like anticorruption and antibribery. Assurance is typically provided by audit firms.

After the turn of the century, several corporate scandals occurred that involve corruption and bribery, for example, the Gürtel case in Spain (Chavero 2012) or the case of Siemens AG in Germany (Blanc et al. 2019), which increased related concerns. Thus, corruption and bribery have become one of today's most troubling global and ethical problems (Everett, Neu, and Rahaman 2006; Ashforth et al. 2008) and are considered one of the essential pillars of corporate social responsibility. Companies should combat corruption and bribery for several reasons. Engaging in corruption and bribery infringes law in many countries and may result in punishment. Moreover, scandals in conjunction with corruption and bribery negatively affects a company's reputation and undermines public trust, leading to a loss of customers, market shares, capital providers and staff. Finally, corruption and bribery may reduce efficiency because resources are misallocated (e.g., Lord 2016). Although there are different ways to combat corruption and bribery, transparency is considered as highly important (Halter, De Arruda, and Halter 2009). By combatting corruption and bribery and reporting on related efforts, a company demonstrates its commitment to responsible business practices. Such transparency can help to build trust with a company's stakeholders. In most jurisdictions, assurance on sustainability reports is voluntary. Therefore, it is not uncommon that related assurance services cover only certain elements of such reports.

Turkey is a country in which corruption and bribery are not uncommon (Baran 2000; Adaman 2011). The Corruption Perceptions Index ranks 180 countries and territories around the world by their perceived level of public sector corruption. The results are given on a scale of 0 (highly corrupt) to 100 (very clean). In the 2023 index, Turkey achieved Rank 115 and 34 points (Transparency International 2024). Very recently,

the societal consequences of the high level of corruption in Turkey were shown by the earthquake 6 February 2023. Construction projects were awarded without competitive tendering or proper regulatory oversight. This resulted in the construction of homes in earthquake hot spots without following proper building codes. Thus, corruption made Turkey's earthquake deadlier (Tol 2023).

Against this backdrop, we investigate the effect of voluntary combating bribery and corruption report assurance on Turkish financial analysts' decision-making. Moreover, we analyse whether the impact of assurance differs according to the type of assurance provider (statutory auditor vs. another Big 4 audit firm) and the level of assurance (limited vs. reasonable assurance). In doing so, we performed an experiment with a $2 \times 2 + 1$ between-subject design based on two treatment variables (assurance provider and assurance level) and a control condition without assurance provision. As study participants, we focus on financial analysts, because they generally have a high level of experience and decision-making power in the valuation and analysis of companies. The dependent variables are reliance on the combating bribery and corruption report of a fictitious company, the likelihood of giving an investment recommendation regarding the shares of this company, the assessment of the company's credit risk and the likelihood of privately investing in shares of the fictitious company.

We hypothesize and find that voluntary assurance on combating bribery and corruption reports results in perceptions and decisions of financial analysts which are more favourable to the reporting company. In contrast to our expectation, the type of assurance provider does not exert a significant impact. This could be explained by two compensatory effects. One the one hand, the financial statement auditor has more client-specific knowledge than another audit firm, which may result in a higher likelihood to reveal material misstatements. On the other hand, additional fees from the client may intensify self-interest threats which potentially reduces auditor's willingness to report detected misstatements in the combating bribery and corruption report. Our results also indicate that financial analysts' perceptions differ depending on the assurance level.

Our study closes a research gap regarding the effects of voluntary assurance on combating bribery and corruption reports, thereby following a suggestion from Hay (2020), who views research on new formats of assurance as highly valuable, and thus, contributing to research on the benefits of assurance on nonfinancial information. European research regarding assurance on nonfinancial reporting is still scarce, and findings from the Anglo-American setting are not directly applicable to the Continental European context, for example, because of cultural differences (Hofstede, Hofstede, and Minkov 2010) or a lower level of investor protection (La Porta et al. 2000). In addition, we complement existing research on the use of alternative assurance providers by comparing assurance provided by the statutory auditor with that provided by another audit firm. Prior research typically investigated the effects of alternative assurance providers outside the accounting profession. Research findings on the relevance of different assurance levels are mixed. We contribute to this research by revealing that financial analysts understand the concept of assurance level and react to differences in the assurance

level. A further strength of this paper is that financial analysts participated in the experiment instead of business students as proxies.

2 | Background, Prior Research and Hypotheses Development

Studies on combating bribery and corruption report assurance do not exist. However, CSR report assurance has been researched intensively. Reporting on combating bribery and corruption is an element of CSR reporting. Until today, external and voluntary assurance of nonfinancial reporting remains a comparatively underrepresented area of investigation (Ballou et al. 2018; Fatima and Elbanna 2022; Pollman 2019). Research on combating bribery and corruption report assurance, however, is completely lacking. Studies on the reasons for and drivers of external assurance on CSR reports has attracted considerable attention over the last decades (Martínez-Ferrero and García-Sánchez 2017; Simnett, Vanstraelen, and Chua 2009). Peters and Romi (2015), for example, found that the existence of a chief sustainability officer and the officer's sustainability expertise are positively associated with the demand for external assurance. A significant research gap exists regarding the impact of external assurance on combating bribery and corruption reports, such as the influence on the behaviour of key company stakeholder groups. Our study therefore aims to close this gap by obtaining evidence on the effects on financial analysts who are of particular importance for most companies.

2.1 | Assurance Provision

Legitimacy and signalling theory explain why stakeholders may positively perceive the voluntary assurance on combating bribery and corruption reports (Fernando and Lawrence 2014; Schaltegger and Hörisch 2017). Legitimacy theory is the most widely used theory to explain environmental, social and governance disclosures (Campbell, Craven, and Shrivs 2003, 559). According to legitimacy theory, companies assume an implicit social contract between themselves and society, which encourages them to comply with certain norms and values (Cuganesan, Guthrie, and Ward 2010). Therefore, managers will implement a set of legitimating strategies, and firms will engage in nonfinancial reporting because the company needs to legitimate its activities (Fernando and Lawrence 2014; Deegan 2019; Patten 2020). Externally available company disclosures, such as those on combating bribery and corruption, reflect a pragmatic approach to legitimacy as the disclosures satisfy the perceived needs of specific stakeholder groups (Dumay, Frost, and Beck 2015). As a consequence, a company's disclosure framework is more likely to focus on information that potentially increases the level of legitimacy as perceived by its stakeholders, and avoids information that critically scrutinizes that level (Deegan 2002). Managers are aware of this pragmatic approach to legitimacy and their decision to assure a combating bribery and corruption report can be seen as a corporate governance instrument for legitimizing a company and as a means of shielding the company from negative influences that can reduce its legitimacy (Deegan 2019; Schaltegger and Hörisch 2017; Faisal, Tower, and Rusmin 2012; Velte and Stawinoga 2017).

Obtaining third-party assurance can be a valuable tool for addressing concerns regarding the credibility of information provided in nonfinancial reports (Cho et al. 2014; Simnett, Vanstraelen, and Chua 2009). Hence, an important aspect of combating bribery and corruption report assurance lies in its ability to enhance the credibility of the reported information, thereby legitimating the efforts of the firm regarding combating bribery and corruption and directing various social pressures away from a company (Simnett, Vanstraelen, and Chua 2009; Kolk and Perego 2010).

Signalling theory views firms as pools of information that stakeholders are not aware of and reporting as a way for firms to voluntarily reduce information asymmetry (Connelly et al. 2011) through a costly signal by one party (Spence 1973). While combating bribery and corruption reports can signal some of these hidden characteristics, related assurance can provide insights into the actions of managers related to combatting bribery and corruption, signalling the credibility of the reported information (Ruhnke and Gabriel 2013; Alon and Vidovic 2015) and its importance through a costly signal by one party (Spence 1973). In using signalling theory to examine stakeholder confidence in the credibility of nonfinancial reports, some studies postulate that there could be possible competitive advantages for a company, such as a better access to finance or reduced cost of capital (Dhaliwal et al. 2011; Cheng, Ioannou, and Serafeim 2014; Braam and Peeters 2018). Given the extremely high financial and reputational risk exposure of companies engaging in corruption and bribery (e.g., Gardberg, Sampath, and Rahman 2012; Lapotta et al. 2017), the necessity for signalling via the combating bribery and corruption report and related assurance services might be more pronounced than the necessity for other elements of a sustainability report (de Andrés et al. 2024).

Results from archival research are mixed. There is evidence that CSR assurance increases the quality of CSR disclosures (e.g., Ballou et al. 2018; Clarkson et al. 2008; Gerwanski, Kordsachia, and Velte 2019; Moroney, Windsor, and Aw 2012; Michelin, Patten, and Romi 2019), is positively associated with environmental reputation (Birkey et al. 2016), results in lower costs of capital (e.g., Carey et al. 2021; Casey and Grenier 2015; Martínez-Ferrero and García-Sánchez 2017) and leads to more accurate analysts' forecasts (Casey and Grenier 2015; Cuadrado-Ballesteros, Martínez-Ferrero, and García-Sánchez 2017). In contrast, other archival studies fail to identify a statistically significant impact on firms' sustainability reputation (Alon and Vidovic 2015) and firm value (e.g., Cho et al. 2014; Fazzini and Dal Maso 2016; García-Benau, Sierra-Garcia, and Zorio 2013). Findings from Gietl et al. (2013) indicate that the disclosure of externally assured CSR reports could even be negatively related to firm value, measured by Tobin's Q.

Experimental studies complement these archival findings, but this time, the results consistently support the notion that CSR report assurance is an advantageous undertaking. Results indicate that assurance increases the credibility of CSR reports (e.g., Hodge, Subramaniam, and Stewart 2009; Pflugrath, Roebuck, and Simnett 2011). Other experimental findings suggest that assurance positively affects investors' stock price assessments (e.g., Coram, Monroe, and Woodliff 2009; Brown-Liburd and Zamora 2015). Finally, there is evidence that assurance can

increase an investor's willingness to invest (e.g., Cheng, Green, and Ko 2015; Shen, Wu, and Chand 2017; Reimsbach, Hahn, and Gürtürk 2018).

Overall, the archival research findings are inconclusive. In contrast, almost all experimental studies reveal CSR report assurance has a positive impact. Companies may opt for voluntary combating bribery and corruption report assurance to legitimize the company and prove related commitment or to signal credibility of its disclosed information, which may reduce agency problems. Drawing on legitimacy and signalling theory and previous archival and experimental research, we anticipate that combating bribery and corruption report assurance will positively affect financial analysts' decision-making. Hence, we formulate our first hypothesis as follows:

H1. *Assurance on combating bribery and corruption reports positively impacts financial analysts' decisions.*

2.2 | Type of Assurance Provider

Concerning the type of assurance provider, existing research mainly focuses on the comparison between assurance provision by an audit firm or by an alternative assurance provider (Pflugrath, Roebuck, and Simnett 2011). Exceptions are the studies by Lu, Simnett, and Zhou (2023), who demonstrate that companies with the same assurance provider for financial and nonfinancial information have less discretionary accruals and higher chances of receiving going concern modifications, indicating higher audit quality, and by Maso et al. (2020), who also observe an increase in audit quality if an audit firm provides both CSR assurance and the financial statement audit. Nevertheless, there is a research gap regarding the impacts of assurance provision by the financial statement auditor versus by another audit firm. This gap is of particular relevance because the CSRD of the EU includes a member state option to allow a statutory auditor or an audit firm other than the one carrying out the statutory audit of financial statements to express an opinion on the adequacy of sustainability reporting (European Parliament and Council of the European Union 2022). Due to legitimization by society, audit firms are, in principle, regarded as relevant institutions for shaping and performing challenging assurance services (Kend 2015; Wallage 2000).

Engaging the incumbent financial statement auditor may result in knowledge spillovers (Arruñada 1999) and increase the likelihood, that the assurance provider reveals misstatements in combating bribery and corruption reports. Furthermore, when assessing the risks of material misstatement, the financial statement auditor obtains an understanding of the entity's governance (ISA 315 (rev.).19) and of its system of internal control (ISA 315 (rev.).21-27), including the proper application of policies, which may assist in the assessment of bribery and corruption risk. Apart from that, the financial statement auditor already knows the client's management, helping him to assess the correctness of the combating bribery and corruption report. Moreover, the combating bribery and corruption report could be integrated into the management report. Thus, the choice of the financial statement auditor may appear more salient to users and demonstrate consistency and integrated thinking

(Lu, Simnett, and Zhou 2023). On the other hand, the simultaneous provision of financial statement audits and other assurance services may result in factual and perceived independence risks due to familiarity (IESBA 2022, 120.6 A3) and self-interest threats (IESBA 2022, 120.6 A3). Even though the joint provision of audit and other assurance services is less critical than the simultaneous provision of audit and consulting services (Eilifsen et al. 2018; Meuwissen and Quick 2019), it may result in negative stakeholder perceptions.

Many studies have explored the relationship between the type of assurance provider and the (perceived) quality of assurance provided. Assurance provision by professional accountants is often superior, factually and perceived (e.g., Pflugrath, Roebuck, and Simnett 2011; Peters and Romi 2015; Casey and Grenier 2015; Martínez-Ferrero and García-Sánchez 2017; Cuadrado-Ballesteros, Martínez-Ferrero, and García-Sánchez 2017; Martínez-Ferrero and García-Sánchez 2017; Carey et al. 2021). However, some studies indicate that the type of assurance provider is irrelevant or that the assurance provision by a public accounting firm is not superior (e.g., Hodge, Subramaniam, and Stewart 2009; Perego and Kolk 2012; Birkey et al. 2016; Moroney, Windsor, and Aw 2012; Shen, Wu, and Chand 2017).

Assurance provision by the statutory auditor is associated with a strong positive effect on auditor competence. There is an opposing effect on auditor independence. However, fees for assurance services on combating bribery and corruption reports are much lower than audit fees, and the familiarity threat is reduced due to mandatory audit firm and audit partner rotation. In addition, some prior research indicates the positive effects of assurance provision by the financial statement auditor. Thus, we formulate the following hypothesis:

H2. *Assurance provision by the statutory auditor has a greater positive impact on financial analysts' decisions than assurance provision by another audit firm.*

2.3 | Level of Assurance

The objective of assurance on combating bribery and corruption reports is to provide stakeholders with confidence about the report (Nugent and Simnett 2007; Cohen and Simnett 2015). A core element of this confidence is the assurance providers' own stated confidence in their opinion, known as the level of assurance. The level of assurance is the extent to which the assurer feels the information given in a report is correct and, in turn, a reflection of how much trust users should place in the content of a report (Ackers 2015). However, financial analysts may not understand different assurance levels, perceive limited assurance as sufficient or doubt that audit firms have the required competence and capacity to provide reasonable assurance.

The different types of assurance levels stem from the many national and international audit frameworks that regulate assurance engagements, but the two most common levels are reasonable and limited. For example, ISAE 3000(revised) and ISAE 3410, which govern assurance engagements other than audits or reviews of historical financial information and assurance on greenhouse gas statements, respectively, both stipulate between

reasonable and limited assurance (ISAE 3000(revised).12; ISAE 3410.6-8; Manetti and Becatti 2009; Simnett, Vanstraelen, and Chua 2009). The global consulting and standards firm AccountAbility uses the terms high and moderate assurance levels (AA1000AS.3.3.2.2).

Both reasonable and limited assurance offer an acceptable level of confidence in the accuracy of the disclosures. However, reasonable assurance is the higher of the two levels and is expressed as an unmodified conclusion in positive form, for example, 'that the combating bribery and corruption report is prepared, in all material aspects, in accordance with the legal provisions' (ISAE 3000(revised).72 (a)). This is the typical level of assurance given during a standard financial audit. While still offering an acceptable level of confidence, limited assurance is a conclusion in negative form and so is not as strong as reasonable assurance, for example, 'no matters have come to the attention of the assurance provider that causes her or him to believe that the combating bribery and corruption report is not prepared, in all material aspects, in accordance with the legal provisions' (ISAE 3000(revised).72 (b)). Implied in these conclusions is that the assurer has undertaken a more thorough audit to reach the stronger and positive reasonable level of assurance. The nature, timing and extent of procedures performed in a limited assurance engagement are limited, compared to what is necessary for a reasonable assurance engagement, but are planned to obtain a level of assurance which is, in the practitioner's professional judgement, meaningful (ISAE 3000(revised).A4). Nevertheless, both assurance levels, concerning CG assurance, aim to provide stakeholders with confidence that the report is complete, accurate and reliable (Ackers 2015).

Research on assurance levels is limited. Studies point out that report users generally notice and understand the qualitative difference between the assurance levels (e.g., Hasan et al. 2003; Schelluch and Gay 2006). Archival research is scarce and shows that analysts' forecasts are more accurate when based on reports with a reasonable level of assurance than those with a limited assurance (Cuadrado-Ballesteros, Martínez-Ferrero, and García-Sánchez 2017) and that only sustainability reports with high assurance levels are significantly and negatively related to bid-ask spreads (Fuhrmann et al. 2017). The majority of experimental research findings suggests that either the positive impact of assurance will be stronger if reasonable assurance is provided (e.g., Rivière-Giordano, Giordano-Spring, and Cho 2018 on financial analysts' recommendation to buy shares; Quick and Inwinkl 2020, on bankers' credit granting decisions; Hoang and Trotman 2021, on fundamental value estimates) or positive effects can only be identified in the case of reasonable assurance (e.g., Sheldon and Jenkins 2020, on report credibility). Vera-Muñoz, Gaynor, and Kinney (2020) show that report confidence is highest in the case of reasonable assurance in conjunction with a practitioner-customized procedure description. In contrast, Hodge, Subramaniam, and Stewart (2009) found no correlation between assurance levels and the perceived reliability of sustainability reports. Similarly, two other studies reveal that users do not understand different assurance levels (Roebuck, Simnett, and Ho 2000; Low and Boo 2012).

We believe that a positively formulated assurance level is likely to be more appealing to stakeholders than a negative one. However, what is not clear is whether stakeholders will

be able to differentiate between the two levels of assurance. We take the position that financial analysts are knowledgeable parties and so will be able to differentiate between reasonable and limited assurance. Because reasonable assurance is more substantial than limited assurance, it should provide the combating bribery and corruption report with greater credibility. Further, there is more support in the research for the positive impact of reasonable assurance than not. Therefore, H3 is formulated as follows:

H3. *Reasonable assurance on combating bribery and corruption report has a greater positive impact on financial analysts' decisions than limited assurance.*

3 | Research Method

3.1 | Experimental Design

3.1.1 | Case Materials and Procedures

We utilized a $2 \times 2 + 1$ between-subject design to test the hypotheses. The two treatment variables are assurance provider and assurance level; both are manipulated at two levels. The assurance provider (*APROVIDER*) is manipulated at (1) the assurance provider corresponds with the audit firm, which also performs the audit of the financial statements, and (2) the assurance provider is another audit firm. Assurance level (*ALEVEL*) is manipulated at (1) limited assurance and (2) reasonable assurance. Additionally, a control condition was applied where no assurance on the combating bribery and corruption report was provided.

The experimental case described a fictitious engineering and construction group, 'Lider İnşaat ve Mühendislik Anonim Şirketi', with a headquarter located in Istanbul, 20 group companies and activities in many other countries. To ensure a realistic setting, the financial data of a leading engineering and construction company were slightly modified. The participants were first informed about the company's business segments, the number of employees, a listing at the Istanbul Stock Exchange and key financial indicators, such as revenues, net income, balance sheet total, operating cash flow, leverage, current ratio, return on assets and EPS in a 2-year comparison. Furthermore, information was provided on aspects of CG at 'Lider İnşaat ve Mühendislik Anonim Şirketi', such as the composition of the board of directors and of committees, for example, the audit committee.

Moreover, the experimental case provided information about 'Lider İnşaat ve Mühendislik Anonim Şirketi's' annual audit. A Big 4 audit firm performed the audit over the last 6 years and always issued an unqualified audit opinion. Participants were also informed about the audit fee. Next, the experimental case included an excerpt of the Sustainability Report of 'Lider İnşaat ve Mühendislik Anonim Şirketi', dealing with combating bribery and corruption. The wording followed a report from a company from the same industry as the fictitious company but was shortened. The information on the treatment variables followed. The audit opinion was expressed as limited or reasonable assurance and by the statutory auditor or another auditing firm.

After the presentation of the experimental case, we asked participants to answer the case-related questions, assuming their role as a financial analyst, including manipulation checks, and to provide some demographic information in a postexperimental questionnaire.

Before starting the experiment, five pilot tests were conducted with representative participants, such as certified financial analysts and bankers, to verify the comprehensibility, plausibility and terminology. The pilot tests led to marginal verbal and technical changes.

The experimental case was made available to the participants in both Turkish and English.¹ The experiment was conducted online via the 'SoSciSurvey' platform.²

3.1.2 | Dependent Variables

Participants received five questions which relate to the five dependent variables of this study.

The first dependent variable refers to the perceived assurance level related to the report on combating bribery and corruption:

1. How do you perceive the provided level of assurance on the combating bribery and corruption Report of 'Lider İnşaat ve Mühendislik Anonim Şirketi'? (*PERCEIVED_AL*).

Due to information asymmetries, the addressees of reports prepared by management cannot determine their correctness (hidden action; Arrow 1985). Assurance services shall enhance the credibility of such reports (Watts and Zimmerman 1986). Thus, our second dependent variable is the degree of reliance on the combating bribery and corruption report (e.g., Hodge, Subramaniam, and Stewart 2009):

2. To what degree do you trust in the combating bribery and corruption report of 'Lider İnşaat ve Mühendislik Anonim Şirketi'? (*RELY*).

Financial analysts are important information intermediaries in the capital market. They analyse an organization's data to assess risks and inform investment decisions (Hu, Lin, and Li 2008; Du and Budescu 2018; CFA Institute 2024). Financial analysts typically focus on either equity markets or credit markets. Therefore, financial analysts may also work as credit analysts responsible for evaluating customers' creditworthiness (Heflin, Shaw, and Wild 2011). Based on these essential tasks of financial analysts, we raised two further questions related to dependent variables:

3. How likely is it that you recommend the purchase of 'Lider İnşaat ve Mühendislik Anonim Şirketi' shares? (*ADVICE*).
4. How would you assess the credit risk of 'Lider İnşaat ve Mühendislik Anonim Şirketi'? (*CREDIT RISK*).

Lastly, financial analysts were asked about the likelihood of personally investing in the company's shares (*INVEST*), to measure whether and to what extent voluntary assurance can impact personal risk behaviour associated with using personal capital (e.g.,

Cheng, Green, and Ko 2015). Thus, the last dependent variable allows us to add the perspective of an informed private investor.

5. How likely is it that you purchase ‘Lider İnşaat ve Mühendislik Anonim Şirketi’ shares privately? (*INVEST*).

All dependent variables were measured on a 7-point Likert scale (with end-points labelled as 1 = *very low* and 7 = *very high*).

3.1.3 | Treatment Variables

Based on the study’s 2×2+1 design, a binary manipulation per treatment variable was used in addition to a control condition in which no assurance of the combating bribery and corruption report was reported. The control condition is necessary for testing **H1**.

The first treatment variable is the level of assurance provided (*ALEVEL*), which is manipulated at two levels: limited assurance (*LA*) and reasonable assurance (*RA*). Both assurance reports and corresponding assurance levels are based on established templates of a Big 4 auditing firm. They are also practiced in this form in assuring on real-world reports, according to ISAE 3000 (revised). In the case versions with limited assurance, the opinion is formulated in a negative form:

Based on the procedures performed, nothing has come to our attention that causes us to believe that the combating bribery and corruption Report of ‘Lider İnşaat ve Mühendislik Anonim Şirketi’ for the period from January 1, 2021 to December 31, 2021 is not prepared, in all material respects, in accordance with the requirements of the GRI standards.

In contrast, the opinion related to reasonable assurance is formulated in a positive form:

In our opinion, on the basis of the knowledge obtained in the audit, the combating bribery and corruption Report of ‘Lider İnşaat ve Mühendislik Anonim Şirketi’ for the period from January 1, 2021 to December 31, 2021 complies, in all material respects, with the requirements of the GRI standards.

The second treatment variable refers to the assurance provider (*PROVIDER*) and is also manipulated at two levels: financial statement auditor (*FSA*) and another audit firm (*AAF*). The experimental case informs on the statutory auditor³:

Since 2016, the audit firm XXYY is responsible for the statutory audit. XXYY is one of the Big 4 audit firms that operate in the Turkish audit market. During these 6 years XXYY always issued an unqualified audit opinion.

In addition, the case mentions the assurance provider, which is either the financial statement auditor (XXYY) or another audit firm:

XXYY provides assurance according to the ISAE 3000 on the combating bribery and corruption part of ‘Lider İnşaat ve Mühendislik Anonim Şirketi’s’ sustainability report.

Another audit firm ZZAA provides assurance according to the ISAE 3000 on the combating bribery and corruption part of ‘Lider İnşaat ve Mühendislik Anonim Şirketi’s’ sustainability report.

Thus, the study’s design resulted in five experimental conditions. Table 1 gives an overview of the different experimental conditions, their treatment variables and the number of participants per cell.

3.2 | Participants

For our study, we use financial analysts from Turkey as participants. Financial analysts play a key role as information mediators between capital markets or investors and companies concerned. Based on their professional training and experience, they can be assumed to have credibility in analysing and evaluating company-specific information, such as financial and nonfinancial reports. Hence, their assessment of a company’s reporting system and derived decision-making behaviour can have a direct influence on any recommendations for investor action.

Financial analysts frequently have a highly reputable professional certification (e.g., CFA, CIIA or comparable). Due to these

TABLE 1 | Number of participants per experimental condition.

Experimental condition	Assurance provider		Assurance level		Number of participants	
	FSA = financial stated auditor AAF = another audit firm		LA = limited assurance RA = reasonable assurance		Before MC	After MC
1	—		—		52	23
2	FSA		LA		36	23
3	AAF		LA		55	23
4	FSA		RA		43	24
5	AAF		RA		51	23
					Sum 237	Sum 116

professional qualifications, this group is particularly suitable for evaluating nonfinancial reports (van Duuren, Plantinga, and Scholtens 2016). In addition, financial analysts investigate financial data and use the results to provide informed guidance to companies or individuals on business investment decisions. Thus, their decision-making behaviour is highly relevant to companies.

Data were collected from 17 May 2022 to 27 September 2022. For the participant selection process, we conducted the following process:

First, using the corporate report of the Banking Regulation and Supervision Agency (Bankacılık Düzenleme ve Denetleme Kurumu) from March 2022, we identified 56 active banks. Then, we sent e-mails to these banks with general information on the research, including a web link to SoSci, and asked them to forward the message to their financial analysis departments and participate in our study. Second, we identified 1100 persons on LinkedIn with professional expertise as financial analysts working for a bank. This resulted in 237 responses in which at least the questions related to the dependent variables were answered. We cannot

calculate a response rate because we do not know how many financial analysts received our call for participation in the first step.

The experimental questionnaire included two attention checks to examine whether the participants had read and understood the case correctly.

The first attention check ('Was assurance provided on the combating bribery and corruption report?') was a yes/no questions. Eighty-four participants failed to pass this attention check and were excluded from the main analyses. The second attention check asked for the assurance provider ('Who provided assurance on the combating bribery and corruption report?'). Incorrect answers led to the exclusion of 37 further observations.⁴

Admittedly, the combined failure rate for our two attention checks (51%) is relatively high. However, such failure rates are not uncommon in experimental research, for example, Cheng et al. (2015): 35% (2 × 2 design); Brown-Liburd and Zamora (2015): 46% (2 × 2 × 2 design); Aschauer and Quick (2018): 57.6% (2 × 2 × 2 design); Sheldon and Jenkins (2020): 42% (2 × 2 × 2 design); Quick

TABLE 2 | Demographic information.

AGE in years	≤25	26–35	36–45	46–55	56–65	≥66
N=108	6	36	35	21	8	2
GENDER	Male	Female	Diverse			
N=108	74	34	0			
EDUCATION	Middle school	High school	Bachelor's degree	Master's degree or diploma	PhD	
N=108	0	0	60	42	6	

Variable	N	Mean	SD	Min	Max	Median
EXPERTISE_C&B	108	4.019	1.547	1	7	4
EXPERTISE_ASS	108	4.278	1.503	1	7	4
TRUST_DIRECTOR	108	3.833	1.404	1	7	4
TRUST_AUDIT	108	4.407	1.408	1	7	5

Note: AGE is the age of the participants (1 ≤ 25, 2 = 26–35, 3 = 36–45, 4 = 46–55, 5 = 56–65, 6 ≥ 66), GENDER is the gender of the participant (1 = male, 2 = female, 3 = diverse), EDUCATION refers to the highest education level of the participant, EXPERTISE_C&B is the self-assessed expertise regarding combating bribery and corruption, EXPERTISE_ASS is the self-assessed expertise regarding assurance services, TRUST_DIRECTOR is the self-assessed trust in directors and TRUST_AUDIT is the self-assessed trust in assurance services. All Likert scales were labelled from 1 (very low) to 7 (very high).

TABLE 3 | Means and standard deviations of the dependent variables by experimental conditions.

Experimental condition	N	PERCEIVED_AL		RELY		ADVICE		CREDIT RISK		INVEST	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1 = Control	23	—	—	3.522	1.904	2.826	1.586	3.826	1.466	2.783	1.678
2 = FSA_LA	23	4.652	1.434	5.174	0.984	4.870	1.100	3.783	1.704	4.783	1.347
3 = AAF_LA	23	3.957	1.492	4.304	0.876	4.435	0.788	3.609	0.891	4.174	0.887
4 = FSA_RA	24	5.125	1.454	5.125	1.454	4.708	1.829	3.292	1.574	4.458	1.719
5 = AAF_RA	23	5.174	1.072	5.565	1.080	5.000	1.382	3.174	1.696	4.478	1.831
Total	116	4.731	1.438	4.741	1.487	4.371	1.580	3.534	1.495	4.138	1.662

Note: For the dependent variable PERCEIVED_AL, n is 93 because the related question could not be raised to the control group. Abbreviations: AAF = another audit firm; FSA = financial stated auditor; LA = limited assurance; RA = reasonable assurance.

TABLE 4 | Difference in means of the dependent variables of control vs. other experimental conditions.

Variable	Mean control (N=23)	Mean all other (N=130)	t value	p
<i>RELY</i>	3.522	4.992	-3.576	0.001
<i>ADVICE</i>	2.826	4.577	-5.482	0.000
<i>CREDIT RISK</i>	3.826	3.515	0.935	0.351
<i>INVEST</i>	2.783	4.215	-3.912	0.000

TABLE 5 | MANOVA.

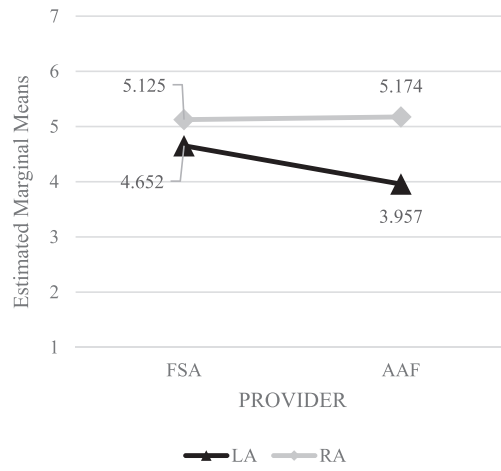
MANOVA results with <i>RELY</i> , <i>ADVICE</i> , <i>CREDIT RISK</i> and <i>INVEST</i> as the dependent variables					
Effect	Wilks-Lambda	F value	Hypothesis df	Error df	p
Intercept	0.031	527.787	5	85	0.000
<i>PROVIDER</i>	0.958	0.739	5	85	0.596
<i>LEVEL</i>	0.847	3.080	5	85	0.013
<i>PROVIDER*LEVEL</i>	0.905	1.777	5	85	0.126

Note: N=93.

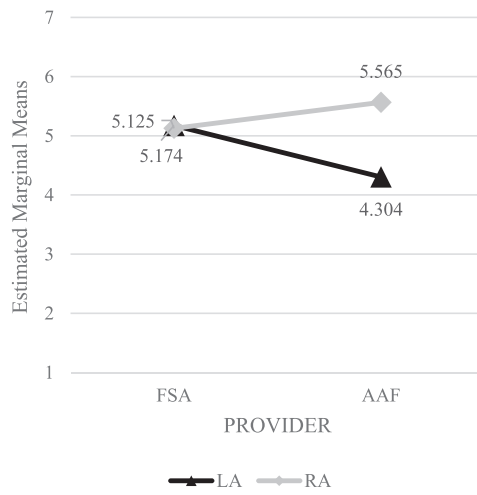
TABLE 6 | Results for the dependent variable *PERCEIVED_AL*.

Panel A. ANOVA results					
	Type III sum of squares	df	F value	p	
Intercept	2077.250	1	1099.772	0.000	
<i>PROVIDER</i>	2.430	1	1.287	0.260	
<i>LEVEL</i>	16.600	1	8.788	0.004	
<i>PROVIDER*LEVEL</i>	3.221	1	1.705	0.195	
Residuals	168.103	89			
N=93					
Adjusted R ² =0.087					
Panel B. Descriptive statistics for each experimental cell and t tests for the treatments					
	FSA	AAF	t value (p value)	Total	
Limited assurance	4.652 (1.434)	3.957 (1.492)	-2.942 (0.004)	4.304 (1.489)	
Reasonable assurance	5.125 (1.454)	5.174 (1.072)		5.149 (1.268)	
t value (p value)	1.102 (0.273)				
Total	4.897 (1.448)	4.565 (1.424)			
Panel C. Post hoc tests (t tests)					
	t value		p		
FSA_LA-FSA_RA	-1.122		0.268		
FSA_LA-AAF_LA	1.613		0.114		
FSA_LA-AAF_RA	-1.398		0.169		
FSA_RA-AAF_RA	-0.131		0.897		
AAF_LA-FSA_RA	-2.719		0.009		
AAF_LA-AAF_RA	-3.179		0.003		

Panel A Dependent variable = PERCEIVED AL



Panel B Dependent variable = RELY



Panel C Dependent variable = ADVICE

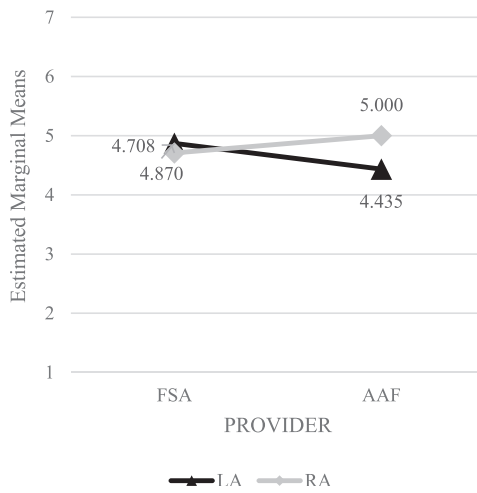
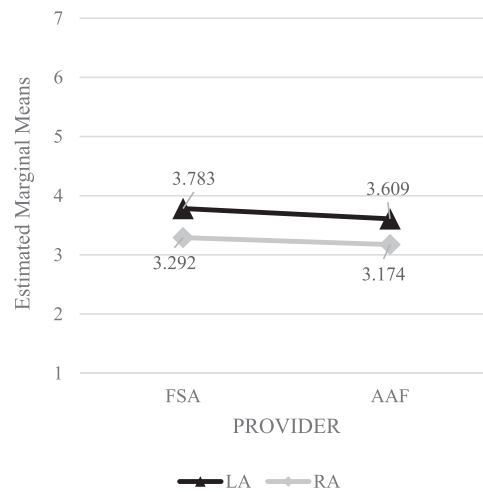


FIGURE 1 | ANOVA results.

Panel D Dependent variable = CREDIT RISK



Panel E Dependent variable = INVEST

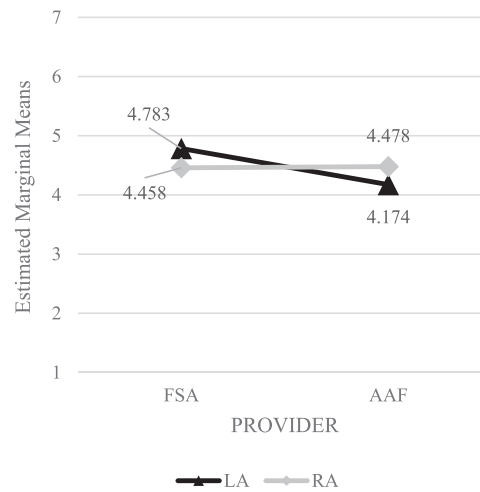


FIGURE 1 | (Continued)

and Sayar (2021): 34% (2×2 design); Hoang and Trotman (2021): 49% (2×3 design).

Table 2 provides demographic information on the participants, which indicates that, according to the profession's representatives, our sample is potentially representative of Turkish financial analysts. The majority of participants is between 26 and 45 years old, and most of them have at least a bachelor degree. Most of the participants are men (68.5%). Further demographic questions were raised on a 7-point Likert scale (from 1=very low to 7=very high). Participants' expertise in combating bribery and corruption is average (*EXPERTISE_C&B*; mean = 4.019; median = 4). The same applies to their expertise regarding assurance services (*EXPERTISE_ASS*; mean = 4.278; median = 4). Participants on average trust more in auditors (*TRUST_AUDIT*; mean = 4.407; median = 5) than in directors (*TRUST-DIRECTOR*; mean = 3.833, median = 4). The difference is significant ($t = 5.578$; $p = 0.000$). The sociodemographic questions were optional, accounting for eight missing responses.

4 | Results

4.1 | Main Findings

Table 3 shows the means and standard deviations of the dependent variables by experimental conditions. Across all dependent variables, the control condition results in the most adverse perceptions and decisions of financial analysts, indicating a positive effect of assurance provision. Reasonable assurance outperforms limited assurance if provided by another audit firm but not if provided by the financial statement auditors.

To test our first hypothesis, whether assurance on the combating bribery and corruption reports, in general, has an impact on the decisions of financial professionals, we performed t tests for four⁵ dependent variables by comparing the control group (no assurance) to a pooled sample of the conditions with assurance on the CG statement (Experimental

Conditions 2–5).⁶ As documented in Table 4, the means for the control group are lower for all dependent variables. The differences between the two groups are significant for the dependent variables *RELY* ($p=0.001$), *ADVICE* ($p=0.000$) and *INVEST* ($p=0.000$) and insignificant for the dependent variable *CREDIT RISK* ($p=0.351$). Regarding our first hypothesis, we can conclude that assurance on combating bribery and corruption reports significantly affects financial analyst reliance on the report, their willingness to make an investment recommendation and the likelihood to invest in shares of the fictitious company. Hence, we can mainly confirm our first hypothesis. However, we do not find support for the variables *CREDIT RISK*.

To test the second and the third hypotheses, we first investigate the overall effect of the type of assurance provider and the assurance level by applying a MANOVA which covers four dependent variables.⁷ Table 5 informs about the results. They indicate that the assurance level ($F=3.080$; $p=0.013$) but not the assurance provider ($F=0.739$; $p=0.596$) exerts a significant impact on the perception and decisions of financial analysts. This supports H3 but not H2. In addition, the interaction between the two treatment variables is insignificant ($F=1.777$; $p=126$).

To test the hypotheses separately for the five dependent variables, we use ANOVAs, t tests of differences and post hoc tests. The results are presented separately per dependent variable: *PERCEIVED_AL*, *RELY*, *ADVICE*, *CREDIT RISK* and *INVEST*.

Table 6 presents the findings regarding the dependent variable *PERCEIVED_AL*. Panel A shows the ANOVA results. The assurance level is significant ($F=8.788$; $p=0.004$), which, in combination with the means (Panel B), supports H3. Reasonable assurance is perceived as higher than limited assurance. In contrast, the assurance provider has no significant effect ($F=1.287$; $p=0.260$). Thus, H2 is not confirmed. Furthermore, the interaction between the two treatments is also insignificant ($F=1.705$; $p=0.195$). The post hoc test results documented in Panel C reveal that limited assurance provided by another audit firm results in a lower perceived assurance level than reasonable assurance provided by another audit firm ($t=-3.179$; $p=0.003$) or the financial statement auditor ($t=-2.719$; $p=0.009$). This is illustrated by Figure 1, Panel A.

Table 7 informs on the results for the dependent variable *RELY*. The ANOVA result (Panel A) for the assurance level ($F=6.755$;

TABLE 7 | Results for the dependent variable *RELY*.

Panel A. ANOVA results				
	Type III sum of squares	df	F value	p
Intercept	2363.533	1	1870.631	0.000
<i>PROVIDER</i>	1.071	1	0.848	0.360
<i>LEVEL</i>	8.535	1	6.755	0.011
<i>PROVIDER*LEVEL</i>	9.968	1	7.889	0.006
Residuals	112.451	89		
$N=93$				
Adjusted $R^2=0.118$				
Panel B. Descriptive statistics for each experimental cell and t tests for the treatments				
	FSA	AAF	t value (p value)	Total
Limited assurance	5.174 (0.984)	4.304 (0.846)		4.739 (1.021)
Reasonable assurance	5.125 (1.454)	5.565 (1.080)	-2.489 (0.015)	5.340 (1.290)
t value (p value)	0.861 (0.391)			
Total	5.149 (1.233)	4.935 (1.162)		
Panel C. Post hoc tests (t tests)				
	t value	p		
FSA_LA-FSA_RA	0.134	0.894		
FSA_LA-AAF_LA	3.166	0.003		
FSA_LA-AAF_RA	-1.285	0.206		
FSA_RA-AAF_RA	-1.174	0.244		
AAF_LA-FSA_RA	-2.331	0.024		
AAF_LA-AAF_RA	-4.350	0.000		

$p=0.011$) is significant and support H3 in conjunction with the means (Panel B). Reasonable assurance results in a significantly stronger reliance on combating bribery and corruption reports than limited assurance. In contrast, we cannot confirm H2. The impact of the type of assurance provider on RELY is insignificant ($F=0.848$; $p=0.360$). However, the interaction between the two treatment variables ($F=7.889$; $p=0.006$) is significant. Financial analysts react to modifications of the assurance level but only if another audit firm provides assurance.

Panel C documents the post hoc test results. They show again that there are significant differences between reasonable and limited assurance if another audit firm provides assurance ($t=-4.350$; $p=0.000$). Moreover, these t tests also indicate that the assurance provider matters in case of a limited assurance engagement ($t=3.166$; $p=0.003$), that is, then the assurance provision by the financial statement auditor results in a significantly higher reliance on combating bribery and corruption report than assurance provision by another audit firm. In contrast, in case of a reasonable assurance provision, the type of assurance provider does not matter ($t=-1.174$; $p=0.244$). Figure 1, Panel B, illustrates these results.

The third dependent variable, ADVICE, refers to the likelihood that financial analysts issue an investment recommendation for the fictitious company. The ANOVA results can be found in Table 8, Panel A. We find no support for H2 related to the type of assurance provider ($F=0.067$; $p=0.797$) and for H3 related to the assurance level ($F=0.530$; $p=0.468$). The interaction between the two treatment variables is also insignificant ($F=1.714$; $p=0.194$). The post hoc test results in Panel C indicate no significant differences. This is illustrated by Figure 1, Panel C, which, however, shows a pattern similar to that from Panel B.

The next dependent variable, CREDIT RISK, relates to the financial analysts' assessments of the credit risk of the fictitious company. The ANOVA results are given in Table 9, Panel A. Neither the assurance provider ($F=0.218$; $p=0.642$) nor the assurance level ($F=2.198$; $p=0.142$) exerts a significant effect on the assessment of credit risk. Thus, H3 and H2 cannot be confirmed. In addition, the interaction between the two treatment variables is also insignificant ($F=0.008$; $p=0.929$). The t tests from Panel B on the treatments and the post hoc tests from Panel C on the pairwise comparison between the cells also do not indicate significant differences. Therefore, credit risk assessments might

TABLE 8 | Results for the dependent variable *ADVICE*.

Panel A. ANOVA results				
	Type III sum of squares	df	F value	p
Intercept	2100.401	1	1174.077	0.000
PROVIDER	0.119	1	0.067	0.797
LEVEL	0.948	1	0.530	0.468
PROVIDER*LEVEL	3.066	1	1.714	0.194
Residuals	159.219	89		
N=93				
Adjusted R ² =0.008				
Panel B. Descriptive statistics for each experimental cell and t tests for the treatments				
	FSA	AAF	t value (p value)	Total
Limited assurance	4.870 (1.100)	4.435 (0.788)		4.625 (0.971)
Reasonable assurance	4.708 (1.829)	5.000 (1.382)	-0.722 (0.473)	4.851 (1.615)
t value (p value)	0.251 (0.802)			
Total	4.787 (1.503)	4.717 (1.148)		
Panel C. Post hoc tests (t tests)				
	t value	p		
FSA_LA-FSA_RA	0.364	0.717		
FSA_LA-AAF_LA	1.541	0.130		
FSA_LA-AAF_RA	-0.354	0.725		
FSA_RA-AAF_RA	-0.615	0.542		
AAF_LA-FSA_RA	-0.671	0.507		
AAF_LA-AAF_RA	-1.704	0.097		

TABLE 9 | Results for the dependent variable *CREDIT RISK*.

Panel A. ANOVA results				
	Type III sum of squares	df	F value	p
Intercept	1115.698	1	492.413	0.000
PROVIDER	0.494	1	0.218	0.642
LEVEL	4.979	1	2.198	0.142
PROVIDER*LEVEL	0.018	1	0.008	0.929
Residuals	201.654	89		
N=93				
Adjusted R ² =0.006				
Panel B. Descriptive statistics for each experimental cell and t tests for the treatments				
	FSA	AAF	t value (p value)	Total
Limited assurance	3.783 (1.704)	3.609 (0.891)		3.696 (1.348)
Reasonable assurance	3.292 (1.574)	3.174 (1.696)	1.496 (0.138)	3.234 (1.618)
t value (p value)			0.450 (0.654)	
Total	3.532 (1.640)	3.391 (1.358)		
Panel C. Post hoc tests (t tests)				
	t value	p		
FSA_LA-FSA_RA	0.727	0.310		
FSA_LA-AAF_LA	0.434	0.667		
FSA_LA-AAF_RA	1.214	0.231		
FSA_RA-AAF_RA	0.247	0.806		
AAF_LA-FSA_RA	0.854	0.399		
AAF_LA-AAF_RA	1.088	0.284		

be independent from the assurance level and the assurance provider. Figure 1, Panel D, illustrates the means of the four cells and indicates that limited assurance results in a higher perceived credit risk than reasonable assurance and that the combination of limited assurance and assurance provision by the financial statement auditor results in assessing a relatively high credit risk.

Our last dependent variable, *INVEST*, deals with the likelihood that financial professionals will invest their private capital in the fictitious company. Again, as shown by the ANOVA results in Table 10, neither the assurance provider ($F=0.901$; $p=0.345$) nor the assurance level ($F=0.001$; $p=0.974$) significantly impacts these investment decisions. Thus, the results do not support H2 and H3. Furthermore, the interaction term is also insignificant ($F=1.027$; $p=0.314$). This is confirmed by the *t* tests of Panel B. The post hoc tests documented in Panel C do not reveal significant difference between the experimental cells. Figure 1, Panel D, illustrates the findings.

4.2 | Additional Analyses

Regarding the impact of the type of assurance provider on financial analyst perceptions and decisions we argue that the

assurance provision by the financial statement auditor (another audit firm) improves (weakens) auditor ability to detect material misstatements (competence) and threatens (strengthens) auditor willingness to report detected misstatements (independence). To test this assumption, we asked the participants to assess the competence and the independence of the assurance provider on a 7-point Likert scale (1 = *very low*; 7 = *very high*). Competence was perceived to be significantly higher if assurance was provided by the financial statement auditor (mean = 5.043) than by another audit firm (mean = 4.130) ($t=3.326$; $p=0.001$). In contrast, the participants' independence perceptions do not significantly differ ($t=-0.240$, $p=0.811$) between the provision by the financial statement auditor (mean = 4.574) and by another audit firm (mean = 4.652). Thus, our suggested explanation for the insignificant impact of the assurance provider holds.

Figure 2, Panels A–E, shows the results of mediation analyses (assurance provision by the financial statement auditor is coded 0, and assurance provision by another audit firm is coded 1). Assurance provision by another audit firm has a significant negative impact on perceived auditor competence, and perceived auditor competence has a significant positive impact regarding the dependent variables *PERCEIVED_AL*, *RELY*, *ADVICE* and *INVEST* (but not regarding *CREDIT RISK*). On the other hand,

TABLE 10 | Results for the dependent variable *INVEST*.

Panel A. ANOVA results				
	Type III sum of squares	df	F value	p
Intercept	1860.319	1	832.358	0.000
<i>PROVIDER</i>	2.014	1	0.901	0.345
<i>LEVEL</i>	0.002	1	0.001	0.974
<i>PROVIDER*LEVEL</i>	2.296	1	1.027	0.314
Residuals	198.915	89		
<i>N</i> = 93				
Adjusted <i>R</i> ² = 0.012				
Panel B. Descriptive statistics for each experimental cell and t tests for the treatments				
	FSA	AAF	t value (p value)	Total
Limited assurance	4.783 (1.347)	4.174 (0.887)	0.033 (0.974)	4.478 (1.169)
Reasonable assurance	4.458 (1.719)	4.478 (1.831)		4.468 (1.755)
t value (p value)	0.943 (0.348)			
Total	4.617 (1.540)	4.326 (1.431)		
Panel C. Post hoc tests (t tests)				
		t value		p
FSA_LA-FSA_RA		0.371		0.477
FSA_LA-AAF_LA		1.810		0.078
FSA_LA-AAF_RA		0.642		0.524
FSA_RA-AAF_RA		-0.038		0.969
AAF_LA-FSA_RA		-0.717		0.478
AAF_LA-AAF_RA		-0.717		0.478

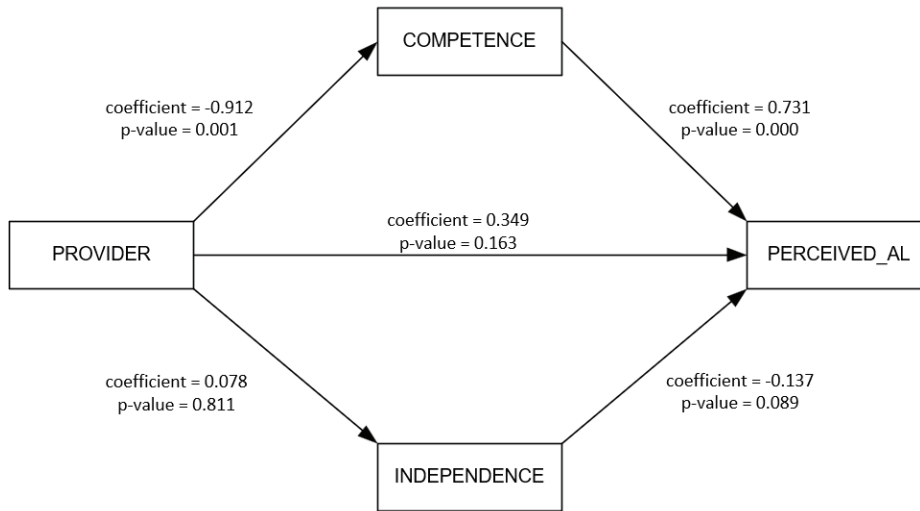
we observe an insignificant positive impact of assurance provision by another audit firm on perceived auditor independence and, in most cases, an insignificant positive effect of perceived independence on the dependent variables. These findings confirm our theoretical arguments about the opposing impacts of the assurance provider on perceived competence and independence, as well as our assumption that the competence effect is stronger than the independence effect.

5 | Discussion

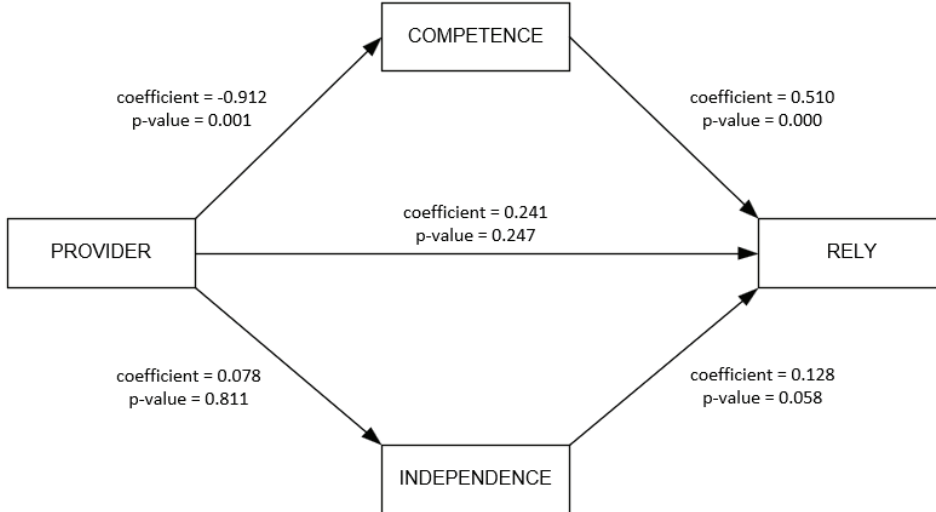
In summary, we find some support for **H1**, that is, external assurance on combating bribery and corruption reports positively affects financial analysts' perceptions and decisions. In contrast, our results do not support **H2** on the expectation of a stronger impact of assurance provided by the financial statement auditor. This could have been caused by opposing effects of assurance provision by the financial statement auditor on auditor's ability to detect material misstatements and on auditor's willingness to report material misstatements. The financial statement auditor

has in-depth knowledge of the client stemming from auditing financial reports. Due to knowledge spillovers, this client-specific expertise could benefit the assurance provision on the combating bribery and corruption report. However, additional assurance provision increases total fees from one client, may result in economic bonding and, thereby, threaten the independence of the assurance provider. Mediation analyses reveal a mediating effect of financial analysts' competence perceptions but not of their independence perceptions, indicating that the competence effect is stronger than the independence effect; however, we fail to identify a significant overall effect. Regarding **H3**, our findings partially indicate that financial analysts recognize and react to the difference in assurance levels. In line with our expectation, they prefer reasonable assurance to limited assurance regarding their perceived assurance level and their reliance on the report of the fictitious company. Interestingly, as shown by univariate tests (untabulated) comparing the means regarding the control group with the means for all experimental cells with reasonable assurance, respectively, limited assurance, assurance based on both assurance levels exerts a positive impact on financial analysts' perceptions and decisions.

Panel A Dependent variable = PERCEIVED_AL



Panel B Dependent variable = RELY



Panel C Dependent variable = ADVICE

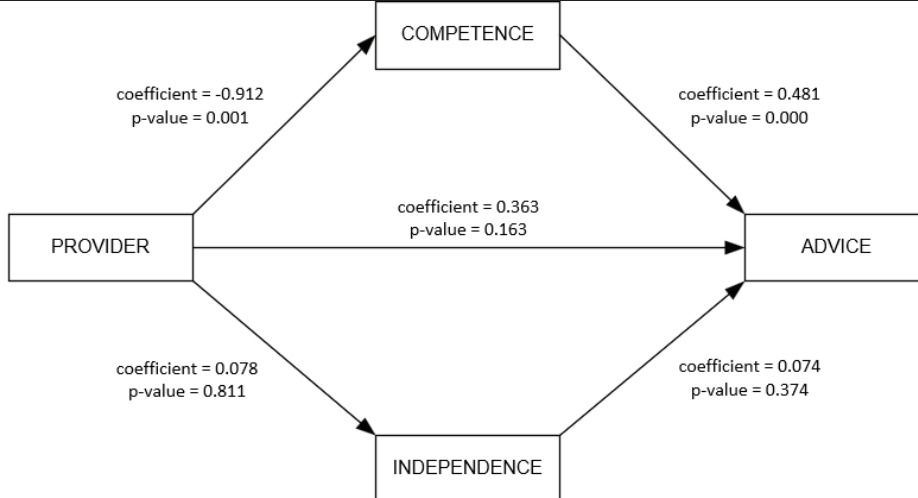
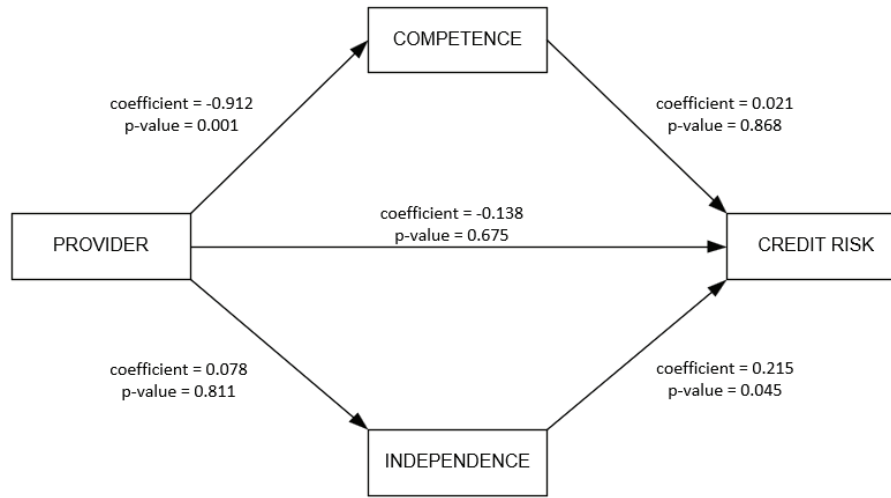


FIGURE 2 | Mediation analyses.

Panel D Dependent variable = CREDIT RISK



Panel E Dependent variable = INVEST

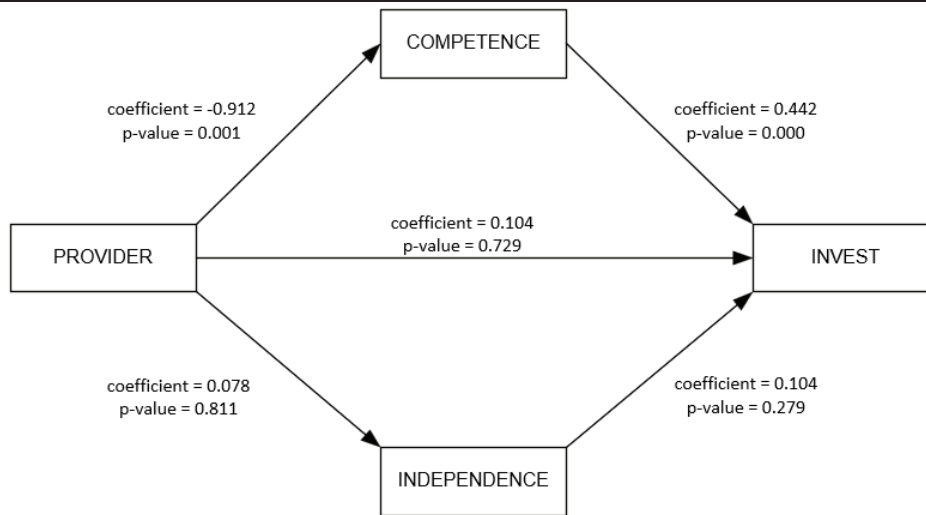


FIGURE 2 | (Continued)

6 | Conclusion

Stakeholders increasingly demand nonfinancial information on firms' sustainability performance. Reports on combating bribery and corruption constitute an essential part of sustainability reports. However, such reports are prepared by managers who may use information asymmetries and hidden actions to maximize their own benefit and to misreport. Thus, assurance on these reports could increase their credibility. Against this backdrop, this study investigates whether the provision of assurance on combating bribery and corruption reports impacts financial analyst perceptions and decisions. Moreover, it examines whether the type of assurance provider and the assurance level matter. To test the related hypotheses, we performed a 2×2+1 between-subject experiment, using financial analysts from Turkey as participants.

The results confirm that assurance on combating bribery and corruption reports leads to perceptions and decisions of financial analysts which are more favourable to the reporting

companies. In contrast, the type of assurance provider, that is, assurance provision by the financial statement auditor or by another audit firm, does not exert a significant effect. Additionally, the financial analysts' perceptions significantly vary with the assurance level. Finally, the assurance provision by the statutory auditor is significantly positively associated with the perceived competence of the assurance provider, and perceived competence mediates the effect of the assurance provider.

There are a few noteworthy limitations of this study. First and foremost, we must acknowledge that we cannot prove the construct validity of our experiment. A weak treatment in conjunction with a relatively small sample size may have caused false insignificance. Future research should pay particular attention to this issue (Asay et al. 2023). Second, we only investigate assurance on one element of sustainability reports and the impact of assurance, the assurance provider and the assurance level might be different for other elements. Third, our participants are financial analysts, and other user groups,

like nonprofessional investors, may perceive assurance on combating bribery and corruption reports differently. Fourth, strictly speaking, our findings are only valid for the fictitious case company. For example, we assumed a company from the construction industry which is prone to bribery and corruption. Fifth, our study is performed in Turkey, a country that bribery and corruption is more widespread than in many other European and North American countries. Hence, we cannot fully generalize our findings to countries with different environmental settings. Sixth, our experiment only considers the potential benefits of combating bribery and corruption report assurance but ignores related costs.

Many of these limitations reveal avenues for future research. Moreover, future research projects could analyse the impact of other characteristics of the assurance provider, such as tenure or industry expertise. In addition, it could be of interest to investigate how new mandatory assurance requirements impact the professional education of public accountants. Finally, with the expanded requirements regarding sustainability reporting and related assurance, archival studies on their effects, such as on capital markets (earnings response coefficients, abnormal returns, abnormal trading volume, cost of capital and credit ratings), will become feasible.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author.

Endnotes

¹ See Appendix A for the English version of the experimental case. The complete experimental materials, as well as the data, are available at: https://osf.io/z72gs/?view_only=736f62f948014060a0f7e1f1b8814d09.

² The experimental materials were prepared following the ethical guidelines of the authors' universities and reviewed and approved by their ethical boards (Ethics Commission of the Technical University of Darmstadt; Ethics Board Adana Alparslan Turkish Science and Technology University).

³ We must point out that we cannot demonstrate that our manipulations exhibit construct validity. For example, the treatment variable regarding the assurance provider only consists of changing a single sentence in the experimental materials manipulating the identity of the assurance provider (XXYY versus another audit firm ZZAA).

⁴ When we rerun our analyses and include participants who failed the attention checks, the results are as follows: Means are lower for the control group than for the treated groups for *RELY* ($p=0.082$), *ADVICE* ($p=0.004$) and *INVEST* ($p=0.054$) but not for *CREDIT_RISK* ($p=0.599$). In the MANOVA analysis, there is no main effect for *PROVIDER* ($p=0.451$) or *LEVEL* ($p=0.466$) and no interaction effect ($p=0.390$). See Appendix A for further details.

⁵ The question related to the dependent variable *PERCEIVED_AL* could not be raised to the control group.

⁶ Nonparametric Mann–Whitney *U* tests yield similar results; *RELY* ($Z=-3.762$, $p=0.000$), *ADVICE* ($Z=-4.818$, $p=0.000$), *INVEST* ($Z=-4.245$, $p=0.000$) and *CREDIT RISK* ($Z=-1.117$, $p=0.264$).

⁷ Apart from *CREDIT RISK*, the following relationship applies to all other variables: The higher the values for the dependent variables, the more favourable the perceptions and decisions of financial analysts are. Therefore, for the MANOVA, the variable *CREDIT RISK* had to be inverted.

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Appendix A

Experimental Case

General

'Lider İnşaat ve Mühendislik Anonim Şirketi' is an engineering and construction group with a headquarter located in Istanbul, 20 group companies and activities in many other countries, for example, Iraq or Kazakhstan. Beyond engineering and construction, it focuses on power generation and real estate investment. 'Lider İnşaat ve Mühendislik Anonim Şirketi' has 22,200 employees. Stocks of 'Lider İnşaat ve Mühendislik Anonim Şirketi' are listed on the Istanbul stock exchange.

Business situation

	2021	2020
Revenues	1231 million USD	1102 million USD
Net income	441 million USD	430 million USD
Balance sheet total	6891 million USD	5635 million USD
Operating cash flow	278 million USD	253 million USD
Leverage (debt/ balance sheet total)	20.2%	19.9%
Current Ratio	332.1%	337.6%
Return on Assets	7.9%	7.6%
Earnings per Share	0.13 USD	0.12 USD

Corporate Governance

The Board of Directors consists of five members (two executive members, one nonexecutive member and two independent nonexecutive members). Three committees officiate in affiliation with the Board of Director: Audit Committee (two members, five meetings in 2021), Corporate Governance Committee (three members, two meetings in 2021) and Early Identification of Risks Committee (three members, six meetings in 2021).

Auditing

Since 2016, the audit firm XXYY is responsible for the statutory audit. XXYY is one of the Big 4 audit firms that operate in the Turkish audit market. During these 6 years, XXYY always issued an unqualified audit opinion.

XXYY conducted the statutory audit in accordance with the standards on auditing issued by the Capital Markets Board of Turkey and with the Turkish Auditing Standards issued by the Public Oversight, Accounting and Auditing Standards Authority.

The audit fee paid to XYYY for the statutory audit of the financial statements 2021 is 200,000 USD.

Excerpt from the Sustainability Report

Combating Bribery and Corruption

'Lider İnşaat ve Mühendislik Anonim Şirketi' antibribery and anticorruption policy and approach are clearly described in its Code of Business Conduct and the Supplier Code of Conduct. All operations of 'Lider İnşaat ve Mühendislik Anonim Şirketi' and its subsidiaries are assessed for bribery and corruption risks. The antibribery and anticorruption policy is communicated with all employees, suppliers and business partners through the corporate website, trainings, workshops and newsletters.

All suppliers and subcontractors that cooperate with 'Lider İnşaat ve Mühendislik Anonim Şirketi' are assessed in terms of antibribery and anticorruption and 'Lider İnşaat ve Mühendislik Anonim Şirketi' does not work with companies that have a negative record in this regard. No cases of corruption were encountered during supplier audits conducted in 2021, and no allegations of corruption related to its suppliers have been reported to 'Lider İnşaat ve Mühendislik Anonim Şirketi'.

During the reporting period, no criminal cases were filed against the company on charges of corruption and no business contracts have been terminated due to corruption. In addition, there was no penalty paid by the company based on bribery or corruption during this period.

Version 1:

-Version 2:

XYYY provides assurance according to the ISAE 3000 on the combating bribery and corruption part of 'Lider İnşaat ve Mühendislik Anonim Şirketi's' sustainability report. It concludes: 'Based on the procedures performed, nothing has come to our attention that causes us to believe that the combating bribery and corruption Report of "Lider İnşaat ve Mühendislik Anonim Şirketi" for the period from January 1, 2021 to December 31, 2021 is not prepared, in all material respects, in accordance with the requirements of the GRI standards'.

Version 3:

Another audit firm ZZAA provides assurance according to the ISAE 3000 on the combating bribery and corruption part of 'Lider İnşaat ve Mühendislik Anonim Şirketi's' sustainability report. It concludes: 'Based on the procedures performed, nothing has come to our attention that causes us to believe that the combating bribery and corruption Report of "Lider İnşaat ve Mühendislik Anonim Şirketi" for the period from January 1, 2021 to December 31, 2021 is not prepared, in all material respects, in accordance with the requirements of the GRI standards'.

Version 4:

XYYY provides assurance according to the ISAE 3000 on the combating bribery and corruption part of 'Lider İnşaat ve Mühendislik Anonim Şirketi's' sustainability report. It concludes: 'In our opinion, on the basis of the knowledge obtained in the audit, the combating bribery and corruption Report of "Lider İnşaat ve Mühendislik Anonim Şirketi" for the period from January 1, 2021 to December 31, 2021 complies, in all material respects, with the requirements of the GRI standards'.

Version 5:

Another audit firm ZZAA provides assurance according to the ISAE 3000 on the combating bribery and corruption part of 'Lider İnşaat ve Mühendislik Anonim Şirketi's' sustainability report. It concludes: 'In our opinion, on the basis of the knowledge obtained in the audit, the combating bribery and corruption Report of "Lider İnşaat ve Mühendislik Anonim Şirketi" for the period from January 1, 2021 to December 31, 2021 complies, in all material respects, with the requirements of the GRI standards'.