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The Role of ESG Evaluation: The Value Model Perspective

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Yuriko Nakao*
Associate Professor, Faculty of Informatics Kansai University
2-1-1 Ryozenjicho, Takatsuki, Osaka 569-1095 Japan
e-mail: y-nakao@kansai-u.ac.jp

Katsuhiko Kokubu
Professor, Graduate School of Business Administration Kobe University

Philip Sugai
Professor, Graduate School of Business Doshisha University

*Corresponding author

Maki Makoto Foundation

Nagoya, Japan

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Yuriko Nakao, Katsuhiko Kokubu, Philip Sugai

Abstract

This study employs Sugai et al.'s (2021) Value Model framework to analyse the assessment items of the major environmental, social, and governance (ESG) evaluation agencies: MSCI and S&P Global. The objective is to ascertain whether an ESG evaluation provides value to investors beyond being a benchmarking tool. The Value Model is a goal-based framework that enables companies to measure and manage the impact of their activities on seven key stakeholders: employees, customers, society, partners, shareholders, the environment, and the company itself. The model provides a structured approach to goal orientation and progress management for companies, enabling them to create value for their stakeholders by setting clear and specific goals based on key ESG and sustainability reporting frameworks. A comprehensive analysis of the coverage and quality of the MSCI and S&P assessment items revealed considerable gaps in addressing value creation among the seven stakeholders. The analysis revealed that the MSCI and S&P assessment items did not adequately cover value creation for the seven stakeholders in the Value Model, with particularly low coverage of goals related to employees, society, and partners. For example, less than 20% of the assessment items focused on employee well-being and development, whereas fewer than 10% addressed societal impact and partnerships. Further, the quality of the assessment items was inadequate, suggesting that current ESG evaluations may not accurately measure a company's sustainability value. These results indicate that investors may not fully recognise the environmental and social impacts of corporate activities. Further, even high

ESG evaluations by S&P and MSCI may not accurately reflect a company's sustainability activities. Consequently, investors may make decisions based on incomplete or misleading information, thereby potentially overlooking critical sustainability issues. Additionally, demonstrating that actions to enhance ESG evaluation scores genuinely enhance stakeholder value poses challenges for companies. This lack of clarity can impede the development and implementation of effective sustainability strategies. To address these challenges, ESG assessment agencies should consider comprehensive and accurate evaluations of companies' sustainability performance. Further, companies should strive to set clear and measurable goals for each stakeholder group to ensure that their sustainability efforts create value for all stakeholders.

Keywords: ESG evaluation, goal orientation, stakeholder value, value creation, sustainability reporting.

1 Introduction

Companies have made accelerated efforts to address sustainability issues owing to growing global concerns about environmental issues and increasing environmental and social regulations. This trend reflects the fact that environmental, social, and governance (ESG)-based ratings have become important evaluation criteria guiding investment decisions and corporate policies (Amel-Zadeh & Serafeim, 2018; Edmans & Kacperczyk, 2022; Government Pension Investment Fund, 2023). The rapid growth of ESG evaluation agencies is evident, as investors with over USD 100 trillion in assets seek to integrate ESG into their investment frameworks (PRI, 2020). Further, sustainable investment is considered mainstream (Amel-Zadeh & Serafeim, 2018; Edmans & Kacperczyk, 2022; Koenigsmarck & Geissdoerfer, 2023).

However, investments that merely use information from ESG evaluations are often claimed to be ESG investments, even when there is no clear evidence of their actual

contribution to sustainability. This process is identified as 'greenwashing' (Bauer & Smeets, 2021; Chatterji et al., 2009; Conen et al., 2020; Raghunandan & Rajgopal, 2022). Further, ESG investments may be viewed as investments with financial returns as the main objective and social improvements as by-products (Ito & Honda, 2023).[1]

ESG evaluations[2] are important in ESG investment decisions, as is the assessment of a company's ESG performance by ESG evaluation agencies. This interconnected network of ESG evaluations and investments, referred to as the ESG evaluation ecosystem,[3] promotes sustainable investment practices, encourages transparency and accountability in corporate behaviour, and guides investors towards sustainable investment decisions (The SustainAbility Institute by ERM, 2023). However, ESG evaluations may disclose information to strategically improve ESG scores without inherently improving ESG performance (Clementino & Perkins, 2021; Hirai & Brady, 2021). Further, considering the growing demand for ESG information, ESG rating agencies deliberately adopt their own measurement approaches according to their positioning (Eccles & Stroehle, 2018).

Despite the rapid expansion of ESG investment, previous studies have shown that ESG evaluations do not contribute sufficiently to solving societal sustainability challenges. Therefore, we believe that the Value Model proposed by Sugai et al. (2021) is an effective corrective measure to address the shortcomings of conventional ESG evaluations. Their model is based on a comprehensive approach that considers the interests

[1]Ito and Honda (2023) stated that the main purpose of ESG investment is only to achieve returns through increased corporate value, not address social issues. They argued that solutions are a by-product. Note that ESG investment, as defined by Ito and Honda (2023), is 're-impact investment', which aims to achieve socio-economic impact in E and S in addition to the return on earnings and narrowly focuses on companies. Socially responsible investment (SRI) is not profit-seeking; instead, its main purpose is to align with moral values and with the funds (donations) provided.

[2]The SustainAbility Institute by ERM (2023) surveyed investors and company contacts about ESG assessment providers and published the results in its 'Rate the Raters 2023' report. According to the report, an ESG evaluation is defined as an assessment of sustainability performance based on an analysis of ESG data, usually expressed as a numerical score or text rating reflecting a company's performance against ESG criteria.

[3] The ESG evaluation ecosystem refers to the interconnected network of actors, processes, and tools involved in assessing and rating companies based on their ESG performance (The SustainAbility Institute by ERM, 2023). This ecosystem includes ESG evaluation providers, investors, companies, regulators, data aggregators, and other stakeholders involved in assessing and reporting ESG factors (The SustainAbility Institute by ERM, 2023). The ESG evaluation providers are important in assessing and rating companies on ESG criteria and providing ESG scores, ratings, and reports to investors and other stakeholders (The SustainAbility Institute by ERM, 2023). However, investors use ESG evaluations and data to make investment decisions that align with their sustainability goals and values. Moreover, companies are assessed and rated on their ESG performance and seek to improve their sustainability practices and disclosure to attract responsible investors (The SustainAbility Institute by ERM, 2023). Regulators are also important in influencing the ESG evaluations by setting standards and guidelines for ESG reporting and disclosure (The SustainAbility Institute by ERM, 2023). Data aggregators collect, analyse, and distribute ESG data from various sources to support ESG evaluations and assessments (The SustainAbility Institute by ERM, 2023). Further, stakeholders such as non-governmental organization, employees, the general public, and supply chain partners can influence or be influenced by ESG evaluations and assessments (The SustainAbility Institute by ERM, 2023).

of all stakeholders and covers relevant stakeholders: the company, its customers, employees, partners, shareholders, society, and the planet. This comprehensive stakeholder approach is inspired by the views of prominent business leadership groups, such as the Business Roundtable and the World Economic Forum, which advocate for inclusive business success (Sugai et al., 2021).

The Value Model differs from traditional ESG evaluation models in several key ways. First, the Value Model aims to ensure that business activities positively affect shareholders and all relevant parties. Thus, seven key stakeholders are incorporated into the framework. This approach differs from traditional ESG evaluation approaches (Berg et al., 2022; Boffo & Patalano, 2020; Escrig-Olmedo et al., 2019), which often focus narrowly on shareholder value. Second, the Value Model is a robust and objective measure that goes beyond mere compliance with the ESG reporting disclosure notice requirements. It also advocates the use of indicators that truly reflect a company's impact and actions towards sustainability. It addresses the criticism that many companies have high ESG evaluations but do not take meaningful action (Clementino & Perkins, 2021). This will be discussed in the next section. The underlying criticism is that existing sustainability guidelines and initiatives use several fragmented indicators (micro-indicators) that focus on reporting requirements rather than on the actual impacts and actions of companies. Consequently, companies may only report data and receive a positive rating from external ESG evaluation bodies and others, even if the content does not reflect meaningful behaviour (Christensen et al., 2022). The Value Model aims to address these issues by developing indicators that reflect the true impact and behaviour of companies.

Third, the Value Model proposes a standardised, objective, and transparent framework to address the inconsistent methodologies used by different ESG evaluation agencies (CFA Institute, 2023; Financial Services Institute [FSA], 2022; International Organization of Securities Commissions [IOSCO], 2021), as well as market-oriented, rating-unique ESG evaluation agencies (Eccles & Stroehle, 2018). The Value Model may address the challenges of ESG evaluation, including the exclusion of multi-stakeholder involvement, a lack of transparency, and methodological inconsistencies. Additionally, the Value Model differs from ESG evaluation, which is an investor-benchmarking tool because it is goal-oriented. This enables companies to identify the most appropriate direction for sustainability activities, free from the influence of ESG evaluations (Berg et al., 2022; Chatterji et al., 2016; Clementino & Perkins, 2021).

Therefore, this study identifies the extent to which ESG assessments undermine stakeholder value by comparing them to major ESG assessments, based on the Value Model framework, and examines the challenges of these ESG assessments. The ESG evaluations employed in this study are those of two organisations, S&P Global and MSCI,

which cover major global companies. The remainder of this paper is organised as follows: Section 2 reviews the literature on the challenges of ESG valuation and how ESG investment and valuation can guide corporate sustainability activities. It then discusses how the Value Model adopted in this study overcomes these challenges. Section 3 presents the research design. Section 4 presents the results of the analysis. Finally, Section 5 presents the discussion and conclusions.

2 Analytical perspectives of previous studies and this paper

2.1 ESG investment and sustainability

In SRI and ESG investments, providing reliable information is important to enable investors to make informed decisions, considering financial structures and investor preferences (CFA Institute, 2023; FSA, 2022; IOSCO, 2021). However, considerations have been presented regarding the uncertainty of ESG information for investors (CFA Institute, 2023; FSA, 2022; IOSCO, 2021) and the lack of clarity regarding the definition of ESG investment as sustainability finance (Hartzmark & Sussman, 2019; Koenigsmarck & Geissdoerfer, 2023; Kölbel et al., 2019; Scholten, 2006).

Scholtens (2006) provided a detailed review of theoretical and empirical studies on finance and corporate social responsibility since the early 1990s, highlighting the important role of finance in promoting sustainable development and corporate social responsibility, and the need for investors and financial institutions to focus on long-term value creation.

Hartzmark and Sussman (2019) conducted an experiment to analyse the impact of sustainability ratings on US mutual fund inflows, finding that high sustainability ratings positively impact fund inflows. This effect was particularly pronounced for funds with high and low sustainability ratings. They also considered institutional constraints, expectations of high returns, and altruism as the background to investors' preferences. Although they drew no clear conclusions on specific motivations, they presented substantial results indicating that investors respond positively to sustainability.

Kölbel et al. (2019) examined the mechanisms by which investor activity in sustainable investment influences the improvement of a company's environmental and social activities. They analysed 64 relevant studies from various disciplines and considered the existing evidence on each of the reported mechanisms. The results indicated that shareholder engagement is the most reliable mechanism and is empirically supported as a key determinant in promoting or hindering the improvement of corporate environmental

and social activities. Conversely, the literature has not elucidated clear factors regarding the impact of capital distribution or the indirect impact of investor behaviour. Kölbel et al. (2019) suggested that current sustainable investment practices have a limited impact on investors and advocated for the development of investor impact indicators to reflect sustainable investment contributions to social goals.

Koenigsmarck and Geissdoerfer (2023) raised the question of whether sustainable investments are actually sustainable. They reviewed academic literature on SRI and sustainability indicators, focusing on the period from 2019 to 2021, by compiling a comprehensive and concise definition of sustainable investment and clarifying the differences between related concepts. Further, they sought to develop a comprehensive framework, increase their understanding, and provide a holistic picture of sustainability indicators. In their systematic review, Koenigsmarck and Geissdoerfer (2023) covered 274 journals and 316 relevant arguments, including the 100 most-cited studies published between 2019 and 2021, eight conference proceedings, 16 practitioner reports, and 18 other sources. They emphasised the need to shift the focus of the current academic debate on SRI to improve sustainability measurements. Further, they suggested providing more comprehensive and concise definitions of SRI and related terms to clarify sustainable investment.

In a recent empirical analysis, Avramov et al. (2022) examined the impact of ESG uncertainty on investment decisions and asset pricing. They employed data from a range of databases, including Compustat, I/B/E/S, and Thomson Reuters, spanning the period from 2002 to 2019. Their study highlighted the challenges inherent in ESG evaluation, particularly the ordinal nature of ESG scores and the variability in sample coverage across rating agencies. They also identified the impact of ESG uncertainty on investor demand and the risk–return trade-off, potentially increasing the cost of capital for environmentally focused companies. Their study highlighted the need to understand and effectively manage ESG uncertainty in the context of sustainable investment.

The literature suggests that SRI and ESG investments have certain effects on corporate sustainability. However, challenges persist regarding their definitions and measurement methods, and there is no unified view (Avramov et al., 2022; Koenigsmarck & Geissdoerfer, 2023). Considering these issues, this study examines the impact of SRI and ESG investment on corporate sustainability activities from a new perspective based on ESG evaluations of companies engaged in SRI and ESG investments.

2.2 ESG evaluation and sustainability

With the growing importance of ESG investments, the number of evaluation bodies has increased to more than 600 globally (The SustainAbility Institute by ERM, 2020). However, various challenges are associated with the criteria and methods used by these assessment bodies (Delmas et al., 2013; Fowler & Hope, 2007; Semenova & Hassel, 2014; Yang, 2022). Additionally, ESG evaluations have not triggered substantial improvements in corporate sustainability activities (Clementino & Perkins, 2021; Fetami, 2021).

There are several challenges and limitations to ESG evaluations regarding evaluation methodologies, including a lack of standardisation and transparency, the risk of greenwashing, and the need for greater stakeholder involvement (Delmas et al., 2013; Fowler & Hope, 2007; Semenova & Hassel, 2014; Yang, 2022). For example, Delmas et al. (2013) indicated that the convergence of KLD, ASSET4, and Global Engagement Services rating agencies in the MSCI World Universe (2003–2011) environmental performance indicators for US companies is low. They stated that composite environmental performance measures may mask significant differences by aggregating different environmental factors. Their study highlighted the importance of consistent and transparent environmental performance standards in influencing corporate behaviour and guiding sustainable investment decisions.

Yang (2022) provided a comprehensive review of studies focusing on environmental performance and highlighted the potential risks of undermining trust in SRI screening as a basis for investment decisions, particularly in the context of greenwashing. Yang (2022) highlighted that Delmas et al. (2013) identified the risk of misrepresenting environmental performance by combining different components into a single indicator and emphasised that similar problems exist when aggregating social dimensions. Yang (2022) noted the reliability and comparability of ESG evaluations by investors, managers, and researchers, and discussed the potential impact of these ratings on investment decisions and corporate strategy, emphasising the importance of making decisions based on them. Yang (2022) posited that if ESG evaluations do not provide meaningful information on corporate behaviour, the relationship between ESG evaluations and financial performance may not reflect the intended relationship.

Berg et al. (2022) provided a comprehensive analysis of ESG evaluation divergence among six agencies. They provided a detailed analysis of each rating agency's

methodology, dividing ESG evaluation divergence into three factors—scope, performance measurement, and weighting—and examined the extent to which these factors influenced the divergence. The results indicated that the performance measurement accounted for 56% of the deviation, whereas scope and weight contributed 38% and 6%, respectively. Berg et al. (2022) noted how the assessor's overall view of the company influences the measurement of certain categories, the so-called assessor effect. They argued that to improve the comparability of ESG evaluations, attention needs to be paid to how the data underlying ESG evaluations are produced.

Some studies focused on the effectiveness of third-party ESG evaluations in influencing corporate sustainability (Clementino & Perkins, 2021; Fetami, 2021). Clementino and Perkins (2021) conducted semi-structured interviews with personnel from 20 large Italian companies to investigate how they respond to ESG evaluations and whether this response leads to a substantial enhancement in sustainability-related initiatives. The results revealed that some companies enhanced their disclosure of ESG evaluations; however, this response did not necessarily lead to substantive improvements in their environmental and social activities. Further, companies respond to ESG evaluations in different ways based on their unique circumstances and priorities due to a variety of factors, including management beliefs about the benefits of ESG evaluations and their alignment with the company's broader goals and strategies (Clementino & Perkins, 2021).

Fetami (2021) drew on previous research to examine the impact of greenwashing and the effectiveness of third-party ESG evaluation institutions from a corporate finance perspective. First, the inaccurate or incomplete information provided by companies undermined the accuracy of ESG evaluations. Second, ESG evaluation institutions may confuse actual sustainability activities with greenwashing activities. Third, these assessment institutions may lack the resources and incentives to monitor corporate sustainability activities adequately. Fetami suggested that ESG evaluation agencies cannot solve the problem of greenwashing and that stronger regulations and a system of checks and balances are needed.

Drempetic et al. (2020) examined the impact of firm size on ESG scores in corporate sustainability ratings, particularly focusing on bias in the ASSET4 database. They found a significant firm size bias, indicating that larger companies tended to receive disproportionately higher ESG scores. This bias was attributed to larger companies having more resources to provide ESG data and greater pressure to disclose information for

legitimacy. They also discussed the relationship between sustainability reporting, corporate sustainability measurements, and ESG scores, as well as the need for more detailed comparisons of ESG scores and greater transparency from ESG evaluation agencies.

The SustainAbility Institute by ERM (2023) 'Rate the Raters 2023' report aimed to elucidate the role and impact of ESG evaluation providers within the sustainable investment ecosystem. The report indicated discrepancies between company and investor perspectives on ESG evaluations. For companies, although there are potential benefits to participating in ESG evaluations, balancing them with the burden of internal resources is challenging. Many companies indicated that engaging with ESG rating agencies requires time and effort and can be confusing (The SustainAbility Institute by ERM, 2023). However, the rating agencies rated most highly by companies were those with which they engaged frequently, such as the Carbon Disclosure Project (CDP) and S&P Corporate Sustainability Assessment (CSA). Further, companies tend to engage with ESG rating agencies to obtain high-quality ratings. The report noted that companies seek rating consistency, and rating divergence makes it challenging to prioritise and track their ESG evaluations.

Conversely, institutional investors enhance their internal ESG expertise, develop their own data analysis systems, and tailor their ESG information sourcing methods to align with their operational needs. Comprehending the discrepancies between corporations and investors' perspectives is crucial when considering the function and influence of ESG evaluations.

Previous studies have identified numerous challenges and limitations of ESG evaluation criteria and methods, including a lack of consistency and transparency, the risk of greenwashing, and the need for greater stakeholder involvement. However, the number of ESG evaluation bodies is increasing, reflecting the growing importance of ESG investments (Delmas et al., 2013; Fowler & Hope, 2007; Semenova & Hassel, 2014; Yang, 2022). ESG evaluations have also been observed not to lead to significant improvements in corporate sustainability activities (Clementino & Perkins, 2021; Fetami, 2021). Further, previous studies have not sufficiently addressed the challenges of ESG evaluation from a comprehensive stakeholder perspective.

2.3 ESG valuation challenges and the Value Model

The Value Model adopted in this study is a framework for an objective,

transparent, and integrated assessment of a company's stakeholders' value (Sugai et al., 2021). This section elucidates the distinctions between the challenges presented by previous studies on ESG investment and evaluation, as outlined in the preceding section, and the Value Model adopted in this study. First, the challenges of divergence in ESG evaluation indicators, weights, and scope among rating agencies (Berg et al., 2022; Chatterji et al., 2016) are addressed. Second, the challenges of ESG evaluation indicators, weights, and scope are discussed (Berg et al., 2022). Third, the challenges in corporate ESG information disclosure are presented (Christensen et al., 2022; Kimbrough et al., 2022).

2.3.1 Challenges of divergent ratings by ESG evaluation agencies and value models

Berg et al. (2022) empirically demonstrated the divergence of ESG evaluations by six rating agencies, identifying three sources of divergence in ESG evaluations: scope, measurement, and weighting. Deviation in scope' refers to a divergence between two ratings, where one rating agency may include lobbying activities but another rating agency may not. 'Measurement divergence' refers to a situation in which two or more rating agencies employ different indicators to assess the same attribute. For instance, a company's labour practices may be evaluated by its turnover rate or the number of labour-related court cases. 'Divergence in weights' occurs when two or more rating agencies assign different degrees of relative importance to various attributes. For example, an indicator of labour practices may be given greater weight in the final rating than an indicator of lobbying.

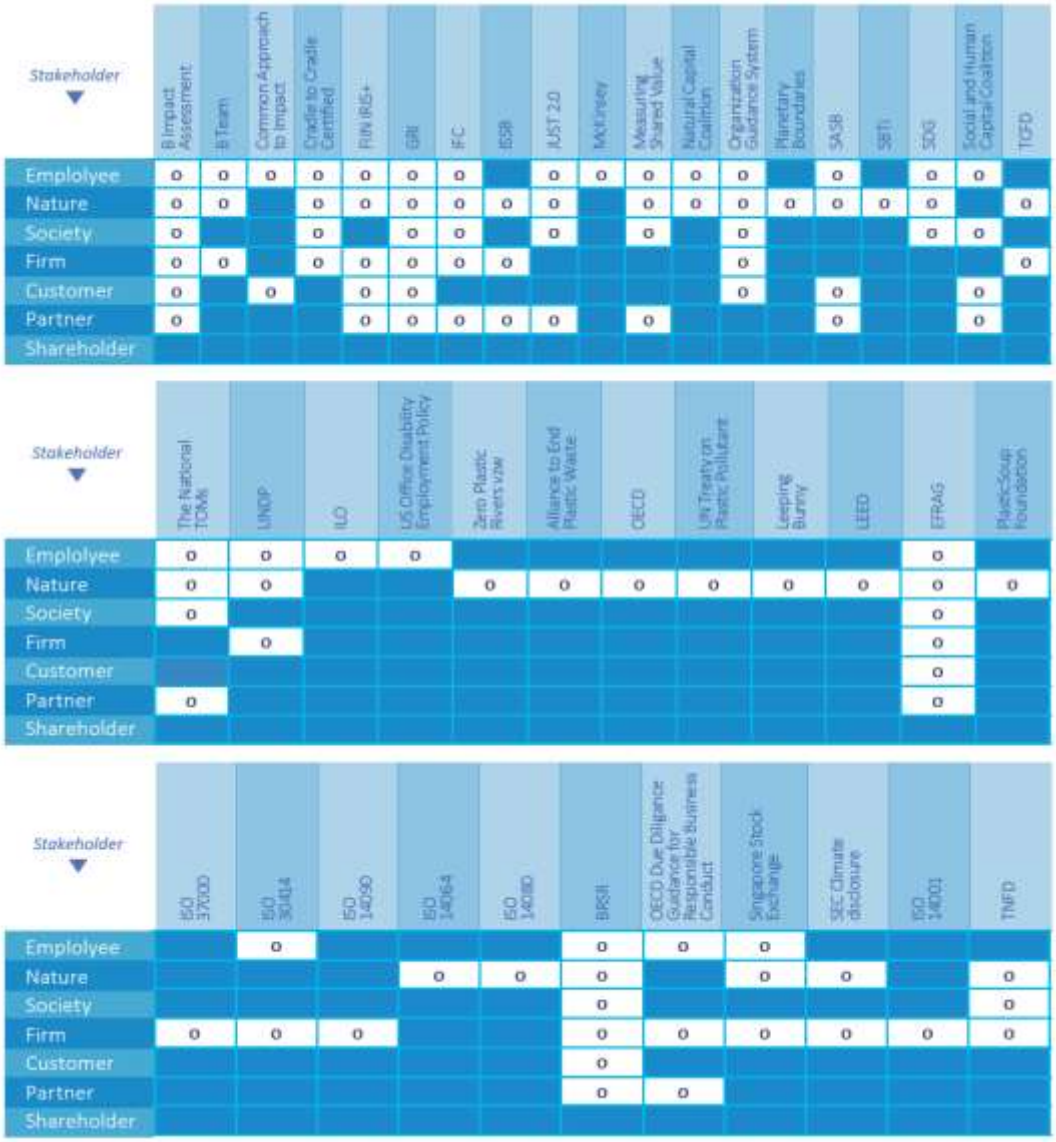
Sugai et al.'s (2021) Value Model can overcome the challenge of rating diversity. First, regarding 'divergence in scope', the Value Model integrates 45 sustainability criteria, frameworks, and models and comprises 1,234 individual impact measures (Sugai et al., 2023). This comprehensive approach avoids the problem of differences in the scope of assessment between ESG evaluation organisations. The Value Model is structured hierarchically, comprising 7 stakeholders, 27 themes, 81 goals, and 168 sub-goals. This enables a comprehensive assessment of an organisation's sustainability efforts. Second, regarding 'measurement divergence', the Value Model provides standardised themes, which prevents ESG evaluation bodies from measuring the same attributes with different indicators. For instance, six themes have been identified for analysing employee values: diversity and equity; fair pay; health, welfare, and safety;

employee development; corporate engagement and satisfaction; and human rights. This enables companies to assess their performance using consistent indicators. Finally, about 'weighting divergence', all seven stakeholders are treated with the same positioning in the Value Model. This does not lead to ESG rating agencies having different assessment results regarding the relative importance of attributes.

Sugai et al.'s (2021) Value Model represents a framework designed to address the issue of divergence in ESG evaluation, as identified by Berg et al. (2022). The Value Model's comprehensive approach, standardised themes, and equal treatment of each stakeholder can improve the consistency and comparability of ESG evaluations.

Table 1 illustrates the interrelationships between the seven stakeholders of the Value Model and the individual sustainability frameworks. Tables 2-1, 2-2, and 2-3 demonstrate the sustainability-related frameworks and the correspondence between the 27 themes and 81 goals of the Value Model. These tables illustrate the comprehensive scope of the Value Model for addressing various aspects of sustainability.

Table 1 The seven stakeholders in the Value Model and their relationship with individual sustainability frameworks



Source: Prepared based on Sugai et al. (2023, p.18).

Table 2-1 Relationship between the 27 themes of the Value Model and the individual sustainability frameworks

Theme ▼	B Impact Assessment	B Team	Common Approach to Impact	Cradle to Cradle Certified	GIIN IRIS+	GRI	IFC	ISSB	JUST 2.0	McKinley	Measuring Shared Value	Natural Capital Coalition	Organization Guidance System	Planetary Boundaries	SASB	SBTi	SDG	Social and Human Capital Coalition	TCFD
E1: Diversity & Equity	o	o		o	o	o	o		o						o		o	o	
E2: Fair Wages	o			o	o	o			o										
E3: Health, Welfare and Safety	o					o	o		o	o	o	o	o					o	
E4: Development	o		o		o	o			o				o					o	
E5: Engagement and Satisfaction	o					o			o				o		o			o	
E6: Human Rights	o	o		o	o	o	o										o	o	
N1: Waste and Pollution	o	o			o	o	o	o				o		o		o	o		o
N2: Water	o			o	o	o	o	o				o		o	o		o		
N3: Energy	o			o		o		o			o	o			o		o		
N4: Products and Services	o			o		o		o	o		o	o	o		o		o		
N5: Biodiversity				o		o		o	o			o		o			o		
N6: Buildings and Land	o							o							o				
S1: Appropriate Taxes						o												o	
S2: Local Community Development						o	o				o		o				o	o	
S3: Local Employment and Engagement	o			o		o			o									o	
S4: Charity and Volunteerism	o								o										
F1: Transparent Financial Reporting	o				o	o		o					o						
F2: Governance and Firm Structure	o	o		o	o	o	o						o						o
F3: Management Capability																			
C1: Truth in Communications	o				o	o													
C2: Privacy			o		o	o									o			o	
C3: Health, Safety & Satisfaction	o				o	o							o		o			o	
P1: Supply Chain and Distribution Channel Reporting	o				o	o													
P2: Suporting MSMES and VCSES											o								
P3: Environmentally & Socially Responsible Partners						o		o	o						o				
P4: Supply Chain & Distribution Channel Fair Labor Practices						o	o											o	
SH1: Shareholder EVA																			

Source: Prepared based on Sugai et al. (2023, p.19).

Table 2-2 Relationship between the 27 themes of the Value Model and the individual sustainability frameworks

Theme ▼	The National TOMs	UNDP	ILO	US Office Disability Employment Policy	Zero Plastic Rivers vzw	Alliance to End Plastic Waste	OECD	UN Treaty on Plastic Pollutant	Leaping Bunny	LEED	EFRAG	PlastiSoup Foundation
E1: Diversity & Equity	o										o	
E2: Fair Wages	o										o	
E3: Health, Welfare and Safety	o										o	
E4: Development	o										o	
E5: Engagement and Satisfaction			o	o							o	
E6: Human Rights		o									o	
N1: Waste and Pollution	o				o	o	o	o			o	o
N2: Water											o	
N3: Energy											o	
N4: Products and Services	o	o									o	
N5: Biodiversity	o								o		o	
N6: Buildings and Land										o		
S1: Appropriate Taxes												
S2: Local Community Development	o										o	
S3: Local Employment and Engagement	o											
S4: Charity and Volunteerism	o											
F1: Transparent Financial Reporting											o	
F2: Governance and Firm Structure		o									o	
F3: Management Capability												
C1: Truth in Communications											o	
C2: Privacy												
C3: Health, Safety & Satisfaction											o	
P1: Supply Chain and Distribution Channel Reporting	o										o	
P2: Suporting MSMES and VCSES	o											
P3: Environmentally & Socially Responsible Partners												
P4: Supply Chain & Distribution Channel Fair Labor Practices	o										o	
SH1: Shareholder EVA												

Source: Prepared based on Sugai et al. (2023, p.20)

Table 2-3 Relationship between the 27 themes of the Value Model and the individual sustainability frameworks

Theme ▼	ISO 37000	ISO 30414	ISO 14090	ISO 14064	ISO 14080	BRSR	OECD Due Diligence Guidance for Responsible Business Conduct	Singapore Stock Exchange	SEC Climate disclosure	ISO 14001	TNFD
E1: Diversity & Equity	o					o		o			
E2: Fair Wages	o					o	o	o			
E3: Health, Welfare and Safety	o					o		o			
E4: Development	o					o	o	o			
E5: Engagement and Satisfaction	o					o					
E6: Human Rights	o					o	o				
N1: Waste and Pollution				o	o	o		o	o		o
N2: Water						o		o			o
N3: Energy						o		o			o
N4: Products and Services						o					o
N5: Biodiversity						o					o
N6: Buildings and Land						o					o
S1: Appropriate Taxes											
S2: Local Community Development						o					
S3: Local Employment and Engagement						o					
S4: Charity and Volunteerism											o
F1: Transparent Financial Reporting		o				o					
F2: Governance and Firm Structure	o	o	o			o	o	o	o	o	o
F3: Management Capability											
C1: Truth in Communications						o					
C2: Privacy											
C3: Health, Safety & Satisfaction						o					
P1: Supply Chain and Distribution Channel Reporting							o				
P2: Suporting MSMES and VCSES							o				
P3: Environmentally & Socially Responsible Partners						o	o				
P4: Supply Chain & Distribution Channel Fair Labor Practices						o					
SH1: Shareholder EVA											

Source: Prepared based on Sugai et al. (2023, p.21)

The Value Model also includes a unique scoring mechanism called VCA-T (value-creation assessment transparency), which assesses the breadth and depth of a company's sustainability reporting based on publicly available information. Sugai et al. (2023) noted several implications of VCA-T. First, it increases the transparency in reporting sustainability practices and performance by assessing and scoring the quality of corporate policies and disclosures. Transparency is essential for building trust among stakeholders including investors, customers, employees, and communities. Second, VCA-

T provides a structured approach for companies to measure the value they create for different stakeholders beyond financial indicators. Thus, companies can understand and communicate the impact of their sustainability practices. Third, through the assessment process, VCA-T identifies areas where companies can improve their sustainability policies, disclosure practices, and overall value-creation efforts. This allows companies to focus on improving their performance in key areas and drive continuous improvement. Fourth, VCA-T enables companies to benchmark themselves against their industry peers and best practices, which helps them identify leading practices, set improvement goals, and remain competitive. Fifth, VCA-T provides insights into a company's sustainability practices and performance for investors and other stakeholders. This information may help investors make informed decisions, manage the risks associated with sustainability activities, and develop support strategies for sustainability activities.

2.3.2 Methodological challenges and value models based on ESG evaluation bodies

IOSCO (2021) has identified numerous challenges in ESG evaluation methodologies, including a lack of transparency and information disclosure, a high frequency of methodological changes, and differences between assessor interpretation and materiality. First, the limited disclosure of methodologies, including ESG evaluation indicators, weighting schemes, materiality assessments, and industry-specific considerations raises concerns about their reliability and validity. The lack of transparency surrounding ESG evaluation methodologies makes it challenging for users to comprehend and interpret the ESG evaluation outputs. This suggests that the methodology of the external provider may not align with the asset management company's specific investment strategy and philosophy. Second, ESG evaluators and data providers frequently alter their methodologies without prior notice from companies or market participants. This lack of consistency makes it challenging to compare company performance over time, particularly when methodologies are not communicated transparently, leading to confusion among stakeholders. Third, opinions regarding the materiality of ESG issues differ among ESG evaluation methodologies. Some methodologies focus on a company's exposure to ESG risks, whereas others assess the impact of ESG factors on corporate value.

Thus, it is important to understand the materiality of ESG issues and how they are reflected in ratings. The report highlights that the interpretation and assessment of ESG issues are complex and subjective and, therefore, subject to different interpretations and

assessments. Further, some ESG evaluation providers may use industry averages or negatively rate companies that fail to report information, which may become a disincentive for proper disclosure. Additionally, the lack of interaction and communication between ESG evaluation providers and rated companies is challenging. Companies may be unable to correct erroneous information or comprehend how ratings are derived and ESG evaluation users may make investment decisions based on inaccurate information.

In response to the challenges of ESG valuation methodologies, Sugai et al. (2021) developed a Value Model designed to address the issues highlighted by IOSCO (2021). The indicators for the Value Model were evaluated against four measurement criteria using 1230 indicators from 45 globally issued sustainability frameworks. Each indicator is rated on a scale of 0–2 points using four criteria: (1) existence of clear goals or achievement points, (2) availability of objective measurement, (3) existence of an independent evaluation function, and (4) scale variables. The first criterion, which is goal-based, gives a score of 1 if the indicator is operational and 0 if it is not operational for indicators with clear goals or reach points. To illustrate, the JUST 2.0 mechanism pertaining to 'gender pay equity' (equal pay for work of equal value for men and women) comprises four levels of goal achievement, which is reflected in a score of one. Conversely, Team B lacked a clear goal, resulting in a score of zero.

The second criterion, objective measurement, defines it as logical and rational and presents a clear and objective unit of analysis. For instance, GRI 305-5, which concerns greenhouse gas (GHG) emission reduction, is fundamentally objective. Metric tonnes of gases can be measured simultaneously from the same location using two different criteria. Unless one of them is erroneous, the results will be identical. Conversely, in the context of the organisational guidance system, questions pertaining to employee/customer/community relations are a subjective analytical measure; thus, they are awarded a score of zero.

The third criterion, the independent assessment function (transparency), assesses the capacity of an independent external third-party to readily inspect and confirm that the data reported by the company align with the actual data. Zero points were awarded for specific indicators that could not be assessed and one point was awarded for those that could be assessed. However, the highest score of two was awarded only if there was evidence that the assessment had been performed. For example, under GRI 305-5, all GHG-emitting facilities can be equipped with remote sensors to record and report emission

data openly. However, no evidence has been found describing a transparent method or mechanism for companies to implement this in practice. Further, no evidence could be found among GRI companies worldwide that use standardised methods for transparently reporting GHG emissions and reductions. Consequently, the highest possible score of 2 was not awarded.

The fourth criterion, the scale variable, aims to correct for simply reporting the content. For example, there were instances when reporting that the percentage of women on the board of directors could result in points being awarded, even if the number was zero. This implies that although reporting satisfies the disclosure requirement, it does not provide an assessment of the company's practices. Thus, an evaluation score of 0 was assigned if the question was a binary 'yes/no' question, whereas a score of 1 was assigned if the specific indicator was analysed using an ordinal, interval, or ratio scale. This process ensures that the indicators employed in the Value Model are objective and consistent evaluation criteria have been established. Therefore, the Value Model can be used to overcome the challenges of ESG evaluation methods, such as the lack of transparency, frequency of methodological changes, and differences between assessor interpretation and materiality (IOSCO, 2021).

2.3.3 Challenges of ESG disclosure in ESG evaluation and the Value Model

Christensen et al. (2022) highlighted that greater ESG disclosure does not necessarily lead to increased agreement on ESG evaluations but may instead foster disagreements among ESG rating agencies. The reasons for this disagreement are complex and multifaceted. Christensen et al. (2022) observed that ESG disclosures tend to exacerbate valuation disagreements regarding outcome indicators rather than input indicators. Input indicators assess whether companies have ESG-related policies and processes in place, whereas outcome indicators assess the actual outcomes of these policies and processes. Christensen et al. (2022) found a lack of consensus and common understanding among ESG evaluation bodies when assessing outcomes and performance, which caused discrepancies in outcome indicators. Input indicators, such as the existence of a diversity policy, are more readily agreed upon; whereas outcome indicators, such as the proportion of women, require a more subjective assessment of what constitutes good or poor performance (Christensen et al., 2022).

Christensen et al. (2022) described this as a lack of a common understanding

of such indicators. The assessment of outcome indicators is further complicated by increased information disclosure, which introduces subjectivity and different metrics that hinder accountability (Christensen et al., 2022). Further, information disclosure exacerbates discrepancies in the outcome indicators more than in the input indicators. When one evaluation body evaluates input indicators and another evaluates outcome indicators, it is akin to comparing apples and oranges (Christensen et al., 2022). These results indicate that it may be more challenging for evaluation bodies to reach a consensus on the outcome indicators, leading to an increased focus on the input indicators. This could undermine the accountability function of evaluation bodies in which ESG evaluations are designed to fulfil (Christensen et al., 2022). To address this issue, they proposed the development of clear rules, norms, and benchmarks to determine the characteristics of good ESG performance (Christensen et al., 2022).

Sugai et al. (2023) proposed a VCA-T to overcome the challenges identified by Christensen et al. (2022) regarding the disclosure of ESG information in ESG evaluations. The objective of VCA-T is to provide a standardised and consistent method for corporate ESG disclosure, enabling the objective measurement and management of value impacts across all stakeholders. The template assesses a company's value creation by assigning scores to three key aspects: policy, quality of disclosure, and value creation. First, regarding the policy score, Sugai et al. (2023) stated that corporate value creation begins with policy and purposeful decision-making in pursuit of relevant goals. A company earns a policy score by having a written policy that is publicly available and communicated to other stakeholders. Two choices are used to define the policy score as points indicating whether a company provides a statement of policy relevant to its objectives (1) or not (0).

The disclosure quality score measures the quality of corporate disclosures for a wide range of corporate ESG topics (Sugai et al., 2023). A 0–3 scoring system based on publicly available documents (financial reports, sustainability reports, and websites) was developed to address the specificity of the 81 goals of the Value Model, reduce ambiguity, facilitate measurements, improve stakeholder understanding, and promote accountability.

Finally, regarding value scores, Sugai et al. (2023) stated that stakeholders can assess the value impact and creation of an organisation based on clearly defined objectives. Enterprises can earn value score points based on their performance in relation to each practical objective. As previously described, the VCA-T comprehensively and systematically assesses a company's ESG performance by assigning scores to three

aspects: policy, quality of disclosure, and value creation. This allowed for a common set of evaluation criteria to improve the consistency of the assessment. Specifically, the disclosure quality score provides clear criteria for assessing the quality of a company's ESG disclosures and can reduce discrepancies in the interpretation of ESG evaluations. It also focuses on the assessment of outcome indicators. Because value scores are assessed based on a company's actual ESG performance, outcome indicators are emphasised rather than input indicators. This reduces the incentive for ESG rating agencies to be biased towards input indicators and improves accountability of ESG rating agencies (Christensen et al., 2022). Sugai et al.'s (2023) VCA-T standardises ESG evaluation and addresses the ESG disclosure challenges identified by Christensen et al. (2022) by emphasising outcome indicators and incorporating stakeholder perspectives.

3 Research design

As indicated in Section 2, the Value Model is a distinctive analytical framework with the potential to address ESG valuation challenges. This study aims to identify and discuss ESG valuation challenges based on a Value Model framework by comparing major ESG valuations. This study presents the following research questions to achieve this objective:

(1) To what extent do the ESG evaluation items cover value creation for the seven stakeholders?
(2) What is the quality of ESG evaluation items in terms of the Value Model framework?

To address these research questions, this study analysed the ESG evaluations of MSCI and S&P Global by obtaining the assessment methodologies published on the websites of these assessment organisations. Regarding RQ1, the analysis was based on the seven stakeholders of the Value Model. Thematic analysis was conducted for 27 themes and 81 items. For RQ2, the analysis was based on four criteria: (1) the existence of clear objectives and milestones, (2) the availability of an objective analysis, (3) the existence of an independent evaluation function, and (4) the scale variables.

This analysis identifies the bias of ESG evaluation indicators and demonstrates the challenges of ESG evaluation within a Value Model framework. The

results provide evidence on the extent to which ESG evaluations measure corporate sustainability values and offer insights into the challenges of ESG evaluations. This section outlines the 7 stakeholder definitions, 81 practical objectives, and 3 perspectives of the Value Model. Subsequently, this study outlines S&P's CSA Handbook 2023 'Corporate Sustainability Assessment' and MSCI's 'ESG Methodologies', both of which are surveyed in the context of ESG evaluation issues.

3.1 Value Model framework adopted in this stud*y*

The seven stakeholders in the Value Model are defined as follows (Appendix 1 presents the relationships among the 7 stakeholders, 27 themes, and 81 goals):

Sugai et al. (2021) defined seven key business stakeholders and stated that each plays an important role in value creation and sustainability. According to Sugai et al. (2021), the first stakeholder is the 'company', which refers to the organisation itself, including its leadership, management team, and overall strategic direction. The company is responsible for setting policies, practices, and goals that coincide with its sustainability and value-creation goals. The second stakeholder is the 'shareholder', which refers to the individual or entity that owns shares in the company. Shareholders[4] typically seek returns on their investments that may influence company decisions through their voting rights. The third stakeholder is the 'customer', which refers to an individual or organisation that purchases goods or services from the company. Customers play an important role in generating demand, providing feedback, and influencing the company's reputation and market positioning. The fourth stakeholder is the 'employee', which refers to the workforce of the organisation, including permanent, casual, and contract employees. While employees contribute their skills, knowledge, and labour to a company's operations and success, they are also affected by company policies and practices. The fifth stakeholder is the 'partner', which refers to external entities or organisations that work with the company in various capacities, such as suppliers, distributors, joint venture partners, and strategic alliances. Partnerships can enhance value creation, innovation, and market reach for all the parties involved. The sixth stakeholder category is 'society', which represents the impact of a company's business activities on the wider community and society. This stakeholder

[4] Sugai et al. (2021, 2022, 2023) noted that a measure of shareholder value is absent from the more than 1,200 indicators they collated. However, they posited that, given the pivotal role of shareholders among the seven stakeholders the authors prioritise, including at least one unambiguous measure of shareholder value that can be applied to any company, irrespective of its size, location, or structure, is imperative. Sugai et al. (2021) selected economic value added (EVA) as the most appropriate metric for measuring shareholder value. This is because EVA objectively assesses the performance of an investor in a company compared to an investor investing the same amount in an alternative low-risk investment vehicle. EVA objectively measures the performance of an investor in a company.

category includes local communities, not-for-profit organisations, government agencies, and other groups affected by a company's activities. The seventh stakeholder category is the 'environment', which encompasses the natural world and ecosystems affected by a company's business activities and decisions. Environmental sustainability concerns the adoption of environmentally friendly practices with the objective of minimising negative environmental impacts, promoting conservation, and ensuring the long-term health of ecosystems. Sugai et al. (2021) posited that these stakeholders collectively shape the business landscape and influence companies' value-creation efforts, emphasising the importance of considering diverse perspectives and interests in sustainable business practices.

The objective of this study was to analyse the S&P and MSCI ESG assessment items based on four criteria derived from Sugai et al. (2021, 2022, 2023). This study employed an approach to assess the quality of over 1,200 indicators from 45 sustainability frameworks included in the Value Model developed by Sugai et al. (2021, 2022, 2023).

The four criteria employed in this study are as follows:

(1) Goal-based: This criterion assesses whether the indicator includes an end goal, with a binary scoring system of either zero or one point.

(2) Objective measurement: This criterion assesses whether the indicator employs an objective measurement, with a binary scoring system of either zero or one point.

(3) Independent verification: This criterion determines whether the indicator can be independently verified with evidence of such practices, using a three-point scale (zero, one, or two points).

(4) Scale variability: This criterion examines whether the indicator employs an ordinal scale or a higher variable, with a binary scoring system of either zero or one point.

3.2 S&P Global's ESG evaluation

The assessment process began with a CSA questionnaire. Participating companies completed a detailed questionnaire on their sustainability activities to obtain a wide range of data related to corporate sustainability.

S&P Global's ESG highlights economically relevant ESG factors that have not been adequately considered in traditional financial analysis and aims to capture the

sustainability risks and opportunities most relevant to a company's long-term financial performance and value creation. S&P Global also conducts industry-specific assessments, in which at least 50% of the questions asked by companies within an industry consist of financially relevant content. For example, in the manufacturing industry, efforts to manage carbon emissions within the supply chain are key assessment elements. In the banking industry, the questionnaire included questions related to efforts to combat climate change through financial products and services.

This study provides a Value Model framework and analysed S&P Global's ESG evaluation based on a survey of common questions used across industries in S&P Global's CSA Handbook. The main purpose of the CSA Handbook is to increase the transparency of corporate sustainability information, provide a CSA methodology and rationale for the questions, and explain how the information provided is used to calculate the S&P Global ESG Score.

3.3 MSCI's ESG evaluation

MSCI's ESG evaluation has the following features. First, it provides an industry-specific index as a benchmark to compare companies within the same industry. Ratings are determined on a seven-point global scale ranging from AAA (highest ESG evaluation) to CCC (lowest ESG evaluation), allowing for consistent scoring across regions (MSCI, 2023).

Second, MSCI's ESG evaluations focus on a company's exposure to potential ESG risks. Companies are rated on two to seven of 33 material environmental and social issues, selected based on their exposure to potential material ESG risks specific to their industry and market conditions (MSCI, 2023).

Third, all companies in MSCI's ESG evaluation receive a Governance Pillar rating. The Governance Pillar is a framework for assessing key factors related to a company's governance structure and behaviour, and assesses the gap between a company's governance practices and best practices. The Governance Pillar assesses specific aspects of a company's governance risk profile, focusing on elements such as the ownership structure, board of directors, compensation, accounting, business ethics, and tax transparency. These elements are evaluated against Key Metrics, which are important factors influencing a company's governance practices. The Governance Pillar assessment quantifies whether a company's governance practices align with best practices and aims to

identify governance risks for investors.

Fourth, where applicable, MSCI's ESG evaluation also considers a company's position to meet market demand for the provision of products and services that make a positive contribution to the environment and society. An assessment generally evaluates a company's management of the totality of its ESG risks and opportunities through its governance structure, policies, objectives, quantitative performance indicators, and related controversies (MSCI, 2023).

4 Analysis results

4.1 S&P and MSCI ESG evaluation items: stakeholder value analysis

This section presents the results of an analysis of the 156 items in S&P's CSA Handbook and MSCI's 33 key issues (sub-88 indicators) surveyed, based on 7 stakeholders, 27 themes, and 81 goal models. S&P has indicated that corporate governance is a key area of focus, with 60 (38%) of the 156 items dedicated to governance related to the company. As illustrated in Table 3, most items related to the company (60 items, 38% of the total), followed by employee stakeholders (33 items, 21%), the environment (30 items, 19%), customers (four items, 3%), partners (13 items, 8%), and society (15 items, 10%). The CSA items do not address shareholders, nor are they included in the existing stakeholder categorisation, as they only provide guidance for managing climate-related risks and opportunities by applying the TCFD framework.

Of the MSCI's 88 indicators, the highest number of questions concerned the environment (25 items, 28% of the total), as illustrated in Table 4. This was followed by companies (23 items, 26%), partners (11 items, 13%), customers (9 items, 10%), and employee stakeholders (7 items, 8%).

Table 3 Analytical perspectives of this study

(1) Goal-based	(2) Objective assessment	(3) Independent verification	(4) Scale variability (0 or 1 point)
Clearly states the goal of the measurement	Logical, rational, clear, and objective measurement Provides a clear and objective measurement, free from bias No measurement is based on personal judgements or perceptions	Have an independent feedback loop and be externally checkable	Not based on 'yes/no' answers but on some sort of ordinal, interval, or ratio scale data
(0 vs 1 point)	(0 vs 1 point)	(0, 1, or 2 points)	(0 vs 1 point)
0 no goal	0 Not objectively measured	0 Not independently checkable	0 Not a scale variable
1 Goal	1 Objectively measured	1 Independently checkable, not currently in place (based on published data)	1 Based on ordinal, interval, or ratio scale data
N/A no goal	N/A	2 Independently checkable, currently underway.	N/A

(**Source:** Perspective analysis based on Sugai et al. (2021, 2022, 2023)).

However, as evident from the examples given in Table 4, the MSCI's assessment items, although environmental in nature, collect and use company-specific scoring data. For instance, although 'climate change vulnerability' is categorised as an environmental topic, the data collected and used relate to the management's views and actions to mitigate the risks posed by climate change to the company, rather than specific

actions to reduce negative impacts on the natural environment. This set of assessment items results from MSCI's focus on its ESG evaluations of the risks and opportunities that environmental issues pose to the management of companies, rather than directly assessing their environmental impacts. Note that this stakeholder categorisation does not fully represent the comprehensiveness of the stakeholders in the Value Model.

Table 4 Distribution of S&P and MSCI assessment items against the Value Model

Stakeholder	S&P	Percentage	MSCI	Percentage
Employee	33	21%	7	8%
Nature	30	19%	25	28%
Society	15	10%	11	13%
Firm	60	38%	23	26%
Customer	4	3%	9	10%
Partner	13	8%	10	11%
Shareholder	0	0%	3	3%

Table 5 presents the coverage results for the 27 themes and 81 goals of the Value Model. First, the S&P assessment items are classified according to the seven stakeholder themes, with an 85% coverage rate. However, only 48% of the goals (39 out of 81 goals) were covered. This indicates that the key objectives of each stakeholder group were missing. For employees, S&P's CSA considered employees to be distinct stakeholders and posed questions for each of the six Value Model themes. However, 48% (39 out of 81) of the goals in these themes were covered. For employees, S&P's CSA considered employees to be distinct stakeholders and covered an item for each of the six themes of the Value Model. However, only 61% (14 out of 23) of these themes were covered. The items missing for the employees were as follows:

e1-A: Full-time employment
e2-A: Transparent reporting on employees
e2-B: Transparent reporting on wages
e3-A: Physical health
e3-B: Retirement benefits
e3-D: Employee healthcare
e5-B: Job flexibility
e6-B: Human rights
e6-B: Human rights corrective action
e6-C: Human rights training

Regarding the environment, S&P did not present any items relating to theme N4 ‘Products and Services’ of the Value Model or the eight related goals. This may be because the survey table covers the metals sector, which may have been omitted from the analysis.

Only 42% of the goals related to the Value Model were applied to society. This may be because local communities are not sufficiently emphasised in S&P assessment items. The missing items for the local communities were as follows:

S1-B: Adequate tax payments

S2-B: Benefit-based capital expenditure

S2-C: Transparent social reporting

S3-B: Local ownership

S3-C: Fair purchasing

S3-D: Local value chain

A total of 88% (seven out of eight) of the Value Model goals related to the company (itself) were covered by S&P assessment items. Regarding the company itself, S&P’s focus was on items related to the company’s value, as these are linked to the company.

Table 5 MSCI ESG evaluation items: examples of mixed stakeholders

MSCI Key Issue	**MSCI Pillar**	**Related Text in the Documents**	**Related Stakeholder**
The Climate Change Vulnerability	Environmental	Companies are assessed on the physical risk that climate change may pose to insured assets or individuals.	Firm
Financing Environmental Impact	Environmental	Financial institutions are evaluated on the environmental risks of their lending and underwriting activities and their ability to capitalise on opportunities related to green finance.	Firm, Nature
Opportunities in Nutrition & Health	Social	Companies are evaluated on their positioning to meet market demand for products with improved nutritional or health profiles.	Firm, Customer
Responsible Investment	Social	Companies are evaluated on their integration of environmental, social, and governance considerations in the management of their own assets or the assets they manage on behalf of others.	Firm, Shareholder

Only 50% (three out of six) of the goals related to customers were covered.

As shown in Appendix 1, S&P includes items related to customer satisfaction, security, and privacy. However, items related to advertising and customer safety may not have been included in this survey, as the survey table for customers covered items common to the entire company and the metal sector in this case.

Only 44% (four out of nine) of the goals related to partners were addressed by S&P. It is evident that items 'P1-B: Report on supply chain diversity, equity, and inclusion', 'P2-A: Support MSMEs, VCSEs, MWOBEs, and SDVOBs through business partnerships', 'P2-B: Support MSMEs, VCSEs, MWOBEs, and SDVOBs through education and support through training', 'P3-B: Environmental and social operational requirements', and 'P3-C: Supply chain carbon certification' are missing in the Partners section. This indicates that S&P does not comprehensively assess its partners' environmental and social impacts. Note that items related to shareholders were not included in the questionnaire.

Second, 27 MSCI assessment themes, particularly those related to the environment, society, company, customers, and shareholders, were covered in full, indicating the importance MSCI attaches to these. Conversely, the coverage of items related to employees and partners was only 75% and 67%, respectively. This result indicates that MSCI may underestimate the relevance of indicators related to employees, partners, and financial risk.

MSCI met 47 of 81 goals (58%) in the Value Model. By stakeholder group, the company and shareholders achieved 88% and 100% coverage of the goals included in the Value Model, respectively. This represents approximately 90% or more of the goals. Conversely, the results demonstrated that the coverage of targets for other stakeholders was only 26% (6 out of 23 items) for employee-related targets, 50% (6 out of 12 items) for society-related goals, and 67% (6 out of 9 items) for partner-related goals.

This result indicates that MSCI emphasises two key stakeholders—the company and its shareholders—more than any other stakeholder. However, 34 of the 81 objectives in the Value Model (42%) are missing, indicating that MSCI's ESG evaluation currently does not provide a comprehensive corporate assessment. However, they did not measure sustainability efforts.

Regarding the difference in the coverage of goals in the Value Model assessment items between S&P and MSCI, MSCI outperformed S&P. MSCI covers 47 of the 81 goals (58%), whereas S&P covers 49% of the Value Model goals out of 156 questions (39 of the 81 goals), and 40 goals are only covered. Both stakeholders had a high coverage of company-related goals. Conversely, MSCI has a higher coverage of goals related to the environment, society, customers, and partners than S&P. In particular, there was a significant difference in the coverage of environmental goals, with MSCI covering 73% (16 items), compared to 8% (36 items) for S&P. This discrepancy in indicator

coverage in the Value Models of S&P and MSCI mirrors the findings of Berg et al. (2022), who observed discrepancies in ESG evaluation scores.

4.2 Results of Analysis of S&P and MSCI ESG evaluation items by four criteria for measuring quality

Table 6 shows the results of the analysis of S&P and MSCI ESG evaluations based on the following four criteria to measure the quality of the items: goal-based, objectively measurable, and independently verifiable.

Table 6 Analysis of the 81 goals of the 27 themes of the Value Model measuring S&P and MSCI ESG assessments items

	Theme						Goals				
	S&P		MSCI		Value model		S&P		MSCI		Value model
Stakeholders	20	74%	24	89%	**27**	Stakeholders	**39**	**48%**	**47**	**58%**	**81**
Employee	6	100%	4	67%	**6**	Employee	14	61%	6	26%	**23**
Nature	5	83%	6	100%	**6**	Nature	7	32%	16	73%	**22**
Society	4	100%	4	100%	**4**	Society	5	42%	6	50%	**12**
Firm	2	67%	3	100%	**3**	**Firm**	**7**	**88%**	**7**	**88%**	**8**
Customer	2	67%	3	100%	**3**	Customer	3	50%	5	83%	**6**
Partner	3	75%	3	75%	**4**	Partner	3	33%	6	67%	**9**
Shareholder	0	0%	1	100%	**1**	Shareholder	0	0%	**1**	**100%**	**1**

For S&P, 68% (106 out of 156) of respondents indicated that the indicator was goal-based, 46% indicated that it was objectively assessable, 24% (38 out of 156) indicated that it was two-point independently verifiable, 3% (4 out of 156) indicated that it was one-point independently verifiable, and 29% (45 out of 156) indicated that it was a scaled variable. In contrast, MSCI scored 0% (0 out of 88) for goal-based indicators, 100% (88 out of 88) for objectively assessable indicators, 0% (0 out of 88) for two-point independently verifiable indicators, 18% (16 out of 88) for one-point independently verifiable indicators, and 29% (26 out of 88) for being a scaled variable.

For S&P, governance as a goal-based item includes Section 1.1.1 'Composition of the Board of Directors', which asks, 'A target share of independent directors on the board. Please specify: xxx'. Regarding environmental governance, Section 2.5.12, 'Commitment to Net Zero', requires targets for Scopes 1, 2, and 3 and asks whether the target has been verified through the science-based goals initiative. Social aspects are described in Section 3.3.1., while Section 3.6.8—'Trends in Employee Engagement'—requires companies to set a goal for the percentage of actively engaged employees, based on survey responses.

Additionally, the score of 2 points is 24% higher than the score of zero for MSCI's ESG evaluation of whether a company can be independently verified; S&P's

questionnaire includes many items that require publicly available information. Moreover, 38 items were given a score of 2 because they required third-party evaluation or assurance.

As a specific example, in governance, one item that was given a score of 2 was 1.1.5, 'Investigation of Board Effectiveness', which is a performance review of the board of directors/audit board members. This specifically states, 'A periodic independent evaluation of the Board's performance. Please be specific or provide supporting documentation'. This is indicated as follows:

> *Such evaluations are considered 'periodic' if the company has clearly stated guidelines for conducting them at specific intervals (e.g. annually or biennially), even if the firm is conducting the evaluation for the first time.*
> *The evaluation is clearly intended to be conducted on a regular basis, and it is considered best practice to conduct both types of assessments on a regular basis, although not necessarily annually.*
>
> *(Source: S&P survey items)*

Regarding the environmental aspect, for example, for 2.3.4 'Water consumption', the item and supporting rationale for whether third-party verification of water consumption has been received, along with publicly available evidence, are required to be submitted. For the social aspect, for example, for 3.8.3 'Number of deaths', the data are subject to third-party verification and public availability.

Because S&P's ESG evaluation has been based on questionnaire-based surveys for more than 20 years, it seeks solid evidence from companies and increases transparency regarding its assessment methods.

Additionally, MSCI's assessments are based on publicly available information such as corporate financial and sustainability disclosures, specialised government and academic data, and media searches. In the environmental and social pillars of MSCI's ESG evaluation, we evaluate how well companies manage their key issue risk exposures. The assessment is based on strategy and governance, initiatives and action plans, and performance. 'Strategy and governance' assesses the commitment that corporate management has to organisational capacity and responds to key risks and opportunities. The initiatives section assesses the intensity and scope of the initiatives, plans, and goals that have been implemented or introduced to improve performance on key issues. The Performance section assesses a company's past performance. Thus, these assessments are zero for goal orientation because they may or may not be disclosed and zero points are given because they cannot be verified.

In the case of governance, the requirement is materiality of the disclosure

relevant to the scoring model. For example, MSCI ESG Research does not provide a corporate governance theme score if a company does not disclose its board members. This reflects the importance of board assessments in the scoring model. Further, if a company does not disclose the existence or adoption of governance guidelines or practices, MSCI ESG Research presumes that they do not exist or have not been adopted. For example, if a company does not disclose the adoption of clawback guidelines that apply to short- and long-term incentive compensation, non-disclosure would mean that clawback guidelines do not exist; thus, the company would be flagged in the clawback and malus key metrics. Therefore, a score of 1 was assigned to the governance portion of the MSCI's score to determine whether it can be independently verified.

MSCI was assigned a score of 1 for all objective measurements and scale variables. For example, assessing the extent to which climate change companies are actively working to reduce carbon emissions in their operations and value chains includes initiatives such as improving energy efficiency, using clean energy, carbon capture, and demand-side management. However, other initiatives, such as the purchase of carbon offsets, were not included in the evaluation. Indicators used to measure a company's performance include the following:

1. Trends in GHG (greenhouse gas) emissions' intensity
2. GHG emissions intensity relative to peers
- Scope 1+2 GHG emissions intensity: CO_2 metric tonnes/US$ million in sales
- Scope 1+2 GHG emissions intensity: metric tonnes of CO_2/unit of production
We also evaluate whether companies report their carbon emissions to the CDP.

Table 7 Percentage of the four criteria of the Value Model measuring the quality of items in the S&P and MSCI

	S&P		MSCI	
	items	%	items	%
(1) whether it included an end-goal (worth either zero or one point).	106	68%	0	0%
(2) whether it had an objective measurement (worth either zero or one point)	71	46%	88	100%
(3) whether it could be independently checked with evidence of such practices (two points)	38	24%	0	0%
whether it could be independently checked with evidence of such practices (one points)	4	3%	16	18%
(4) whether it used an ordinal scale or higher variable (worth either zero or one point)	45	29%	88	100%
		156		88

Table 7 shows the results of the analysis of the quality of the S&P and MSCI assessment items overall and by stakeholder. The values in Table 8 were calculated by assigning scores to the S&P and MSCI evaluation items for the four criteria listed above and then summing the scores for all evaluation items to arrive at a total score. The 'total possible score' was obtained by multiplying each question by the highest score of 5 points. The overall score was calculated by dividing the total score by the total possible score, and the percentage of achievement relative to the total possible score was calculated.

Table 8 Results of analysis of S&P and MSCI ESG evaluations by four criteria measuring item quality

S&P								
Stakeholders	0	1	2	3	4	Total	%	Value model
Employee	0	5	4	6	6	55	52%	105
Nature	1	2	4	1	7	41	59%	70
Society	0	0	0	3	0	9	60%	15
Firm	8	8	15	7	8	96	49%	195
Customer	3	0	0	1	2	11	73%	15
Partner	1	2	2	1	0	9	36%	25
Shareholder	0	0	0	0	0	0	0%	0
Total	13	17	25	19	23	221	47%	425
MSCI								
Stakeholders	0	1	2	3	4	Total	%	Value model
Employee	0	0	7	0	0	14	40%	35
Nature	0	0	25	0	0	50	40%	125
Society	0	0	8	2	0	22	44%	50
Firm	0	0	12	11	0	57	50%	115
Customer	0	0	9	0	0	18	40%	45
Partner	0	0	10	1	0	23	42%	55
Shareholder	0	0	1	2	0	8	53%	15
Total	0	0	72	16	0	192	44%	440

Based on the analysis results, the quality of the items evaluated in the S&P Value Model was rated on a scale of 0 to 5. The largest number of items, at 25, received a

score of 2. This was followed by 28 items that received a score of 4 and 19 items that received a score of 3. Only one item scored the highest (i.e. 5). Fifty-nine items received 0 and 1 points, suggesting that there was a notable number of low-quality items among S&P's evaluation items. There were 28 items that received a score of 4 points. Although a certain quality was maintained for these items, there is scope for improvement.

The largest number of items evaluated by the MSCI Value Model were those that received a score of 2, accounting for 72 items, or approximately 82% of the total. This was followed by 16 items that received a rating of 3 points. However, none of the items received a score of 4 or 5. Most of the items received a score of 2, indicating that the quality of the items evaluated in MSCI model was poor. As noted above, MSCI generally covers a wide range of topics related to the stakeholders, themes, and goals of its Value Model; however, the results do not suggest that the items accurately measure corporate sustainability. These results suggest that efforts to improve ESG evaluation scores may result in a situation where efforts are being made.

These results indicate a variation in the quality of the assessment items of the two groups, possibly because S&P has a long history of conducting evaluations based on questionnaire surveys, which requires firms to provide solid evidence and transparency regarding their own evaluation methods. Conversely, MSCI conducts its evaluations based on publicly available information, which limits its transparency because it is based on the disclosure status of companies. Further, S&P employs many goal-based indicators and requires setting specific goals. In contrast, MSCI focuses primarily on a company's initiatives and performance; thus, evaluation is expected to require improvement in this area. However, the challenge for S&P is that many of its indicators are not meaningful from the perspective of the Value Model, with some items scoring 0 points or 1 point.

5 Discussion and conclusions

This study analysed the assessment items of the major ESG evaluation agencies—MSCI and S&P Global—based on the Value Model framework proposed by Sugai et al. (2021), to identify the challenges of ESG evaluation. The Value Model emphasises value creation for seven key stakeholders and advocates goal-based indicators that measure the sustainability activities a company should aim for, with an emphasis on indicators that reflect the company's real impact on and actions towards sustainability. This contrasts traditional ESG evaluations, which often focus narrowly on shareholder value, a benchmark for investors. The analysis revealed that the MSCI and S&P assessments did not adequately cover value creation for the seven stakeholders in the Value Model. The MSCI assessment covered only 58% of the 81 goals, whereas the S&P assessment covered

only 40%. Particularly, the coverage of goals related to employees, society, and partners is low, indicating that ESG evaluations do not adequately measure the value creation of these stakeholders. ESG evaluations tend to be of single materiality, focusing on items for investors. If a company attempts to increase its ESG evaluation score, the value it brings may not be linked to stakeholder value. Further, even companies with initiatives that cover a wide range of stakeholders may not receive appropriate ratings to gain investment support. If ESG investment aims to contribute to a sustainable society, ESG investment based on such ESG evaluations may undermine ESG investment aims.

Further, deficiencies were identified in the quality of ESG evaluation items from the perspective of the Value Model framework. Some low-quality items were found in the S&P's assessment items, while most of the MSCI's assessment items were of low quality. The Value Model indicators emphasise goal-based indicators, yet these ESG evaluation items demonstrated a lack of goal-based indicators that would enhance the sustainability activities of companies. This suggests that even if companies are taking sustainability actions to improve their ESG evaluations, they may be unable to properly assess what and to what extent they are working on and may be unable to say that their activities truly lead to social and environmental improvements. These results indicate that even high ESG evaluations by S&P and MSCI may not accurately measure a company's sustainability. That is, investors may fail to identify the environmental and social impacts of corporate activities. Further, it is unclear whether companies' actions to enhance their ESG evaluation scores are aimed at enhancing stakeholder value. This may result in a lack of clarity regarding the direction that companies should pursue, such as sustainability strategies, for their corporate activities.

Further, analysis using the Value Model framework revealed issues, such as the exclusion of multi-stakeholder involvement, lack of transparency, and methodological inconsistencies in ESG evaluation, as previously identified in studies on the actual assessment items of S&P and MSCI. Fowler and Hope (2007), Delmas et al. (2013), Semenova and Hassel (2014), and Yang (2022) clearly demonstrated this.

In summary, ESG evaluation influences investment decisions. However, analysis based on the Value Model framework revealed challenges that could undermine the credibility of ESG evaluations. Addressing these issues requires all concerned parties, including managers and companies as an ecosystem surrounding ESG evaluation, as well as policymakers and consulting services, to make concerted efforts to improve ESG

evaluation.

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APPENDIX 1

Table A1. Goals from the Value Model covered by the CSA and goals that are not.

		S&P		MSCI	
Stakeholder	**Themes**	**Goals that are covered**	Goals that are not covered	**Goals that are covered**	Goals that are not covered
Employee	**E1: Diversity & Equity**	**E1-B: Ethnic Diversity**	E1-A: Full-time Employment		E1-A: Full-time Employment E1-B: Ethnic Diversity
		E1-C: Gender Diversity and Equity-based policy	E1-D: Broad Diversity and Representativeness of employees		E1-C: Gender Diversity and Equity-based policy E1-D: Broad Diversity and Representativeness of employees
	E2: Fair Wages	**E2-A: Transparent Reporting on Employees**	E2-B: Transparent Reporting on Wages		E2-A: Transparent Reporting on Employees
		E2-C: Living Wage		**E2-C: Living Wage**	E2-B: Transparent Reporting on Wages
		E2-D: Pay-scale equity among different level employees			E2-D: Employee Healthcare
	E3: Health, Welfare and Safety	**E3-C: Family/Medical Leave**	E3-A: Physical Health	**E3-B: Retirement Provision**	E3-A: Physical Health
		E3-E: Occupational safety and Health Coverage	E3-B: Retirement Provision	**E3-E: Occupational safety and Health Coverage**	E3-C: Family/Medical Leave
		E3-F: Employee Mental health and wellbeing	E3-D: Employee Healthcare		E3-D: Employee Healthcare E3-F Employee Mental health and wellbeing
	E4: Development	**E4-A: Training and Education**		**E4-A: Training and Education**	
		E4-B: Performance Feedback and Review		**E4-B: Performance Feedback and Review**	
	E5: Engagement and Satisfaction	**E5-A: Turnover, Inclusion & Engagement**	E5-B: Work Flexibility	**E5-A: Turnover, Inclusion & Engagement**	E5-B: Work Flexibility
		E5-C: Freedom of Association			E5-C: Freedom of Association
		E5-D: Employee Ownership			E5-D: Employee Ownership
	E6: Human Rights	**E6-A: Human Rights Reporting**	E6-B: Human Rights Corrective Action		E6-A: Human Rights Reporting E6-B: Human

			E6-C: Human Rights Training		Rights Corrective Action E6-C: Human Rights Training
Nature	**N1: Waste and Pollution**	**N1-A: Carbon Neutral**	N1-C: Zero Plastic Pollution	**N1-A: Carbon Neutral**	
		N1-B: Zero non-GHG air emissions	N1-E: Zero Sound and Light disturbances	**N1-B: Zero non-GHG air emissions**	
		N1-D: 100% Waste reclamation & recycling		**N1-C Zero Plastic Pollution**	N1-E: Zero Sound and Light disturbances
				N1-D 100% Waste reclamation & recycling	
	N2: Water	**N2-B: Water use reporting**	N2-A: Water infrastructure interaction strategy	**N2-A Water infrastructure interaction strategy**	
			N2-C: Discharge water quality	**N2-B: Water use reporting**	N2-C: Discharge water quality
	N3: Energy	**N3-A: Energy Consumption Reporting**	N3-B: Renewable Energy Use	**N3-B: Renewable Energy Use**	N3-A: Energy Consumption Reporting
			N3-C: Carbon Neutral Products	**N3-C: Carbon Neutral Products**	
	N4: Products and Services		N4-A: Transparently Reported Product Impact	**N4-A: Transparently Reported Product Impact**	
			N4-B: Sustainable Sourcing of Raw Materials	**N4-B: Sustainable Sourcing of Raw Materials**	
			N4-C: Products with Positive Societal and Environmental Impact	**N4-C: Products with Positive Societal and Environmental Impact**	
			N4-D: Efficient Packaging	**N4-D: Efficient Packaging**	
			N4-E: Efficient Transportation		N4-E: Efficient Transportation
	N5: Biodiversity	**N5-A: Biodiversity Impact**	N5-B: Humane, Compassionate Treatment of All Animals	**N5-A: Biodiversity Impact**	N5-B: Humane, Compassionate Treatment of All Animals
			N5-C: 100% Sustainably Sourced Palm Oil	**N5-C 100% Sustainably Sourced Palm Oil**	
	N6: Buildings and Land	**N6-A: Transparently Reported Building and Land Use**	N6-B: 100% certified safe & accessible buildings	**N6-A Transparently Reported Building and Land Use**	N6-C: 100% of new buildings are carbon neutral
			N6-C: 100% of new buildings are carbon neutral	**N6-B: 100% certified safe & accessible**	

				buildings	
Society	**S1: Appropriate Taxes**	**S1-A: Transparent tax reporting**	S1-B: Appropriate Taxes Paid	**S1-A: Transparent tax reporting** **S1-B: Appropriate Taxes Paid**	
	S2: Local Community Development	**S2-A: Healthy, Safe, Resilient Community**	S2-B: Benefit-based capital spending S2-C: Transparent Social Reporting	**S2-A: Healthy, Safe, Resilient Community** **S2-C: Transparent Social Reporting**	S2-B: Benefit-based capital spending
	S3: Local Employment and Engagement	**S3-A: Local Employment**	S3-B: Local Ownership S3-C: Equitable purchasing S3-D: Local Value Chains	**S3-D: Local Value Chains**	S3-A: Local Employment S3-B: Local Ownership S3-C: Equitable purchasing S3-E: Supporting Local Youth
	S4: Charity and Volunteerism	**S4-A: Community volunteering** **S4-B: Charitable giving**		**S4-B: Charitable giving**	S4-A: Community volunteering
Firm	**F1: Transparent Financial Reporting**	**F1-A: Transparent reporting on financial performance** **F1-B: Government relationship**		**F1-A: Transparent reporting on financial performance** **F1-B: Government relationship**	
	F2: Governance and Firm Structure	**F2-A: Mission Driven** **F2-B: Governance Reporting** **F2-C: Board Composition** **F2-D: Outside Director Ratio** **F2-E: Zero Corruption**		**F2-A: Mission Driven** **F2-B: Governance Reporting** **F2-C: Board Composition** **F2-Ev Zero Corruption**	F2-D: Outside Director Ratio
	F3: Management Capability		F3-A: Positive EVA (Firm)/EVA (Industry) ratio	**F3-A Positive EVA**	
Customer	**C1: Truth in Communications**		C1-A: Truth in Labeling C1-B: Truth in Advertising	**C1-A Truth in Labeling** **C1-B: Truth in Advertising**	
	C2: Privacy	**C2-A: Data Security** **C2-B: Customer Privacy**		**C2-A: Data Security** **C2-B: Customer Privacy**	
	C3: Health, Safety &	**C3-A: Customer**	C3-B: Customer Health & Safety	**C3-B: Customer**	C3-A: Customer Satisfaction

	Satisfaction	**Satisfaction**		**Health & Safety**	
Partner	**P1: Supply Chain and Distribution Channel Reporting**	**P1-A: Report on Stakeholder Structure in the Supply Chain and Distribution Channel**	**P1-B: Report on Supply Chain Diversity, Equity and Inclusion**		P1-A: Report on Stakeholder Structure in the Supply Chain and Distribution Channel P1-B: Report on Supply Chain Diversity, Equity and Inclusion
	P2: Supporting MSMES and VCSES		P2-A: Supporting MSMEs, VCSEs, MWOBEs, and/or SDVOBs through business partnerships	**P2-A: Supporting MSMEs, VCSEs, MWOBEs, and/or SDVOBs through business partnerships**	
			P2-B: Supporting MSMEs, VCSEs, MWOBEs, and/or SDVOBs through education and training	**P2-B: Supporting MSMEs, VCSEs, MWOBEs, and/or SDVOBs through education and training**	
	P3: Environmentally & Socially Responsible Partners	**P3-A: Suppliers and Distributor Impact Reporting**	P3-B: Environmental and Social operating requirements	**P3-A: Suppliers and Distributor Impact Reporting**	
			P3-C: Supply Chain Carbon Certification	**P3-B: Environmental and Social operating requirements**	P3-C: Supply Chain Carbon Certification
	P4: Supply Chain & Distribution Channel Fair Labor Practices	**P4-A: Audited Fair labor practices throughout supply chain and distribution channels**	P4-B: Living wage paid by all suppliers and distributors in partner network	**P4-A: Audited Fair labor practices throughout supply chain and distribution channels** **P4-B: Living wage paid by all suppliers and distributors in partner network**	
Shareholder	**SH1: Shareholder EVA**		**SH1-A: Positive EVA**	**SH1-A: Positive EVA**	