| 3 Topics | 10 Themes | Index | 44 Key Issues | Illustration |
|--------------------|----------------------|-------|------------------------------|--|
| | Climate Change | E01 | Carbon Emissions | Companies are evaluated on the carbon intensity of their operations and their efforts to manage climate-related risks and opportunities. |
| | | E02 | Product Carbon Footprint | Companies are evaluated on the carbon intensity of their products and their ability to reduce the carbon footprint in their supply chains or in the use of their products and services. |
| | | E03 | Financing Environment Impact | Financial institutions are evaluated on the environmental risks of their lending and underwriting activities and their ability to capitalize on opportunities related to green finance. |
| | | E04 | Climate Change Vulnerability | Insurance companies are assessed on the physical risk that climate change may pose to insured assets or individuals. |
| Environ- mental | Natural Capital | E05 | Water Stress | Companies are evaluated on the water intensity of their operations, the water stress in their areas of operation and their efforts to manage water-related risks and opportunities. |
| (E) | | E06 | Raw Material Sourcing | Companies are evaluated on the environmental impacts of the raw materials used in their products and their efforts around supply chain traceability and certification |
| | | E07 | Biodiversity & Land Use | Companies are evaluated on the potential impact of their operations on biodiversity in their areas of operation and their efforts to manage the environmental impact of their operations. |
| | Pollution & Waste | E08 | Toxic Emissions & Waste | Companies are evaluated on the potential environmental contamination and toxic or carcinogenic emissions arising from their operations and the strength of their environmental management systems. |
| | | E09 | Electronic Waste | Companies are evaluated on their production of electronic waste, their potential exposure to e-waste regulations and their efforts around product collection and recycling. |
| | | E10 | Packaging Material & Waste | Companies are evaluated on their production of or reliance upon packaging materials, their potential exposure to waste management and packaging regulations and their efforts to reduce the environmental impact of packaging materials. |

| Environ- mental (E) | Env. Opportunity | E11 | Opportunities in Renewable Energy | Companies are evaluated on their efforts to develop renewable power generation capacity and/or enable renewable power development through network expansion and "green power" offerings. |
|---------------------------|---------------------|-------------|---------------------------------------|--|
| | | E12 | Opportunities in Clean Tech | Companies are evaluated on their clean tech innovation capacity, strategic development initiatives, and revenue generated from clean technologies. |
| | | E13 | Opportunities in Green Building | Companies are evaluated based on the resource consumption and carbon intensity of their property assets, their potential exposure to environmental building regulations and their efforts to improve the environmental performance of their real estate assets. |
| | Human Capital | S01 | Labor Management | Companies are evaluated on the complexity of their workforce (size, labor intensity, and regions of operation), the relationship between management and labor, the strength of worker protections, and their employee engagement efforts. |
| Social | | S02 | Health & Safety | Companies are evaluated on their management of workplace safety and the workplace safety standards in the industries and regions in which they operate. |
| | | S03 | Human Capital Development | Companies are evaluated on their workforce talent requirements and their ability to attract, retain, and develop a highly skilled workforce. |
| (S) | | S04 | Supply Chain Labor Standards | Companies are evaluated on the management and transparency of their supply chain and the working standards in the regions in which their suppliers are located. |
| | | S 05 | Human Rights & Community Relations | The category addresses management of the relationship between businesses and the communities in which they operate, including, but not limited to, management of direct and indirect impacts on core human rights and the treatment of indigenous peoples. More specifically, such management may cover socio-economic community impacts, community engagement, environmental justice, cultivation of local workforces, impact on local businesses, license to operate, and environmental/social impact assessments. The category does not include environmental impacts such as air pollution or waste which, although they may impact the health and safety of members of local communities, are addressed in separate categories. |

| | Product Liability | S06 | Chemical Safety | Companies are evaluated on the possible presence of harmful chemicals in their product portfolio, their potential exposure to strengthening or pending chemical regulations and their efforts to develop less harmful alternatives. |
|---------------|----------------------|------------|--|--|
| | | S07 | Privacy & Data Security | Companies are evaluated on the amount of personal data they collect, their exposure to evolving or increasing privacy regulations, their vulnerability to potential data breaches, and their systems for protecting personal data. |
| | | S08 | Responsible Investment | 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. |
| | | S09 | Product Safety & Quality | Companies are evaluated on their exposure to possible recalls or product safety concerns, the strength of their supply chain and sourcing systems, their quality management efforts in manufacturing and their responsible marketing practices. |
| Social (S) | | S10 | Consumer Financial Protection | Financial institutions are evaluated on product stewardship and transparency, including efforts to mitigate potential reputational and regulatory risks arising from unethical lending practices or mis-selling financial products to consumers. |
| | | S11 | Insuring Health & Demographic Risk | Insurance companies are evaluated on their management of emerging social risks and their development of insurance products to address emerging needs that may arise from major public health and demographic trends. |
| | | S12 | Selling Practices & Product Labeling | The category addresses social issues that may arise from a failure to manage the transparency, accuracy, and comprehensibility of marketing statements, advertising, and labeling of products and services. It includes, but is not limited to, advertising standards and regulations, ethical and responsible marketing practices, misleading or deceptive labeling, as well as discriminatory or predatory selling and lending practices. This may include deceptive or aggressive selling practices in which incentive structures for employees could encourage the sale of products or services that are not in the best interest of customers or clients. |
| | | S13 | Product Design & Lifecycle Management | The category addresses incorporation of environmental, social, and governance (ESG) considerations in characteristics of products and services provided or sold by the company. It includes, but is not limited to, managing the lifecycle impacts of products and services, such as those related to packaging, distribution, use-phase resource intensity, and other environmental and social externalities that may occur during their use-phase or at the end of life. The category captures a company's ability to address customer and societal demand for more sustainable products |

| | Product Liability | | | and services as well as to meet evolving environmental and social regulation. It does not address direct environmental or social impacts of the company's operations, nor does it address health and safety risks to consumers from product use, which are covered in other categories. |
|--------|---------------------------|------------|--|---|
| | | S14 | Supply Chain Management | The category addresses management of environmental, social, and governance (ESG) risks within a company's supply chain. It addresses issues associated with environmental and social externalities created by suppliers through their operational activities. Such issues include, but are not limited to, environmental responsibility, human rights, labor practices, and ethics and corruption. Management may involve screening, selection, monitoring, and engagement with suppliers on their environmental and social impacts. The category does not address the impacts of external factors – such as climate change and other environmental and social factors – on suppliers' operations and/or on the availability and pricing of key resources, which is covered in a separate category. |
| Social | Stakeholder Opposition | S15 | Controversial Sourcing | Companies are evaluated on their dependence on and purchasing volume of raw materials procured from conflict areas and their efforts around traceability and certification. |
| (S) | | S16 | Community Relations | Companies are evaluated on their management of local community relations, policies on conflict and human rights, and efforts to distribute benefits to local communities. |
| | Social Opportunity | S17 | Access to Communication | Companies are evaluated on their efforts to expand connectivity and access to information in developing countries and historically underserved markets (e.g., rural, elderly). |
| | | S18 | Access to Finance | Companies are evaluated on their efforts to expand financial services to historically underserved markets, including small business lending and the development of innovative distribution channels. |
| | | S19 | Access to Health Care | Companies are evaluated on their efforts to expand health care products and services to developing countries and underserved markets (e.g., low regional physician concentration), including equitable pricing mechanisms, patents, capacity advancement and product donations. |
| | | S20 | Opportunities in Nutrition & Health | Companies are evaluated on the nutritional content of their food products and their efforts to introduce products with an improved nutritional or health profile. |

| Gover- nance (G) | Corporate Governance | G01 | Board | Companies are evaluated on the effectiveness of their board in overseeing management and corporate strategy, protecting investor value, and representing the interests of shareholders. This is a Key Issue in the Governance Pillar and is relevant for all companies. |
|------------------------|----------------------|-----|---|---|
| | | G02 | Pay | Companies are evaluated on the alignment between their pay and other incentive practices and corporate strategy. This is a Key Issue in the Governance Pillar and is relevant for all companies. |
| | | G03 | Ownership & Control | Companies are evaluated on their equity ownership structure and its potential impact on shareholder rights and the interests of other investors. This is a Key Issue in the Governance Pillar and is relevant for all companies. |
| | | G04 | Accounting | Companies are evaluated on the transparency, independence and effectiveness of their audit and financial reporting practices. This is a Key Issue in the Governance Pillar and is relevant for all companies. |
| | | G05 | Critical Incident Risk Management | The category addresses the company's use of management systems and scenario planning to identify, understand, and prevent or minimize the occurrence of low-probability, high-impact accidents, and emergencies with significant potential environmental and social externalities. It relates to the culture of safety at a company, its relevant safety management systems and technological controls, the potential human, environmental, and social implications of such events occurring, and the long-term effects to an0 organization, its workers, and society should these events occur. |
| | | G06 | Systemic Risk Management | The category addresses the company's contributions to, or management of systemic risks resulting from large-scale weakening or collapse of systems upon which the economy and society depend. This includes financial systems, natural resource systems, and technological systems. It addresses the mechanisms a company has in place to reduce its contributions to systemic risks and to improve safeguards that may mitigate the impacts of systemic failure. For financial institutions, the category also captures the company's ability to absorb shocks arising from financial and economic stress and meet stricter regulatory requirements related to the complexity and interconnectedness of companies in the industry. |
| | | G07 | Management of the Legal & Regulatory Environment | The category addresses a company's approach to engaging with regulators in cases where conflicting corporate and public interests may have the potential for long-term adverse direct or indirect environmental and social impacts. The category addresses a company's level of reliance upon regulatory policy or monetary incentives (such as subsidies and taxes), actions to influence industry policy (such as through lobbying), overall reliance on a favorable regulatory environment for business competitiveness, and ability to comply with relevant regulations. It may relate to the alignment of management and investor views of regulatory engagement and compliance at large. |

| Gover- nance | Corporate Governance | G08 | Business Model Resilience | The category addresses an industry's capacity to manage risks and opportunities associated with incorporating social, environmental, and political transitions into long-term business model planning. This includes responsiveness to the transition to a low-carbon and climate-constrained economy, as well as growth and creation of new markets among unserved and underserved socio-economic populations. The category highlights industries in which evolving environmental and social realities may challenge companies to fundamentally adapt or may put their business models at risk. |
|-----------------|--|------------|---------------------------|--|
| | | G09 | Business Ethics | Companies are evaluated on their oversight and management of business ethics issues such as fraud, executive misconduct, corrupt practices, money laundering, or anti-trust violations. This is a Key Issue in the Governance Pillar and is relevant for all companies. |
| (G) | Corporate Behavior Not related to Company | G10 | Tax Transparency | Companies are evaluated on their estimated corporate tax gap (i.e., gap between estimated effective tax rate and estimated corporate income tax rate), revenue reporting transparency and their involvement in tax-related controversies. This is a Key Issue in the Governance Pillar and is relevant for all companies. |
| | | G11 | Competitive Behavior | The category covers social issues associated with existence of monopolies, which may include, but are not limited to, excessive prices, poor quality of service, and inefficiencies. It addresses a company's management of legal and social expectation around monopolistic and anti-competitive practices, including issues related to bargaining power, collusion, price fixing or manipulation, and protection of patents and intellectual property (IP). |
| (E) | | E00 | Related to Environmental | Not related to company but related to Environmental topic. |
| (S) | | S00 | Related to Social | Not related to company but related to Social topic. |
| (G) | | G00 | Related to Governance | Not related to company but related to Governance topic. |
| | NN None of the above | | | None of the above category. Not related to ESG topic. |

X Reference:

• MSCI: MSCI 35 ESG Key Issues \ MSCI ESG Industry Materiality Map

• SASB: SASB Standard Overview (Include 26 Issues & Materiality Map)

X Please feel free to contact us if you have any questions. Here is the email: ymtseng@nlg.csie.ntu.edu.tw, c.c.chen@acm.org