



CLIMATE FIRST... OR LAST?

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TEN QUESTIONS THE BOARD SHOULD ASK ABOUT MATERIALITY ASSESSMENT

1. What is the process and methodology for identifying material sustainability-related risks and opportunities (SROs)?
2. Which internal and external stakeholders are involved, how are they identified, and how are they engaged in the process? Are stakeholders prioritised?
3. Have we considered the context of our business when undertaking the materiality assessment?
4. Are short-term, medium-term and long-term horizons considered when assessing the materiality of SROs?
5. Have we benchmarked our materiality assessment against our peers, standards and other external sources? Are any frameworks such as the Sustainability Accounting Standards Board (SASB) and Global Reporting Initiative (GRI) used? Are there any local regulations relating to choosing material topics?
6. Are we missing blind spots in our materiality assessment?
7. How often is the materiality assessment undertaken and refreshed?
8. Are the results of our materiality assessment linked to strategic planning, risk management, goal-setting and reporting?
9. How is the corporate materiality assessment rolled out throughout the group and how are variances in material SROs in different parts of the business and geographies considered?
10. Is the materiality assessment that is disclosed useful to help stakeholders understand the most material SROs?

1. INTRODUCTION

Materiality assessment is a critical step for effective management of sustainability-related risks and opportunities (SROs) and disclosure of sustainability-related information that is useful for investors and other stakeholders, including for stakeholder accountability.

The materiality assessment enables an entity to identify and prioritise sustainability aspects for the entity. It helps the entity determine which topics or indicators have significant actual or potential economic, environmental or societal impacts caused by or impacting the organisation.

The results of the materiality assessment are an important input into strategic planning, goal-setting and reporting.

According to the Implementation Guidance on Materiality Assessment issued by the European Financial Reporting Advisory Group (EFRAG): “The performance of a materiality assessment is pivotal to sustainability reporting”¹.

The Sustainability Reporting Guide published by Bursa Malaysia, the Malaysian stock exchange, states: “Undertaking a robust materiality assessment process is essential for the systematic identification as well as prioritisation of sustainability matters that are most material to the company and its stakeholders”².

In this report, we examine materiality assessment by predominantly large companies from 10 sectors which are listed on Australia Securities Exchange (ASX), Bursa Malaysia (BM) and Singapore Exchange (SGX). Six sectors were selected as they were identified in the Association of Southeast Asian Nations (ASEAN) Taxonomy for Sustainable Finance as collectively accounting for 85% of regional emissions³. The other four sectors were selected because they have large companies and are considered major sectors with many companies. The report is focused on materiality assessment from the perspective of overseeing and managing SROs, and not from the perspective of sustainability reporting, although they should be linked.

We collected data mostly from the FY2022 or FY2023 annual reports and sustainability reports, and from company websites. However, we also collected data from the latest annual reports and sustainability reports to determine whether there have been significant changes.

Our research consists of two phases. For Phase 1, we selected 300 companies using a combination of market capitalisation (from largest to smallest) and sector representation. For these 300 companies, we examined the presentation of the materiality assessment and sources that were used to identify material SROs. We found that Bursa-listed companies had the clearest presentation of the materiality assessment as 87% disclosed this using a materiality matrix that shows the relative importance of different SROs. SGX-listed issuers were some way behind at 45% but ahead of ASX-listed companies which was at just 14%.

In terms of sources that were used to identify SROs, ASX-listed companies were more likely to use internal and external stakeholders, compared to SGX-listed companies, followed by Bursa-listed companies. For external stakeholders, ASX-listed companies were much more likely to engage with non-governmental organisations (NGOs) and civil society organisations (CSOs) compared to Bursa-listed and SGX-listed companies.

1 European Financial Reporting Advisory Group (EFRAG), Materiality Assessment, EFRAG IG 1, May 2024.

2 Bursa Malaysia, Sustainability Reporting Guide, 3rd Edition, 2022.

3 ASEAN Taxonomy Board, ASEAN Taxonomy for Sustainable Finance (Version 3), 20 December 2024.

For Phase 2, we examined the most frequently mentioned SROs by companies and the relative importance of different SROs for different sectors in the different markets. Unfortunately, as many companies did not have clear presentations of the materiality assessments, which allow an assessment of relative importance, they had to be dropped from the latter analysis. Some companies with a materiality matrix were also dropped because the axes for their matrix were not comparable to the other companies as they did not clearly indicate that materiality was assessed based on impact on the business and impact on stakeholders. In order to have at least 50 companies with acceptable materiality matrices in each market, we added more companies with lower market capitalisation. Our final sample for examining the frequency and relative importance of different SROs in Phase 2 comprised of 50 companies each for ASX and SGX, and 80 companies for BM.

Human Capital and Labour Management, along with Workplace Health and Safety, emerged as the two most frequently disclosed material SROs among companies listed on BM and SGX. For both markets, Ethical and Sustainable Supply Chain and Climate Change and Emissions were the third most commonly reported material topics, respectively. These patterns may be related to the industrial composition of the sampled companies. Carbon-intensive industries, which dominate the sample, tend to be highly labour-intensive. Consequently, issues related to human capital, labour management, and occupational health and safety may be prioritised.

However, for ASX-listed companies, Community Relations was the most frequently mentioned, followed by Climate Change and Emissions and then Corporate Governance. The importance of Community Relations as a material SRO for ASX-listed companies is consistent with higher external stakeholder engagement, particularly engagement with NGOs and CSOs, for these companies.

Based on relative importance, we found that while “social” factors and, to some extent, “environment” factors were frequently mentioned, they were only ranked third and fourth overall, respectively, for each market and for most sectors in each market. In general, governance factors were ranked as most important, followed by economic factors.

Companies often seek to project an image of strong governance, leading to the prioritisation of governance-related topics in their sustainability disclosures. Economic factors are similarly emphasised, particularly when organisations adopt the GRI framework. Within this framework, economic performance is identified as a key material topic, and companies may perceive that omitting it could be interpreted as a lack of commitment to financial responsibility, potentially resulting in reputational or stakeholder-related consequences.

We should highlight that our data was collected before sustainability standard-setting bodies such as the International Sustainability Standards Board (ISSB) and the EFRAG, and regulators in a number of countries, adopted a “climate-first” approach for sustainability reporting. This may increase the relative importance that companies place on environment-related SROs. Under the ISSB approach, companies assess climate impact through an “outside-in” perspective, focusing on how climate-related risks and opportunities affect the organisation’s financial position and performance. A “climate-first” approach to sustainability reporting may elevate the importance of environment-related factors in the materiality assessments undertaken by companies.

2. PROCESS FOR IDENTIFYING MATERIAL IROs/SROs

This section discusses the process for identifying material impacts, risks and opportunities (IROs) or sustainability-related risks and opportunities (SROs) and some of the key issues to consider for each step of the process. Sources such as the non-binding implementation guidance, EFRAG Implementation Guidance (IG) 1 Materiality Assessment, issued by the EFRAG in May 2024⁴, and BM's Sustainability Reporting Guide⁵ and Toolkit for Materiality Assessment⁶ (3rd edition) published in 2022, provide comprehensive guidance on the topic of materiality assessment.

A typical process for determining the material IROs based on a double materiality perspective involves the following five steps:

1. Identifying sustainability topics
2. Gathering stakeholder perspectives
3. Assessing impact on stakeholders
4. Assessing impact on the entity
5. Determining the entity's most material SROs

2.1. EFRAG Guidance on Materiality Assessment

EFRAG IG 1 Materiality Assessment suggests the following steps in the materiality assessment process for the purpose of sustainability reporting based on double materiality⁷:

Step A: Understanding the context. This involves the entity developing an overview of its activities and business relationships, the context in which these take place and an understanding of its key stakeholders affected. This provides key inputs to identify the entity's IROs.

Step B: Identification of the actual and potential impacts, risks and opportunities related to sustainability matters. This involves the entity identifying the actual and potential IROs relating to environmental, social and governance matters across its own operations and in its upstream and downstream value chain. The outcome will be a 'long' list of impacts, risks and opportunities for further assessment and analysis in subsequent steps.

Step C: Assessment and determination of material IROs related to sustainability matters. The entity applies criteria for assessing impact and financial materiality in order to determine the material actual and potential impacts and the material risks and opportunities. This forms the basis for determining material information based on the European Sustainability Reporting Standards (ESRS) topical disclosure requirements.

Step D: Assessing Double Materiality. This involves the entity assessing each identified IRO from both an impact materiality perspective and a financial materiality perspective. From the impact

4 European Financial Reporting Advisory Group (EFRAG), Materiality Assessment, EFRAG IG 1, May 2024.

5 Bursa Malaysia, Sustainability Reporting Guide, 3rd Edition, 2022.

6 Bursa Malaysia, Toolkit: Materiality Matrix, 3rd Edition, 2022.

7 European Financial Reporting Advisory Group (EFRAG), Materiality Assessment, EFRAG IG 1, May 2024.

perspective, the entity evaluates the severity (including scale and scope) and the likelihood of actual and potential impacts on people and the environment, taking into account the entity's own operations and its value chain. From the financial perspective, the entity determines whether the identified topics could reasonably be expected to affect its development, financial position, financial performance, cash flows, access to finance, or cost of capital over the short, medium, or long term. A topic is considered material if it meets the criteria for either impact materiality, financial materiality, or both. This assessment enables the entity to identify sustainability matters that are material for reporting under the ESRS.

Step E: Reporting. Following the materiality assessment process, the entity reports on the assessment process, its outcome and other information based on ESRS requirements.

2.2. GRI Standard for Materiality Assessment

GRI standards are based on impact materiality. The materiality assessment process outlined in GRI 3: Material Topics 2021 provides a structured methodology for identifying and prioritising an entity's most significant impacts on the economy, environment, and people, including human rights. The process is grounded in principles of due diligence, stakeholder inclusivity, and contextual relevance, and comprises four key steps.

Step A: Entities are required to **understand their context**, which includes mapping their operations, business relationships, stakeholders, and the broader sustainability landscape in which they operate. This step ensures a comprehensive understanding of the entity's value chain and the socio-environmental conditions surrounding its activities.

Step B: Entities must **identify actual and potential impacts**, both positive and negative. These include short-term and long-term, intended and unintended, and reversible or irreversible impacts across the entities' activities and relationships. Information is gathered from internal assessments, grievance mechanisms, stakeholder consultations, and third-party sources, with priority given to identifying adverse impacts, particularly on human rights.

Step C: This step involves **assessing the significance of impacts**. This assessment is based on the severity (defined by scale, scope, and irremediability) and, for potential impacts, the likelihood of occurrence. The evaluation may involve stakeholder engagement, expert consultation, and internal deliberation, and serves to prioritise impacts for both management and reporting purposes.

Step D: In the final step, **entities prioritise the most significant impacts** for reporting by grouping them into material topics and establishing a threshold that determines which are disclosed. This step includes testing the identified topics against GRI Sector Standards and validating them with stakeholders and subject matter experts. The finalised list of material topics must be reviewed and approved by the organisation's highest governance body or senior management.

The process culminates in disclosures that explain how material topics were identified (Disclosure 3-1), list the material topics and any changes (Disclosure 3-2), and describe how each topic is managed (Disclosure 3-3). Overall, the GRI 3 framework promotes a rigorous, context-sensitive, and stakeholder-informed approach to materiality that enhances the quality and credibility of sustainability reporting.

2.3. ISSB Standard for Materiality Assessment

In the case of ISSB standards, which are grounded in the concept of financial materiality, International Financial Reporting Standards (IFRS) S1 outlines the process for identifying material SROs that could reasonably be expected to affect an entity's prospects, including its cash flows, access to finance, or

cost of capital over the short, medium, or long term. The following steps are suggested for sustainability reporting:

Step A: Consider IFRS Sustainability Disclosure Standards. Entities should begin by considering IFRS S1 (General Requirements for Disclosure of Sustainability-related Financial Information) and any thematic standards such as IFRS S2 (Climate-related Disclosures). These provide overarching and topic-specific guidance to identify relevant sustainability-related risks and opportunities.

Step B: Consider the applicability of the SASB Standards. To identify relevant disclosure topics and metrics, entities should assess the industry-based guidance from the SASB Standards. These standards help surface sustainability issues that are most likely to be financially material for companies in a given industry.

Step C: Consider other relevant sources. In addition to IFRS and SASB Standards, entities may also refer to the Climate Disclosure Standards Board (CDSB) framework, particularly its application guidance on water and biodiversity-related disclosures:

1. Recent pronouncements by other standard-setting bodies that address the needs of primary users of general-purpose financial reports;
2. Peer disclosures and emerging SROs observed in entities operating in the same industry or region.

Step D: Apply judgment based on reasonable and supportable information. Identifying material SROs requires the application of judgment. Entities are expected to consider all reasonable and supportable information available at the reporting date without incurring undue cost or effort. Materiality must be assessed in relation to the potential to affect enterprise value, considering nature, magnitude, and likelihood of impacts across time horizons.

2.4. Material SROs are contextual and dynamic

Material SROs can vary significantly across sectors and geographies. Even within the same industry, companies may assess the materiality of SROs differently due to variations in business models, strategic positioning, or efforts to create differentiation and competitive advantage. Divergent stakeholder expectations further contribute to these differences. While sustainability reporting frameworks and standards provide a foundational basis for identifying and prioritising material topics, it is critical that companies contextualise their assessments. Differences in value chains, operational structures, and stakeholder landscapes, despite being within the same sector, can lead to distinct materiality determinations. Therefore, while entities will have to ensure that disclosure requirements are complied with and are therefore considered in identifying material SROs, a context-specific approach is essential to ensure that reported SROs reflect the company's unique sustainability risks, opportunities, and stakeholder concerns.

Additionally, disclosure frameworks such as the IFRS ISSB, EFRAG, EU's Corporate Sustainability Reporting Directive (CSRD), and GRI influence how companies define and apply materiality. The ISSB standards (S1 and S2) adopt a financial materiality lens, focusing on SROs that could influence enterprise value. In contrast, the CSRD mandates a double materiality approach, requiring firms to report both on how sustainability issues affect their financial performance and how their operations impact people and the environment. Meanwhile, GRI standards emphasise impact materiality, urging companies to consider the significance of their economic, environmental, and social impacts on stakeholders. These varying approaches require companies to evaluate materiality from multiple perspectives and clearly articulate the basis for what is disclosed.

Further, disclosure topics in sustainability standards may be updated relatively infrequently, but SROs and their relative importance may change fairly rapidly for a specific sector or entity.

Take the case of glove manufacturers whose primary sector is “Medical Equipment & Supplies” sector under SASB standards. For this sector, the relevant disclosure topics under the SASB standards are “Access & Affordability”, “Product Quality & Safety” and “Selling Practices & Product Labeling” under “Social Capital”; “Product Design & Lifecycle Management” and “Supply Chain Management” under “Business Model & Innovation”; and “Business Ethics” under “Leadership & Governance”.

“Human Capital” issues such as “Labour Practices” and “Employee Health & Safety”, and “Human Rights & Community Relations” under “Social Capital”, were not identified as relevant disclosure topics. However, a number of glove manufacturers in Malaysia faced import bans because of issues that were very much related to labour practices, employee health and safety, and human rights. In fact, Malaysian companies in other sectors with a high reliance on migrant workers faced similar accusations. In 2021, Malaysia was downgraded to “Tier Three” in the United States (U.S.) Department of State’s annual “Trafficking in Persons” report, the lowest rating a country could get⁸. This would have subjected Malaysian companies to greater scrutiny by international human rights activists. Sustainability reporting standards may not be sufficiently granular to take into account country-specific sustainability-related risks.

In Malaysia, companies mostly follow Bursa’s framework or GRI to report. SASB has not been very popular, and hence, the topics selected for materiality are mostly taken from the GRI list. Although Malaysian companies may consult SASB industry-specific recommendations, it has not been a commonly adopted practice.

Companies that seek to differentiate themselves from their competitors may assess the materiality of SROs differently.

Consider the materiality assessments of the four largest listed glove manufacturers in Malaysia based on their 2022 annual reports. Three of these companies were facing labour-related issues. Based on their materiality assessments, “Environment” factors were assessed as less material, while “Social” issues were rated more material.

Companies may use the prioritisation of material topics as a signaling mechanism or as part of legitimacy-building strategies to demonstrate their commitment to specific issues. This is particularly evident in cases where companies face legal claims or controversies related to certain topics, often leading to such topics being elevated in priority within their sustainability disclosures.

In contrast, the fourth company in this group rated “Environment” and “Economy” factors as most material – four of the eight most material factors were “Environment”-related – climate change, environmental compliance, waste management and water and effluents management. The fact that this company was the only company among the four that did not face import bans and scrutiny over labour practices may explain why the “Social” factors were rated lower in terms of materiality. It had likely already recognised and addressed potential risks associated with labour practices, although “Social Compliance & Labour Practice” remained one of the highest ranked sustainability-related issues in its materiality assessment. This company may also have seen an opportunity to differentiate itself from its competitors by prioritising environment-related factors, which it may consider as important for its customers and other stakeholders.

If these four companies identified material SROs based largely on standards and peers in the same industries or geographies, their materiality assessments may be broadly similar but may not sufficiently

⁸ In 2024, Malaysia was upgraded to Tier Two in the same report (<https://www.state.gov/reports/2024-trafficking-in-persons-report/malaysia/>).

consider their own context, including their business model and strategies.

We have also observed that stakeholders who are more familiar with sustainability processes tend to be better aligned with the intended outcomes of the materiality assessment. The level of stakeholder interest and their sense of accountability can significantly influence the results of the process. Once inputs from various stakeholder groups are gathered, management typically undertakes a compliance and authenticity review before finalising the materiality matrix, ensuring that the outcome reflects both external expectations and internal strategic considerations.

In the Novartis Lecture on Integrating Environmental, Social and Governance (ESG) into Strategy on 12 November 2021, Dr Lutz Hegemann, Group Head Corporate Affairs and Global Health at Novartis, explained the importance of materiality assessment or analysis for his company, and how it is linked to its mission and vision. He said:

*"...in the ESG space, it's not the more the better... we need to focus on those pieces that are material to us and where we can ultimately drive change and impact...what comes out very clear [in our materiality analysis] is that the expectation and the focus for us should be on innovation and access to that innovation...other elements are important as well, so that you have safe and effective medicines...and run your business ethically...as we read the materiality analysis, what our stakeholders expect from us...[align] very intrinsically with our mission and with our vision, how we would like to be seen in society...without any doubt, the environment is important, we need to consider how we can reduce any potential harm we do to the environment, but that is not going to ultimately define the contribution that we are making to society."*⁹

While business ethics (governance) and environment are important, Novartis considers innovation and access to that innovation, which are grouped under social factors for the company, to be most important.

2.5. Beware of blind spots

This is not to say that companies should ignore sustainability reporting standards when identifying material SROs because such standards are developed based on what stakeholders generally consider to be important. In addition, while the materiality of different SROs even for companies within the same sector may differ due to differences in business models, key stakeholders, geographies and competitive strategies, certain SROs such as those related to climate change and biodiversity may not be sufficiently prioritised by companies because of blind spots or a focus on short-term SROs. It is important for companies undertaking materiality assessments to consider short-term, medium-term and long-term horizons and not simply prioritise short-term SROs compared to longer-term ones.

2.6. Identifying potential SROs

To identify potential SROs, a long list can be generated through internal sources and external sources, such as internal and external stakeholders, reporting standards and frameworks, industry peers, industry associations and other organisations.

⁹ Novartis, Integrating ESG into Strategy, Novartis Lecture, 12 November 2021 (<https://www.youtube.com/watch?v=6kdYAp5CbWE>)

EFRAG IG 1 suggests the following steps for identifying the list of potential SROs¹⁰:

1. The outcome of existing materiality assessment processes based on other frameworks
2. The outcome of the existing due diligence process
3. The feedback or inputs received from stakeholder engagement processes already in place, such as customer/employee satisfaction surveys and grievance mechanisms
4. Benchmark analysis of material topics for peers/sector-specific matters

The long list can then be grouped into issues, and internal and external stakeholders surveyed or interviewed about impact on the company and impact on stakeholders of different issues.

2.7. Gathering stakeholder perspectives

To be useful, the materiality assessment should involve significant engagement with and input from relevant stakeholders - those individuals or entities that can reasonably be expected to affect, or be affected by, the organisation's activities, products, services, or objectives.

An entity has many stakeholders and who are the most important stakeholders for a particular entity may also be contextual, depending on factors such as industry, business model, strategies and geography.

It is important for management, with input and oversight from the board, to identify the company's key stakeholders and determine appropriate engagement strategies for each group. This should be based on a dual perspective: the potential impact of the entity's operations on different stakeholders, and the potential influence of stakeholders on the entity's operations. However, stakeholder prioritisation should not precede, but come after, the identification of material topics. Otherwise, this can undermine the integrity of the materiality assessment, as it risks narrowing the scope of engagement and filtering out potentially important issues. Ideally, material topics should emerge organically from a broad and inclusive stakeholder engagement process.

A related consideration is whether explicitly linking material topics to specific stakeholder groups could enhance the process. Although this practice is not yet widespread, it offers potential benefits. By directly connecting material issues to stakeholder interests, companies could improve transparency and accountability in sustainability reporting. However, implementing such an approach would require a structured methodology to avoid introducing excessive complexity.

In practice, certain challenges are often observed in stakeholder engagement processes. One key challenge is securing active participation from external stakeholders. Many are either reluctant or slow to respond. To address this, the entity has to conduct individual follow-ups, including reminders and detailed explanations of how the survey would influence sustainability priorities. This additional effort can improve response rates and contribute to a more representative and holistic assessment.

Another major challenge is ensuring that stakeholders fully understand the implications of each sustainability topic. In some cases, a lack of familiarity with the process may lead to responses that require further clarification. Bridging this conceptual gap is necessary to ensure the quality and relevance of stakeholder input in the materiality assessment.

One possible approach is to start by tiering the stakeholders in terms of their relative importance. For example, Tier 1 stakeholders could be those with the most significant influence on the company's operations and who would be most impacted by the company's operations. Engagements with these

¹⁰ European Financial Reporting Advisory Group (EFRAG), Materiality Assessment, EFRAG IG 1, May 2024.

stakeholders can be one-on-one or small group meetings and more frequent. For other stakeholders, less intensive and less frequent engagements may be used.

Figure 1 shows the disclosure on stakeholder engagement in the FY2024 Sustainability Report published by Starhub, a company listed on SGX, which provides very comprehensive information on its engagement for different stakeholders.

Stakeholder Group	Engagement method & frequency	ESG issues or impacts raised	StarHub's response
Customers (Enterprise and Consumer)	<ul style="list-style-type: none"> Multiple service channels, including digital mobile apps, call centres, online and physical stores Active interaction and prompt follow-up to feedback received via social media platforms or company website Regular customer engagement surveys to track net promoter scores (NPS) Organised trade events to bring together knowledge and focus groups for enterprise customers Participation in conferences, showcase events bringing together knowledge partners and industry leaders 	<ul style="list-style-type: none"> Operational efficiency, enhancements in network service quality and coverage, data and cyber security are some common themes among both EBG and CBG customers There is a growing interest among enterprise customers to embrace sustainability as part of their business strategy. Many are seeking service providers to disclose ESG performance and targets 	<ul style="list-style-type: none"> Prioritising timely customer support to elevate customer experience, a core part of our ongoing investments in technology infrastructure upgrades to ensure network stability, reliability and security Advocating for sustainability capacity building among our technical consultants and solution specialists for enterprise customers
Employees (inc. Management and Board)	<ul style="list-style-type: none"> Quarterly townhall – HubbaHangout – hosted by the Management Committee Annual Employee Engagement survey and more regular employee pulse check surveys 	<ul style="list-style-type: none"> Employee compensation, benefits and welfare Well-being (work related stress, work-life balance) Career and talent development, including upskilling and reskilling Technology and information services management 	<ul style="list-style-type: none"> Introduced a new workplace compact to strengthen employee engagement and well-being Redesigned our corporate office to enhance technology integration and promote innovation and teamwork Offering holistic rewards programme and employee benefits to attract and retain our best talents
Suppliers (inc. distributors and retailers)	<ul style="list-style-type: none"> Meetings (in-person or online) during annual contractual reviews Supplier self-assessment questionnaires 	<ul style="list-style-type: none"> Structured procurement process, including sustainability considerations Compliance with terms and conditions of purchasing policies, including StarHub's Supplier Code of Conduct 	<ul style="list-style-type: none"> Revised our Environmental Policy to strengthen our responsible and sustainable business practices Introduced green procurement guiding principles in our internal purchasing policy to formalise the practice of sustainable sourcing

Government and Regulators	<ul style="list-style-type: none"> • Regular engagement sessions with regulators, government bodies and public agencies in one-on-one or group meetings involving other industry partners • Active participation and contribution to government-led working groups, committees and/ or forums • Provide feedback to Consultation Papers, draft regulations or guidelines, or policy statements and papers 	<ul style="list-style-type: none"> • Supporting the digital readiness of Singapore's telecommunications infrastructure, workforce and economy, while addressing the widening digital divide • Key regulatory and compliance topics being discussed include: <ul style="list-style-type: none"> – Provision of secure and resilient telecommunications networks and services – Fulfilment of minimum quality of service standards – Data privacy, online safety and anti-scam measures to protect customers 	<ul style="list-style-type: none"> • Ongoing measures to ensure compliance with regulatory requirements, including regular fixed and mobile quality of service measurements, regular audits of the cybersecurity and resiliency of our infrastructure, and implementation of anti-scam measures • Participating in Government grant projects to support regulatory efforts to protect public interest and business offerings • Working with policy-makers to raise awareness of regulatory initiatives and pertinent topics, such as <ul style="list-style-type: none"> – Working with SPF on joint publicity to raise public awareness on possible scam tactics employed by scammers, and good practices to avoid scams – Supporting our customers network migration journey with the cessation of StarHub's 3G services in November 2024
Investors	<ul style="list-style-type: none"> • One-on-one and group meetings, conducted either online or in-person, including conferences and non-deal roadshows • Quarterly results briefing and business performance update call • Independent third-party investor relations perception study • Annual investor day • Annual General Meeting 	<ul style="list-style-type: none"> • Transparent and timely updates on business performance and corporate developments, Group and business strategies, views on operating landscape and business outlook • ESG risks identification and management, and climate transition plans 	<ul style="list-style-type: none"> • Regularly providing in-depth commentary and updates on our business outlook and financial performance, including thematic briefings regarding StarHub's business operations and strategies • Responding to the ESG queries and highlighted our net-zero commitment and decarbonisation roadmap through email correspondences and survey feedback
Trade unions	<ul style="list-style-type: none"> • Annual dialogues with management • Regular consultative forums and/ or workshops conducted through the Company Training Committee (CTC) initiative 	<ul style="list-style-type: none"> • Knowledge sharing and capacity building for reskilling and upskilling employees • Awareness raising for trade union memberships 	<ul style="list-style-type: none"> • Providing more opportunities for open and honest dialogue with the Management • Developing updated training and learning initiatives to build a stronger and self-directed learning culture

<p>Communities and NGOs</p>	<ul style="list-style-type: none"> • Regular events and ongoing conversations with impact partners and social service agencies • Long-term programme collaboration with government bodies and non-profit organisations • Community engagement and employee volunteering programmes • Cash donations and in-kind sponsorships 	<ul style="list-style-type: none"> • Addressing the social needs among the less privileged children and youths • Access to connectivity and digital technologies • Social mobility and employability 	<ul style="list-style-type: none"> • Regularly reviewing community needs to plan outreach programmes • Partnering with voluntary welfare organisations and investing in community projects to support less privileged youths and families
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Figure 1: Stakeholder Engagement. Source: Starhub Ltd, Stakeholder Engagement Efforts Summary, Sustainability Report 2024. (https://ir.starhub.com/miscar2024/sustainability_report_2024.pdf)

2.8. Assessing impact on stakeholders and company

The guidance in EFRAG IG 1 states that an entity applies objective criteria, using appropriate quantitative and/or qualitative thresholds, to assess the materiality of actual and potential impacts on stakeholders and the company. Materiality for actual impacts is based on severity, and in the case of potential impacts, also likelihood.¹¹ Two common challenges are:

1. Effective prioritisation but limited perspective: Prioritisation provides focus. However, a holistic perspective may be lacking in some cases due to limited stakeholder engagement.
2. Stakeholder engagement: Often, stakeholder engagement is limited to employees, very few vendors and limited customers. SMEs face bigger challenge as their influence on stakeholders is limited.

Figure 2 shows examples of key questions that BM’s Toolkit for Materiality Assessment suggests an entity can ask in defining materiality¹².

<p>Is it strategically relevant to its business?</p> <p>Sustainability matters which have significant impacts (positive and negative) on its business strategy should be identified, monitored and managed.</p>	<p>Is it important to its stakeholders?</p> <p>Different stakeholders may have different areas of concern. A company should take into account both its internal and external stakeholders’ interests when identifying and prioritising material matters.</p>
<p>In addressing the above two questions, a company should also consider the following:</p> <p>Does it have an economic, environmental or social impact on the value chain?</p> <p>A company should consider the extent of economic, environmental and social impacts when assessing the significance of a sustainability matter to its business or stakeholders, i.e. how a sustainability matter impacts the entire value chain (e.g.: suppliers, customers) of the company as well as the extent of the impact.</p>	

Figure 2: Example of key questions to define materiality. Source: Bursa Malaysia, Toolkit: Materiality Matrix, 3rd Edition, 2022.

¹¹ European Financial Reporting Advisory Group (EFRAG), Materiality Assessment, EFRAG IG 1, May 2024.

¹² Bursa Malaysia, Toolkit: Materiality Matrix, 3rd Edition, 2022.

2.9. Determining the entity's most material SROs

In this step, the entity consolidates the results of the preceding steps and determines the list of material SROs. This should be validated by management.

There is no universally prescribed number of material topics. However, the relevance and effectiveness of a materiality assessment are often compromised when companies identify an excessive number of topics, typically in the range of 15 to 20. While this may reflect a desire to be comprehensive, such a broad list can signal a lack of strategic focus and dilute the clarity of sustainability priorities.

In practice, a more focused set of material topics typically of between six and 10, allows for clearer communication, better resource allocation, and more effective target setting. When too many topics are deemed material, it becomes challenging for companies to define meaningful performance indicators, establish realistic goals, and implement consistent monitoring and reporting practices.

Moreover, some of the listed topics may overlap or be interrelated, suggesting opportunities to cluster them under broader thematic areas (e.g., "Human Capital" could encompass training, diversity, and employee wellbeing). Grouping related issues into overarching themes can enhance coherence in strategy and reporting, and support more integrated management approaches. Ultimately, materiality should serve as a tool to sharpen focus, not to create an exhaustive checklist.

The Board of Directors may be involved as a stakeholder providing inputs in the materiality assessment process, but it is important that it is also engaged in reviewing and approving the materiality assessment undertaken by management.

The Board should also ensure that the materiality assessment process and results are clearly disclosed in the annual report or sustainability report.

2.10. Presentation format

Figures 3 to 5 show several common presentation formats for the materiality assessment that are used by entities. The presentation format shown in Figure 3 does not give an indication of the relative importance of different SROs, and also suggests that the materiality assessment is rudimentary. Further, it does not indicate whether the materiality assessment considered only financial materiality or also includes impact materiality.

Figure 4 is an improvement over the presentation format in Figure 3. However, material SROs are shown in a cluster, with no indication of relative importance of each SRO within each cluster.

Figure 5 is the clearest presentation format as it shows the relative importance of each SRO. In addition, the axes indicate that the company has considered impact or importance to the company and also to stakeholders.



Figure 3: Example of an unclear materiality assessment

INTERNAL STAKEHOLDERS	Priority		<ul style="list-style-type: none"> • Anti-Competition Behaviour • Non-Discrimination • Transparency & Disclosure • Code of Conduct 	<ul style="list-style-type: none"> • Compliance • Anti-Corruption • Child Labour • Continuous Innovation & Improvement • Technology-based Solutions • Business Continuity • Forced or Compulsory Labour • Customer Health & Safety • Customer Privacy • Occupational Health & Safety • Waste Management
	Ongoing Importance		<ul style="list-style-type: none"> • Water Conservation & Recycling • Energy Management • Labour/Management Relations • Training & Education • Equal Opportunity & Workforce Diversity • Supplier Assessment for Labour Practices • Stakeholder Engagement • Greenhouse Gas (GHG) Emissions • Procurement Practices 	<ul style="list-style-type: none"> • Board Diversity & Structure • Shareholder Rights
	Monitor and Manage	<ul style="list-style-type: none"> • Freedom of Association and Collective Bargaining • Market Presence • Community Involvement 	<ul style="list-style-type: none"> • Customer Engagement • Climate Change Mitigation & Adaptation 	<ul style="list-style-type: none"> • Renewable & Clean Energy
		Monitor and Manage	Ongoing Importance	Priority
INTERNAL STAKEHOLDERS				

Figure 4: Example of a materiality assessment showing clusters of material SROs

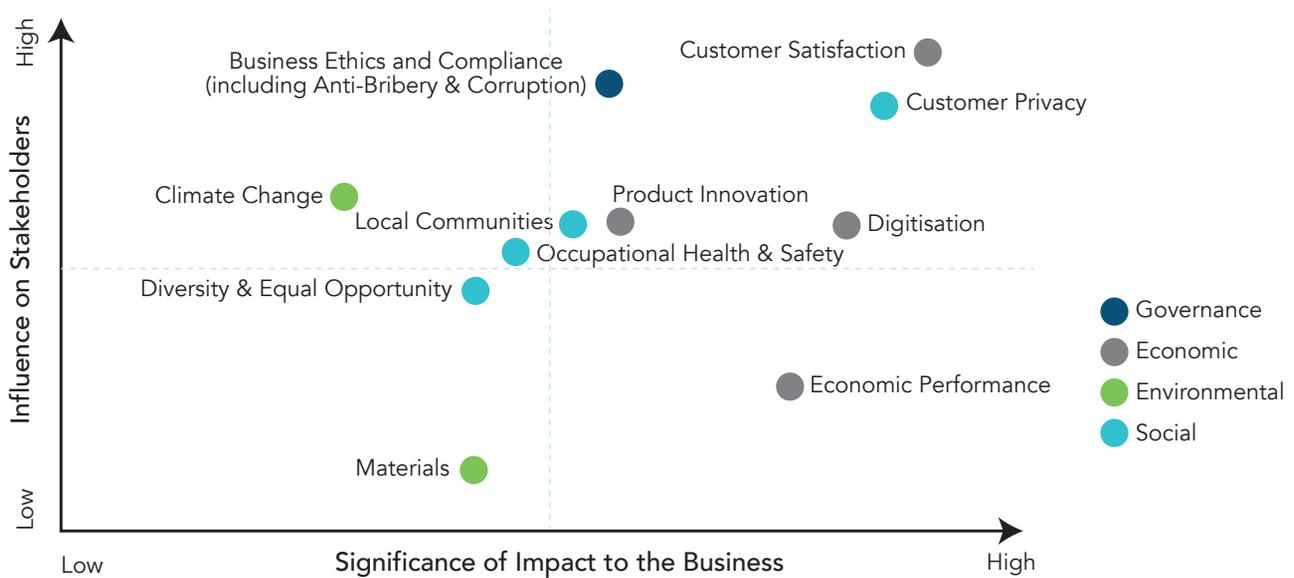


Figure 5: Example of a materiality assessment showing relative importance of material SROs

2.11. Case Study – Conducting a Materiality Assessment in an SME

A small and medium-sized enterprise (SME) recognised the need to integrate sustainability into its business strategy and decision-making. To achieve this, the company sought to identify and prioritise its most material Economic, Environmental, Social, and Governance (EESG) factors through a structured materiality assessment.

As part of the assessment, a stakeholder survey was distributed to gather input from both internal teams and key external stakeholders, with a particular focus on suppliers and customers. The survey aimed to capture stakeholder perspectives by ranking various material topics based on their perceived significance. The results were consolidated into a materiality matrix, providing a visual representation of the prioritised topics. This matrix was subsequently presented to the Board for review and final approval, ensuring alignment with strategic business objectives.

One of the primary challenges encountered during the materiality assessment process was ensuring that stakeholders fully understood the implications of each sustainability topic. Some stakeholders had limited familiarity with certain sustainability concepts, leading to inconsistent or unclear responses. To address this, additional context and explanations were provided to ensure that responses were well-informed and reflective of actual business impacts.

Another significant challenge was securing active participation from external stakeholders, as many were reluctant or slow to respond. The company conducted individual follow-ups, offering reminders and explaining the survey's purpose in shaping sustainability priorities. These efforts improved response rates and ensured a more holistic representation of different stakeholder perspectives.

The assessment also revealed a discrepancy in survey data representation, where employees had the highest response rate while external stakeholders such as suppliers and vendors had the lowest. This imbalance skewed the results and prioritisation of topics, necessitating adjustments to remove sampling bias and achieve a more accurate materiality assessment.

Despite these challenges, the materiality assessment successfully identified key EESG priorities and validated them through a peer benchmarking exercise, providing the company with a clear direction for its sustainability initiatives. The validated materiality matrix was integrated into the company's sustainability

strategy and reporting framework, ensuring that decision-making was aligned with both stakeholder expectations and long-term business goals.

By addressing challenges proactively and refining its approach, the SME was able to conduct a comprehensive and meaningful materiality assessment and identify key SROs. The experience emphasised the importance of clear communication, active engagement, and balanced data representation in ensuring the effectiveness of materiality assessment process.

2.12. Other considerations

Material SROs identified may change over time as internal and external circumstances change. Although it is not required to conduct a full materiality assessment (MA) annually, the organisation should re-assess the material SROs periodically. In practice, significant updates to material topics tend to occur in response to key triggers rather than as part of a routine yearly process. Common drivers of change in materiality assessments include:

1. Change in sustainability consultant or internal team: A new team or consultant may bring a different perspective or methodological approach, prompting a reassessment of what is considered material.
2. Material changes in the business: Events such as shifts in business strategy, market repositioning, or operational restructuring can influence the relevance of existing material topics.
3. Acquisition of new assets, entry into new markets, or divestments: These changes can introduce new risks or alter risk profiles, stakeholder groups, or environmental and social considerations that warrant inclusion in the materiality matrix.
4. Regulatory or framework changes: Transitions from one reporting standard to another (e.g., from GRI to ISSB or ESRS) often necessitate a re-evaluation of material topics to align with revised definitions of materiality, disclosure expectations, and stakeholder focus.

As such, while companies may review their materiality assessment periodically, substantive changes are typically event-driven rather than cyclical.

Companies often undertake a comprehensive materiality assessment every three or four years but review their materiality assessment every year. For a group with operations globally, it will take time to roll out the corporate materiality assessment throughout the group. It is also important that boards and management of entities throughout the group are engaged in reviewing the corporate materiality assessment and ensuring that material SROs relevant to their local operations are taken into account. The importance of different stakeholders and how they should be engaged may also vary based on sector and/or geography. For example, in some markets or sectors, engaging with the local community, NGOs and civil society may be particularly important.

3. RESEARCH ON MATERIALITY ASSESSMENT

For our research, we chose companies in 10 sectors that are listed in the Australian Securities Exchange (ASX), Bursa Malaysia (BM) and Singapore Exchange (SGX).

The 10 sectors are:

1. Agriculture, forestry and fishing
2. Manufacturing
3. Electricity, gas, steam and air conditioning supply
4. Water supply, sewerage, waste management
5. Construction and real estate activities
6. Transportation and storage
7. Financials
8. Communication services or InfoTech
9. Healthcare
10. Consumer discretionary

Six sectors - agriculture, forestry and fishing; manufacturing; electricity, gas, steam and air conditioning supply; water supply, sewerage, waste management; construction and real estate activities; and transportation and storage - were chosen on the basis that they are responsible for 85% of regional emissions under the ASEAN Taxonomy for Sustainable Finance.¹³ The other four sectors – financials; communication services/infotech; healthcare; and consumer discretionary were selected because they had large companies and are considered major sectors with many companies.

3.1. Phase 1: Materiality Assessment Presentation and Methods Used to Identify Material SROs

For Phase 1 of the research, we first selected the largest 100 companies by market capitalisation which have a primary listing in each of three markets from CapIQ. We excluded Real Estate Investment Trusts (REITs), trusts and funds. We tried to have at least 10 companies in each sector for each market. To do so, we expanded the list of companies to select from up to about 200 companies per exchange. Where appropriate, we also re-categorised certain sectors into the 10 sectors above.

The reclassification was undertaken primarily by understanding the nature of the company's business and their product lines. Companies in sectors such as mining and oil and gas were re-categorised. Mining companies were mainly reclassified under the "Manufacturing" sector as these companies are involved in the manufacturing process by providing foundational materials like minerals and metals. Additionally, these companies often engage in activities beyond raw extraction, such as refining and smelting, which closely resemble manufacturing processes since they involve altering a material's physical or chemical state. Oil and gas companies were reclassified under "Electricity, gas, steam and air conditioning supply" sector. This is mainly due to their fundamental role within the energy supply chain, with business activities like oil and gas exploration and production supporting energy generation and distribution.

¹³ ASEAN Taxonomy Board, ASEAN Taxonomy for Sustainable Finance (Version 1), November 2021.

There are some exceptions to the above re-classification. For example, an oil company was re-classified under “Manufacturing” instead of “Electricity, gas, steam and air conditioning supply” because it mainly operates as a manufacturer of lubricant products, instead of contributing to the energy supply chain like other oil and gas companies.

The market capitalisation range for the final list of 100 companies in each market for Phase 1 is shown in Table 1.

ASX	<ul style="list-style-type: none"> Majority of cut off at >USD100m. Eight companies were selected with a market cap of USD9m to 80m to introduce variety as ASX is dominated by companies in the Manufacturing sector.
Bursa	<ul style="list-style-type: none"> Cut off at about USD100m Included two companies with USD40m to 50m market cap from Water Supply sector to increase number of companies in this sector to 5 companies
SGX	<ul style="list-style-type: none"> Cut off at about USD100m, with lowest market capitalisation of about USD96m

Table 1: Market capitalisation range for Phase 1 companies

Figure 6 shows the median market cap for companies in each of the top sectors, for the 300 companies across the three markets.

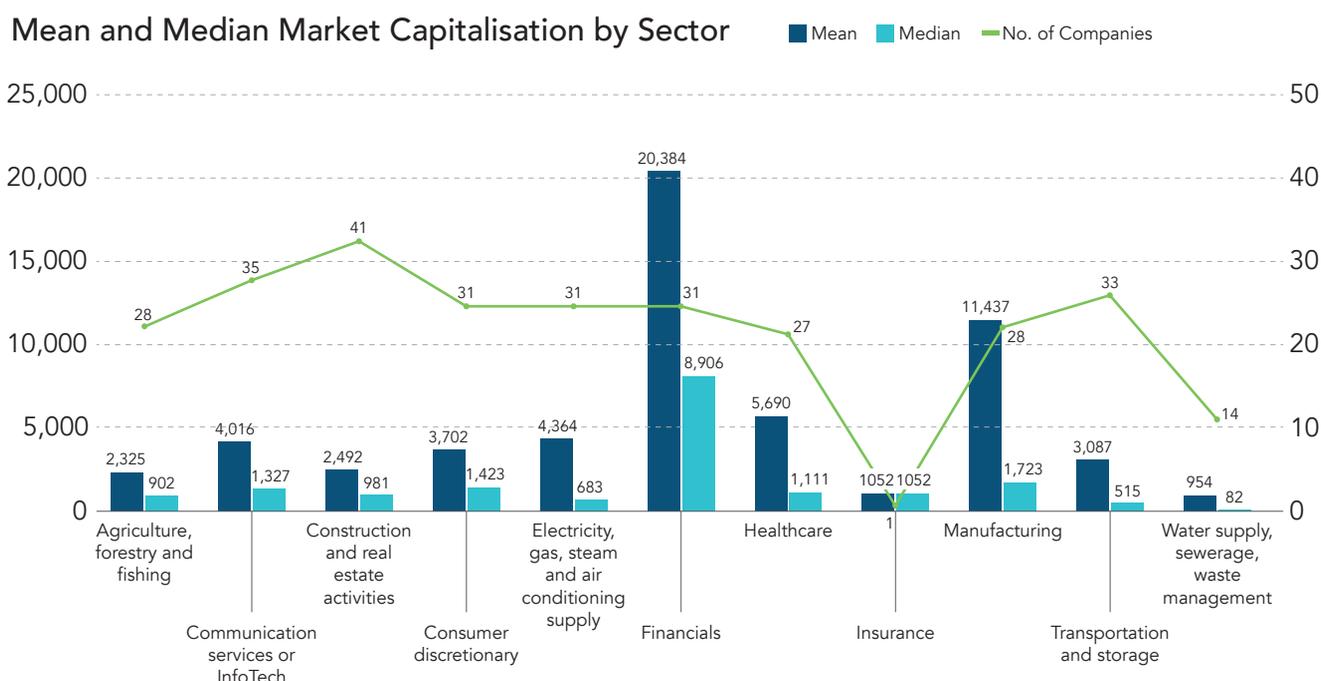


Figure 6: Median and mean market capitalisation of companies in Phase 1

We then collected data mostly from the FY2022 or FY2023 annual reports and sustainability reports, and from company websites.

3.1.1. Materiality assessment presentation format

The 300 companies included in Phase 1 used several different presentation formats for their materiality assessment, with some having no disclosure or unclear or brief disclosures of their materiality assessment. Other companies used one of two other presentation formats – a materiality matrix or a list or table of material SROs. The SROs may or may not be ranked in order of relative importance.

Figure 7 shows the different presentation formats used by the 300 companies in the three markets by sector. Overall, 48 companies had no, unclear or brief disclosures; 106 disclosed using a list or table; and 146 disclosed a materiality matrix. A materiality matrix or at least a list or table with the importance of different SROs ranked would be more useful for investors and stakeholders.

Materiality Assessment Presentation Format - Consolidated by Sector

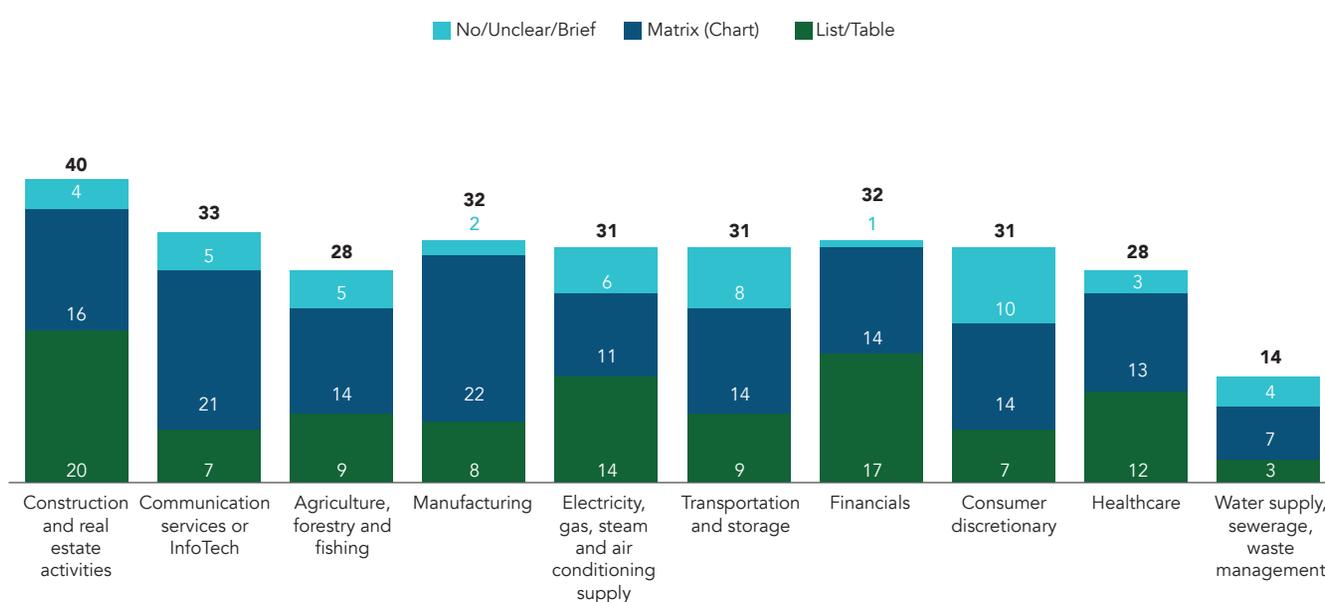


Figure 7: Materiality presentation formats used by companies across the three markets

Figures 8, 9 and 10 show the materiality assessment presentation formats for companies within each market. 87 out of the 100 Bursa-listed companies disclosed the materiality assessment using a matrix, far higher than for ASX-listed companies (14) and SGX-listed companies (45). This is because many Bursa-listed companies referenced BM's Sustainability Reporting Guide and Materiality Assessment Toolkit, which provides guidance on the materiality assessment process. The Guide states: "...a materiality matrix should be utilised to illustrate the importance of prioritised material sustainability matters relative to one another. This would enable readers to develop a deeper appreciation of where the company's attention, resources and efforts are being directed"¹⁴. The Toolkit uses a matrix for illustrating the materiality assessment.¹⁵

¹⁴ Bursa Malaysia, Sustainability Reporting Guide, 3rd Edition, 2022.

¹⁵ Bursa Malaysia, Toolkit: Materiality Matrix, 3rd Edition, 2022.

Materiality Assessment Presentation Format - ASX

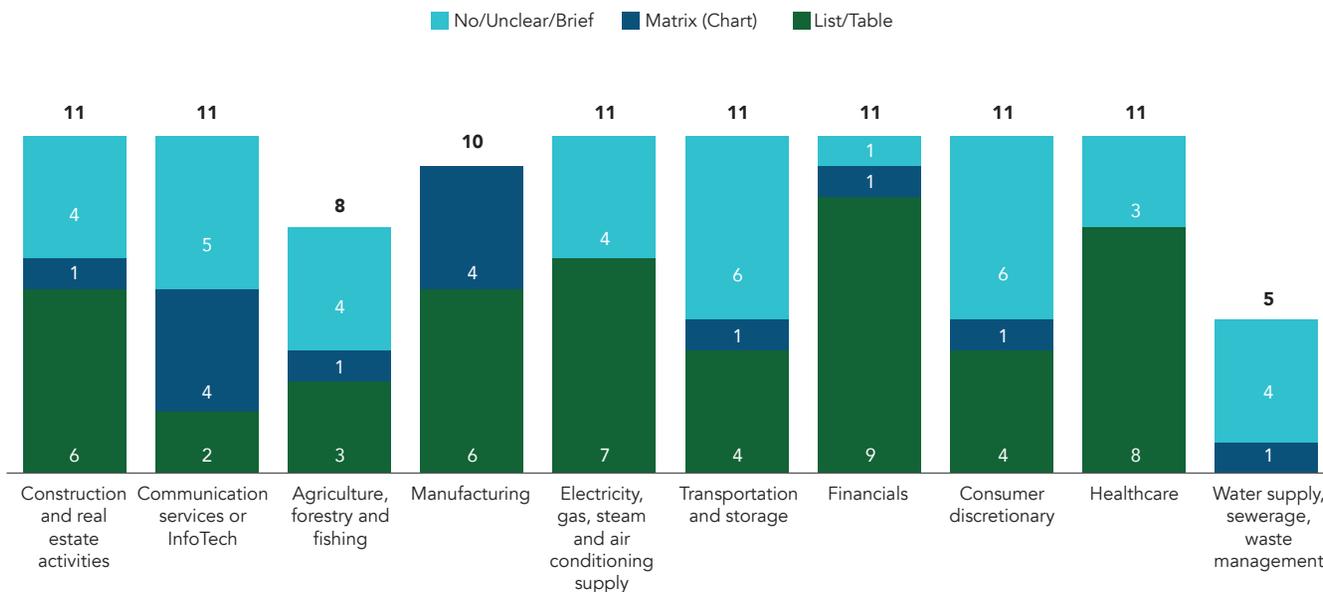


Figure 8: Materiality presentation formats used by ASX-listed companies

Materiality Assessment Presentation Format - Bursa

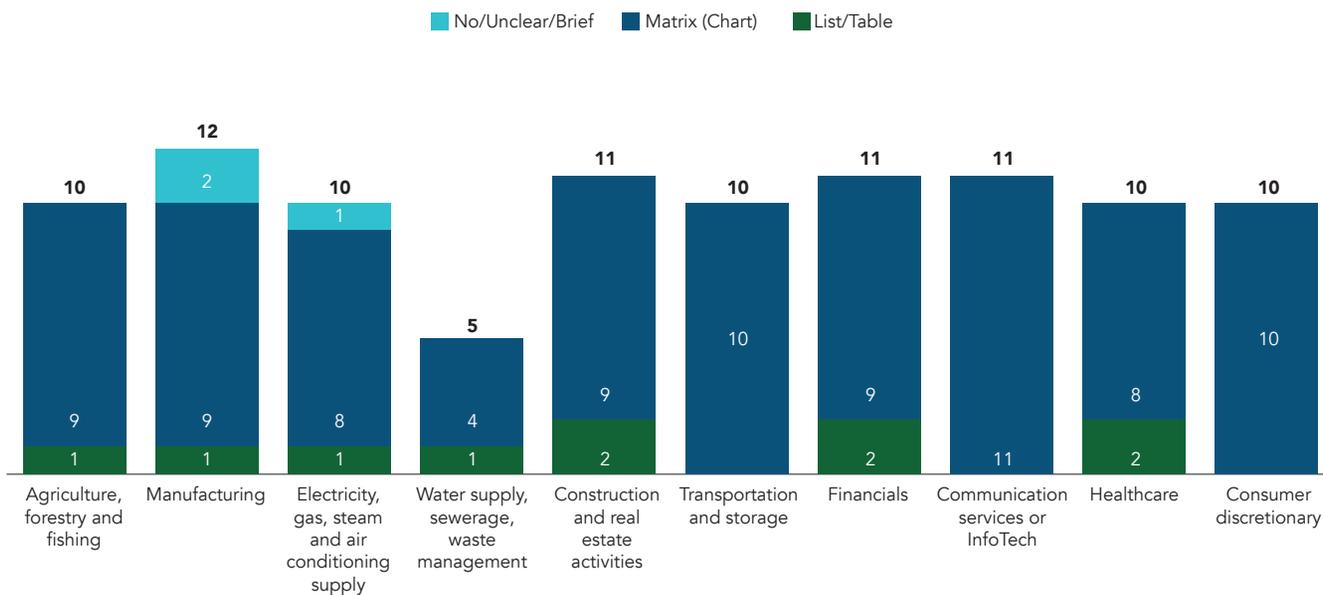


Figure 9: Materiality presentation formats used by Bursa-listed companies

Materiality Assessment Presentation Format - SGX

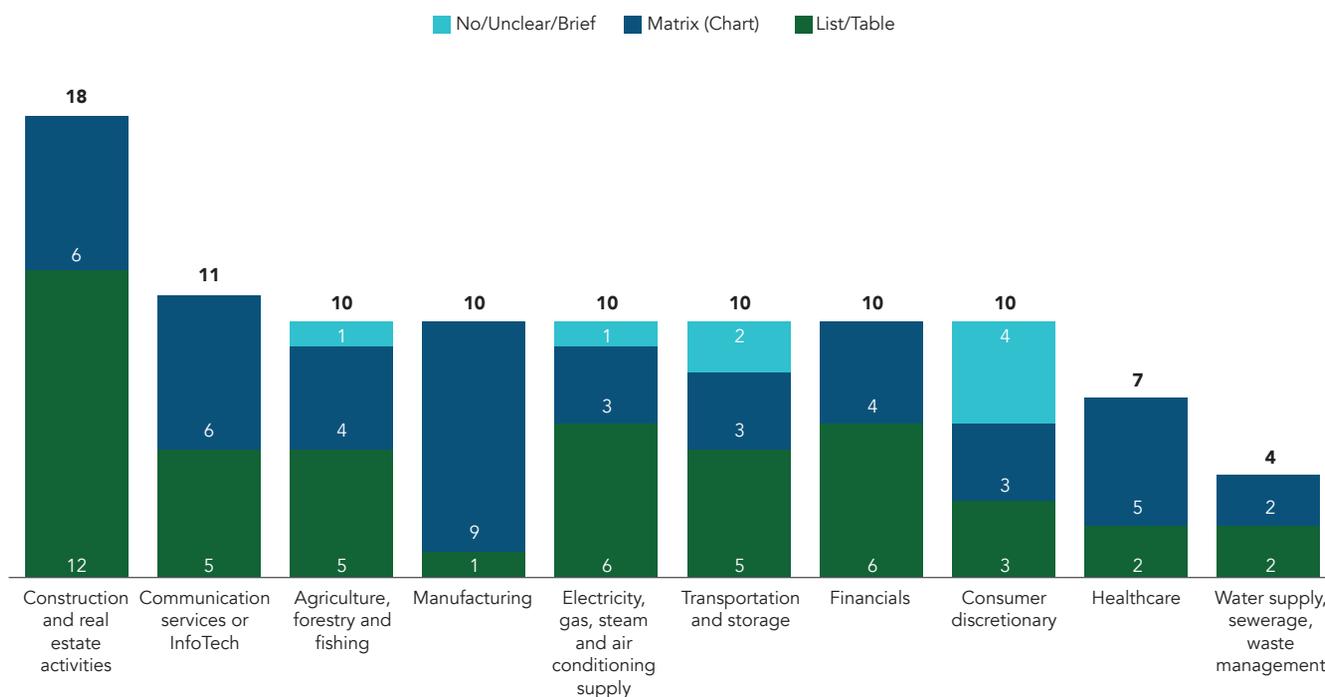


Figure 10: Materiality presentation formats used by SGX-listed companies

3.1.2. Identification of material SROs

Next, we look at the methods disclosed by companies for identifying material SROs. We classified them into the following seven methods, with companies generally using multiple methods:

1. Peers Benchmarking
2. International Standards Alignment (Specified)¹⁶
3. Internal Stakeholder Feedback
4. External Stakeholder Feedback
5. External Sustainability Consultancy
6. Stakeholder Feedback (Unspecified)
7. Standards Alignment (Unspecified)

For ASX-listed companies, as shown in Figure 11, the most common methods used are stakeholder feedback, with 68 companies using internal stakeholder feedback, 63 using external stakeholder feedback, and 42 using other stakeholder feedback without specifying if they are internal or external (these include companies that specified internal or external stakeholder feedback but also mentioned other unspecified stakeholders).

¹⁶ Examples of international standards used for identifying material SROs include GRI, TCFD and UN SDGs.

Material Factors Identification Methods - ASX

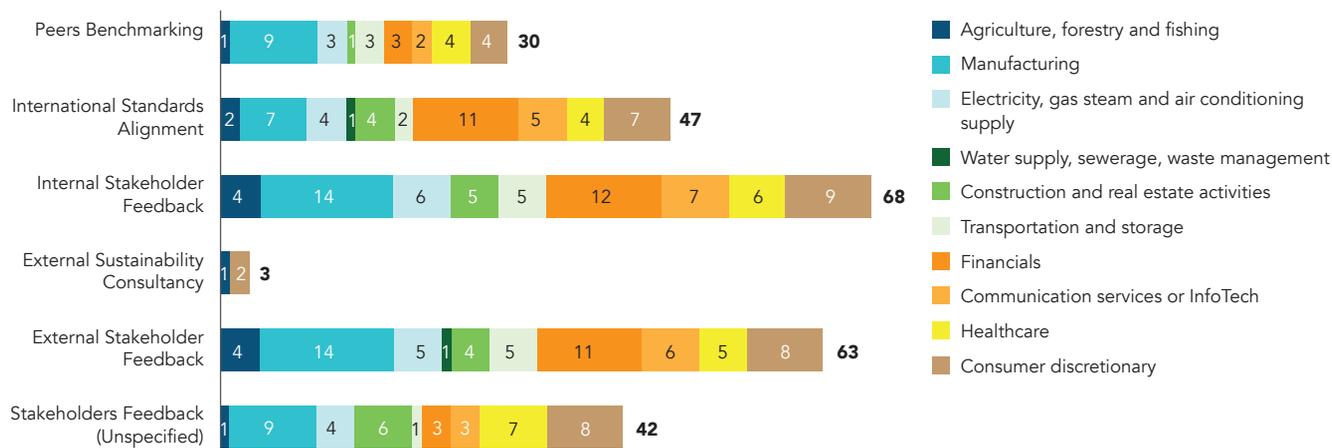


Figure 11: Methods used by ASX-listed companies to identify material SROs

In the case of Bursa-listed companies (Figure 12), the use of each of the different methods was generally lower than for ASX-listed companies, with the highest being internal stakeholder feedback (25 companies) and alignment with international standards (23 companies). This is because many Bursa-listed companies referred to the Bursa Sustainability Reporting Guide, which references international sustainability reporting frameworks such as GRI and Task Force on Climate-Related Financial Disclosures (TCFD), and would therefore have indirectly referenced the international reporting frameworks.

Material Factors Identification Methods - Bursa

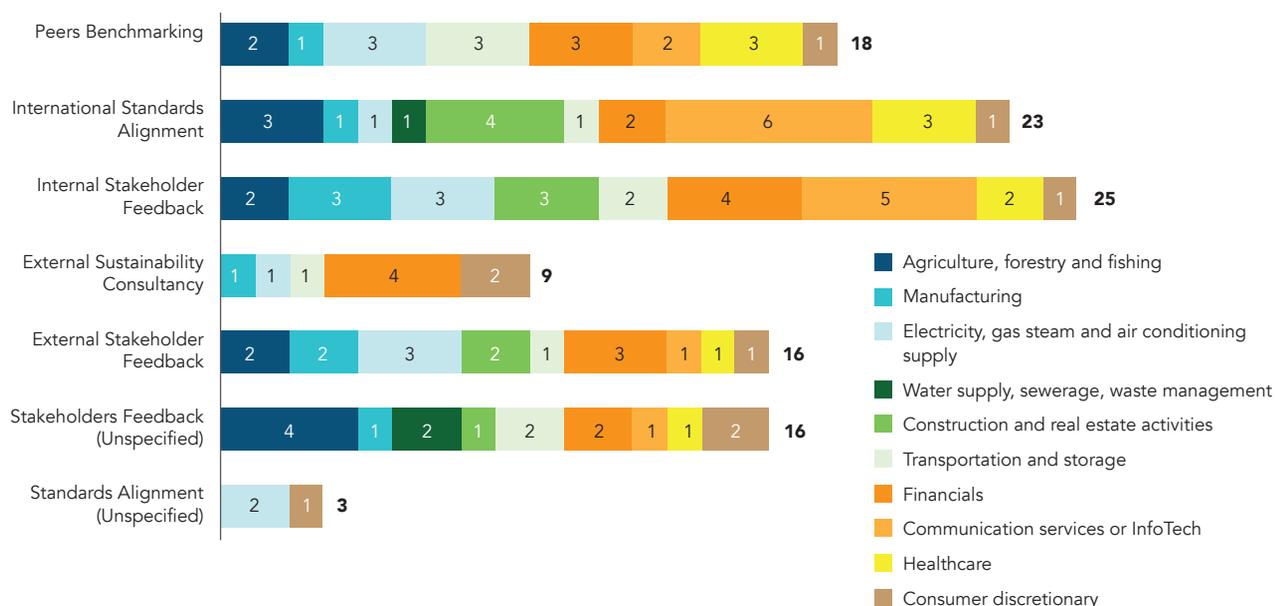


Figure 12: Methods used by Bursa-listed companies to identify material SROs

For SGX-listed companies, as Figure 13 shows, peer benchmarking was the most common method for identifying material SROs (49 companies), followed by international standards alignment (46 companies) and internal stakeholder feedback (42 companies). Across the three markets, SGX-listed companies more commonly disclosed that they used external sustainability consultancy, with 24 companies doing so, compared to nine for Bursa-listed companies and just three for ASX-listed companies.

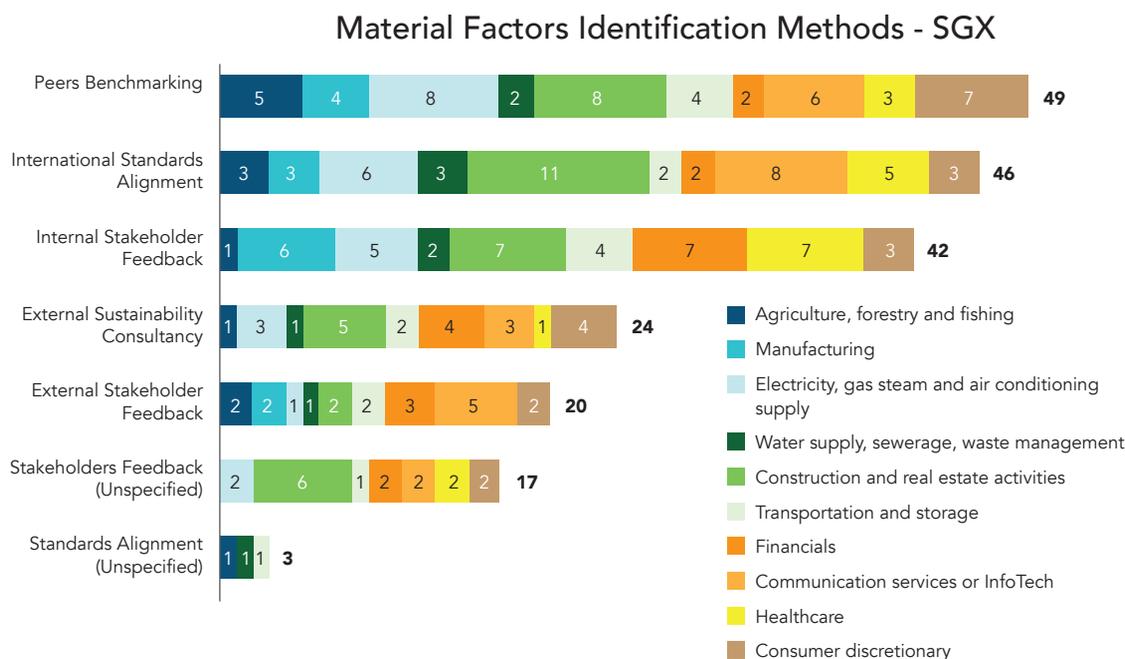


Figure 13: Methods used by SGX-listed companies to identify material SROs

3.1.3. A closer look at stakeholder engagement

The analysis of methods used for identifying material SROs shows that ASX-listed companies were far more likely than Bursa-listed and SGX-listed companies to use internal and external stakeholder feedback to identify material SROs. Sustainability reporting standards emphasise the importance of engaging with material stakeholders as part of the materiality assessment process. Bursa-listed and SGX-listed companies should consider whether they are sufficiently engaging with material stakeholders in identifying and prioritising material SROs.

One external stakeholder group that was more widely engaged by ASX-listed companies compared to those in the other two markets are non-governmental organisations (NGOs) and civil society organisations (CSOs). For ASX-listed companies, 52% disclosed that they engaged with NGOs and CSOs, compared to 36% for Bursa-listed companies and 29% for SGX-listed companies. Greater engagement with NGOs and CSOs for ASX-listed companies is generally true across most sectors, as shown in Figures 14 to 16.

Companies need to be mindful that NGOs and CSOs may be a particularly important stakeholder group in certain sectors and markets and should not under-estimate the need to engage with them. Companies are often publicly flagged for material sustainability-related breaches, such as those relating to greenwashing and forced labour practices, by NGOs and CSOs.

Engagement of NGOs & CSOs - ASX

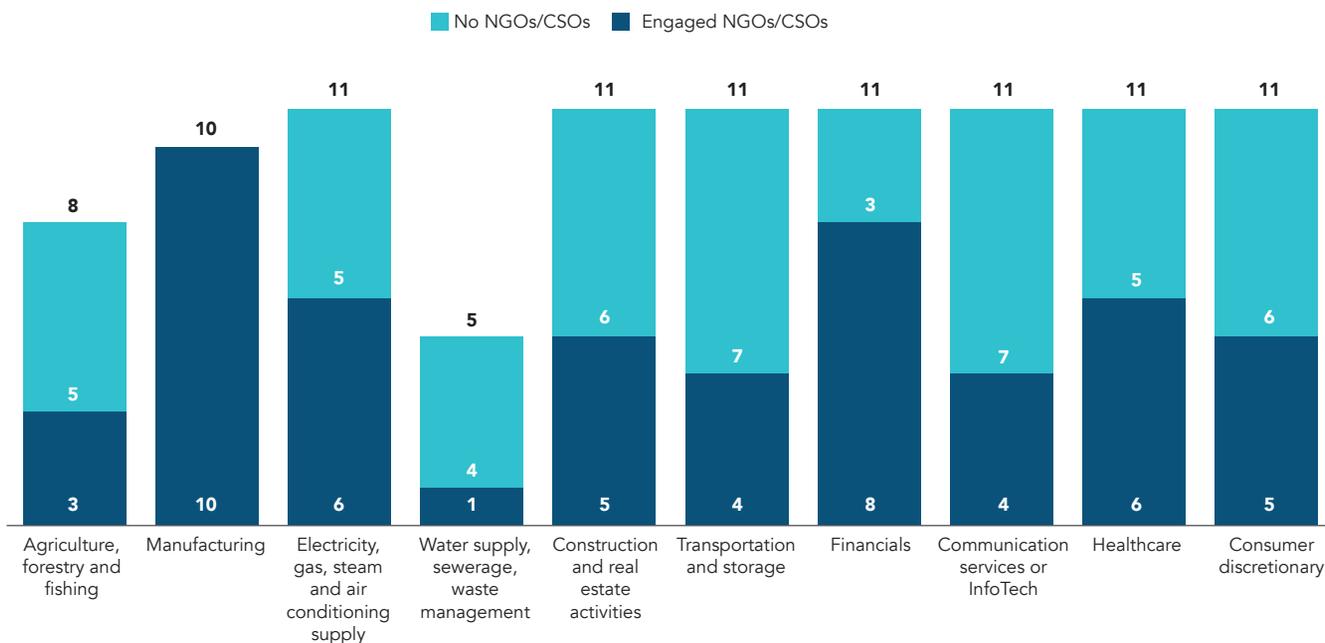


Figure 14: Engagement with NGOs and CSOs for ASX-listed companies

Engagement of NGOs & CSOs - Bursa

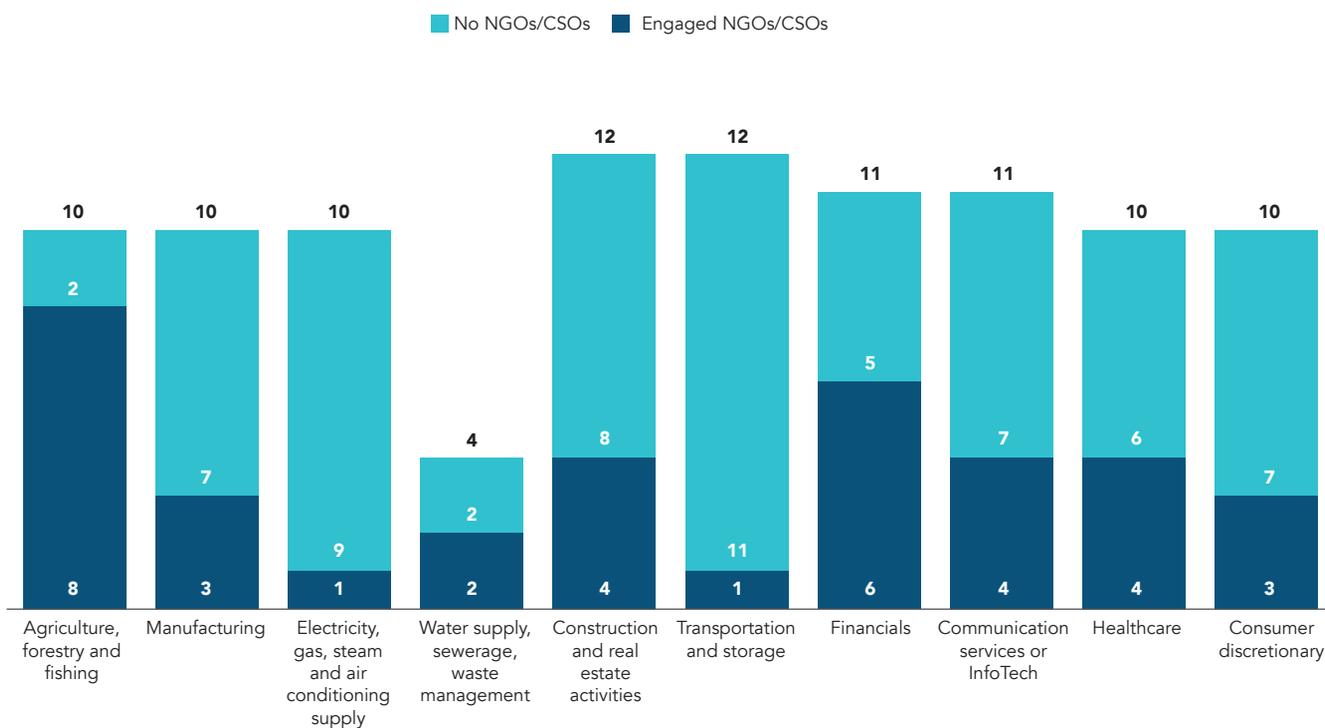


Figure 15: Engagement with NGOs and CSOs for Bursa-listed companies

Engagement of NGOs & CSOs - SGX

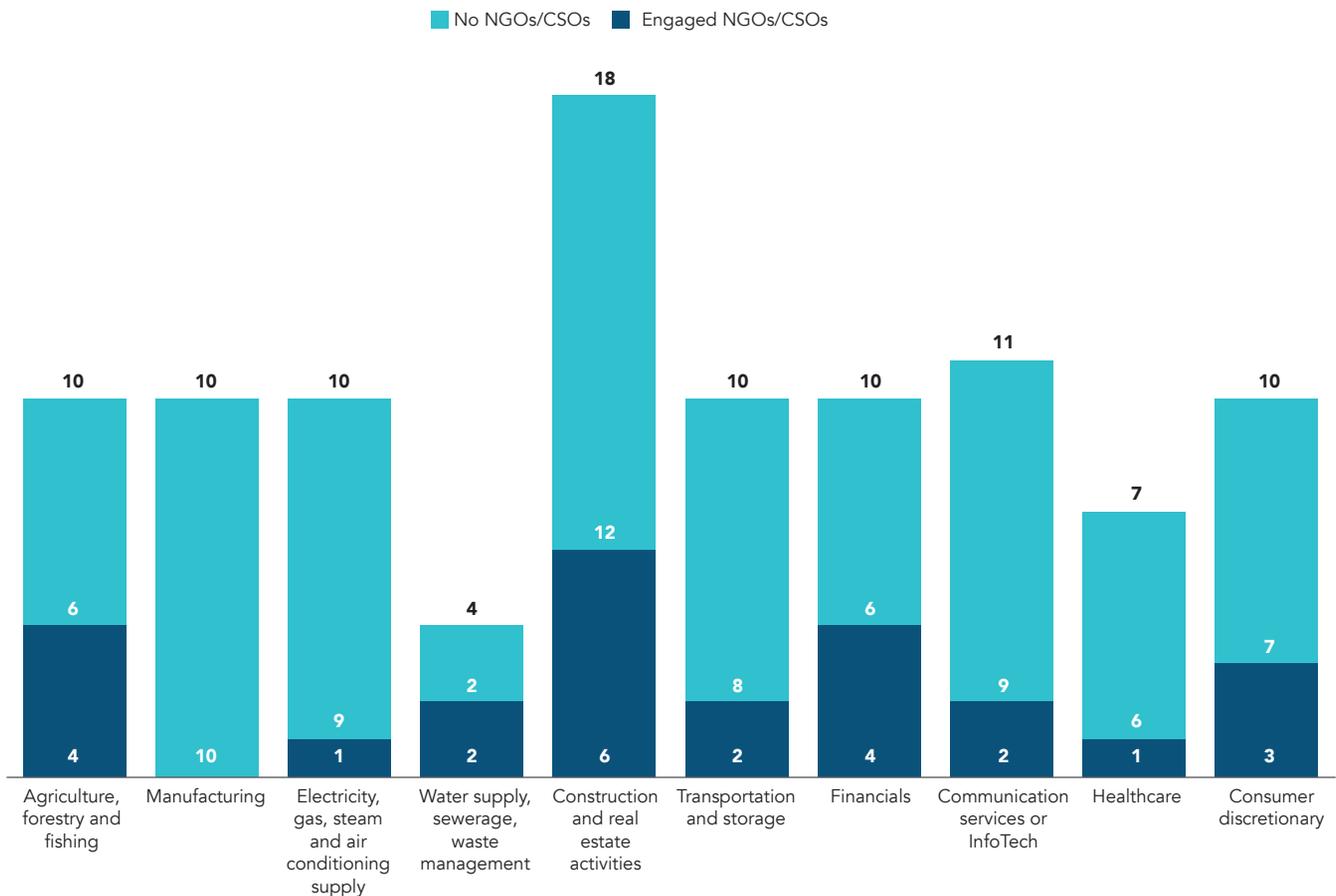


Figure 16: Engagement with NGOs and CSOs for SGX-listed companies

3.2. Phase 2: Common Material SROs and relative importance

For Phase 2, we first examined the most common SROs that were identified by companies in their materiality assessment. We then examined the relative importance of the material SROs.

We started with 146 companies across the three markets which presented the materiality assessment in the form of a matrix. We then dropped 21 companies which presented the SROs in the form of a list in a matrix.

Further, to ensure that the materiality matrices are comparable, we only selected those companies where the materiality matrix has the two axes based on both impact on stakeholders and impact on the business, or equivalent – in other words, those that used a “double materiality” concept. For example, some materiality matrices which were dropped had axes such as “importance” and “impact”, or “influence on stakeholders’ decision” and “significance of ESG impact”. This resulted in a further eight materiality matrices being dropped, yielding an initial reduced sample of 117 “acceptable” materiality matrices for this analysis.

ASX was left with 12 acceptable materiality matrices after two were dropped. SGX lost 20, with 25 having acceptable materiality matrices. Bursa lost only seven, leaving 80 acceptable matrices.

The reason why Bursa-listed companies had so many acceptable matrices is likely because most follow

the guidance in the Sustainability Reporting Guide¹⁷ and the Materiality Assessment Toolkit¹⁸ published by Bursa Malaysia. The Toolkit recommends that companies “disclose prioritised material sustainability matters in a manner which illustrates the relative importance of each material sustainability matter” and shows examples of such materiality matrices.

In order to increase the number of materiality matrices used for the analysis in Phase 2, we added smaller companies listed on ASX and SGX. This was to ensure that we have at least 50 acceptable materiality matrices for each market. Note that this means that for this analysis, the mean and median market capitalisation for the ASX- and SGX-listed companies are lower than for the earlier analysis.

Our final sample for the three markets for Phase 2 consists of 50 ASX-listed companies, 80 Bursa-listed companies and 50 SGX-listed companies. The lowest market capitalisation for the companies in the three markets were USD18.0m for ASX, USD41.5m for Bursa and USD7.14m for SGX.

As companies used a wide variety of terminologies to describe their SROs, we standardised the different terminologies used by different companies, using terminologies that are used in major sustainability reporting frameworks, such as TCFD, United Nations Principles for Responsible Investment (PRI), International Organisation for Standardisation (ISO) and Carbon Disclosure Project (CDP).

3.2.1. Most frequently mentioned SROs

Figures 17 to 19 show the most frequently mentioned material SROs for companies in each of the three markets.



Note: The size of the words does not necessarily reflect the frequency of mentions.

Figure 17: Most frequently mentioned material SROs for ASX-listed companies.

¹⁷ Bursa Malaysia, Sustainability Reporting Guide, 3rd Edition, 2022.

¹⁸ Bursa Malaysia, Toolkit: Materiality Matrix, 3rd Edition, 2022.



Note: The size of the words does not necessarily reflect the frequency of mentions.

Figure 18: Most frequently mentioned material SROs for Bursa-listed companies.



Note: The size of the words does not necessarily reflect the frequency of mentions.

Figure 19: Most frequently mentioned material SROs for SGX-listed companies.

The table below shows the top 10 most frequently mentioned SROs for each market.

Rank	ASX	Bursa	SGX
1	Community Relations	Workplace Health & Safety	Human Capital & Labour Management
2	Climate Change & Emissions	Human Capital & Labour Management	Workplace Health & Safety
3	Corporate Governance	Ethical & Sustainable Supply Chain	Climate Change & Emissions
4	Business Ethics & Compliance	Financial Performance	Corporate Governance
5	Diversity & Inclusion	Human Rights & Labour Practices	Business Ethics & Compliance
6	Workplace Health & Safety	Climate Change & Emissions	Community Relations
7	Human Capital & Labour Management	Corporate Governance	Ethical & Sustainable Supply Chain
8	Finance Performance	Privacy & Data Security	Financial Performance
9	Biodiversity & Land Use	Innovation & Digitisation	Diversity & Inclusion
10	Water Management	Stakeholder Engagement	Toxic Emissions & Waste Management

Table 2: Top 10 most frequently mentioned SROs for each market

Climate Change & Emissions, Corporate Governance, Financial Performance, Human Capital & Labour Management and Workplace Health & Safety are in the top 10 for all three markets. The last two factors are in the top two for Bursa- and SGX-listed companies. In contrast, Biodiversity & Land Use, Innovation & Digitisation, Privacy & Data Security, Stakeholder Engagement, Toxic Emissions & Waste Management and Water Management only appear in the top 10 for one market each.

The fact that Community Relations is the most frequently mentioned SRO for ASX-listed companies, while it is not in the top 10 for Bursa-listed companies and is ranked 6th for SGX-listed companies, suggests that this factor is particularly important for Australian companies. This is consistent with greater external stakeholder engagement, including engagement with NGOs and CSOs, for ASX-listed companies compared to Bursa-listed and SGX-listed companies reported earlier.

It is important for companies operating in different geographies to be mindful that material SROs may differ for different markets.

3.2.2. Most important SROs

Next, we analysed the relative importance that companies in different sectors placed on SROs in the economic, environment, social and governance categories.

For this analysis, we calculated the relative importance of different SROs using distance measures¹⁹. We then determined the Economic, Environment, Social and Governance rankings for each sector.

Figures 20 to 22 show the relative importance of the four categories of Economic, Environment, Social and Governance for each sector for each of the three markets. Note that some sectors had very few companies. Readers should note the caveat that the companies included may not be representative

¹⁹ <https://eleif.net/photomeasure>

of all companies in the sector. We also determined the overall weighted ranking for each factor for each market, taking into account the number of companies in each sector.

“Environment” was ranked first only for the “Agriculture, forestry and fishing” sector on ASX (2 companies) and “Electricity, gas, steam and air conditioning supply” sector on SGX (3 companies). It was ranked last for six sectors on ASX, eight sectors for Bursa and five sectors on SGX.

“Governance” was ranked first for four sectors on ASX, seven sectors on Bursa and six sectors on SGX, while “Economic” was ranked first for four sectors on ASX, two sectors on Bursa and three sectors on SGX.

Overall, for all the three markets, the weighted ranking for all the companies (taking into account the number of companies in each sector) was identical, with “Governance” ranked first, “Economic” second, “Social” third and “Environment” last.

Sector	Environment	Economic	Social	Governance	No. of Companies
Agriculture, forestry and fishing	1	3	2	4	2
Manufacturing	4	2	3	1	24
Electricity, gas, steam and air conditioning supply	2	3	1	2	1
Water supply, sewerage, waste management	2	1	3	4	1
Construction & real estate activities	4	1	2	3	1
Transportation and storage	2	1	4	3	2
Financials	4	2	3	1	5
Communication services/info tech	4	1	3	2	6
Healthcare	4	3	2	1	1
Consumer discretionary	4	3	2	1	7
Overall weighted ranking	4	2	3	1	50

Note: Overall weighted ranking was calculated by adjusting for the number of companies in each sector.

Figure 20: Ranking of different categories of SROs for ASX-listed companies

Sector	Environment	Economic	Social	Governance	No. of Companies
Agriculture, forestry and fishing	4	3	1	2	9
Manufacturing	4	3	2	1	9
Electricity, gas, steam and air conditioning supply	3	2	4	1	7
Water supply, sewerage, waste management	4	2	3	1	4
Construction & real estate activities	4	3	2	1	8
Transportation and storage	4	1	3	2	8
Financials	4	2	3	1	9
Communication services/info tech	4	1	3	2	8
Healthcare	2	3	4	1	8
Consumer discretionary	4	2	3	1	10
Overall weighted ranking	4	2	3	1	80

Note: Overall weighted ranking was calculated by adjusting for the number of companies in each sector.

Figure 21: Ranking of different categories of SROs for Bursa-listed companies

Sector	Environment	Economic	Social	Governance	No. of Companies
Agriculture, forestry and fishing	4	2	3	1	5
Manufacturing	2	1	4	3	8
Electricity, gas, steam and air conditioning supply	1	4	3	2	3
Water supply, sewerage, waste management	3	1	4	2	3
Construction & real estate activities	4	2	3	1	10
Transportation and storage	3	4	2	1	1
Financials	4	3	2	1	5
Communication services/info tech	4	1	3	2	8
Healthcare	2	4	3	1	1
Consumer discretionary	4	2	3	1	6
Overall weighted ranking	4	2	3	1	50

Note: Overall weighted ranking was calculated by adjusting for the number of companies in each sector.

Figure 22: Ranking of different categories of SROs for SGX-listed companies

3.2.3. Frequency versus importance

Comparing the findings on frequency of mention with the importance of SROs, although “Social” and “Environment” factors were frequently mentioned, they were generally not rated as important as “Governance” and “Economic” factors in the materiality assessment.

While governance and economic performance are undoubtedly important for companies, companies should ensure that they are not under-estimating the importance of environment- and social-related factors. There is a risk of blind spots, particularly when it comes to considering the impact of environment-related factors on their business and how their business affects the environment. Companies may view them as issues that may only impact them in the longer term, and their materiality assessments may be based on short-term horizons.

An important role of boards is to ensure that management carefully consider the importance of different SROs over short-, medium- and long-term horizons.

According to insights from a consultant who advises SME boards, climate and other environmental factors are often positioned in the mid- to lower-tier of materiality rankings, while social factors typically fall within the mid-tier. In contrast, ethical conduct and strong governance are widely regarded by companies as baseline expectations that are considered non-negotiable elements of doing business.

One explanation provided for the lower prioritisation of certain topics, particularly environmental ones, is the perceived difficulty in setting meaningful and achievable targets. When a topic is deemed material, companies are generally expected to establish commitments, including measurable goals. However, climate and environmental targets are often viewed as complex, costly to implement, and offering limited short-term financial returns. As a result, the perceived burden of target-setting may influence the prioritisation process itself—suggesting that, rather than prioritisation leading to target-setting, the inverse may be true: the difficulty of setting targets can suppress the perceived materiality of certain issues.

In addition, following the materiality assessment, results are typically presented to the Board. The consultant observed that Boards tend to prioritise topics related to governance and ethics and pay close attention to those positioned in the top-right quadrant of the materiality matrix (i.e., high stakeholder interest and high business impact). Boards often seek assurance that clear metrics and achievable targets can be developed for these topics, favouring those that offer more immediate or tangible implementation pathways. This further reinforces the tendency to de-emphasise complex or resource-intensive issues such as climate change.

3.2.4. Changes in trends

We revisited the analysis using data on materiality assessments from the latest annual reports and sustainability reports published by companies in the three markets. We started with the same companies but had to replace some because there were companies that were acquired or did not disclose a materiality assessment in their latest reports. Some companies did not conduct a new assessment and retained their previous assessments and we kept those companies for the latest analysis.

In general, most companies in the three exchanges have maintained the economic, environmental, social, and governance classification for their material factors, although there were changes in terminologies. Some companies renamed their categories, such as changing from “Environmental” to “Protecting our Environment/Planet”.

Material topics such as “Climate Change” and “GHG Emissions” stay important, while factors such as “Talent Attraction” and “Community Engagement” gained prominence across sectors. Governance-related factors such as anti-bribery and board diversity increased in prominence, and other common factors such as “Occupational Health and Safety” and “Human Rights” became even more commonly cited across the three markets, especially for Bursa-listed issuers. With the easing of the spread of Covid-19, companies no longer mention Covid-19 as a material factor.

There was a deterioration in the presentation of materiality assessments for some companies that transitioned from clear materiality matrices to simpler ranked lists of material factors. This meant that some companies had to be replaced for the updated materiality analysis.

Overall, the rankings of the importance of the four factors did not change across all three markets, with Governance continuing to be ranked first, followed by Economic, then Social, and lastly Environment. For ASX-listed issuers, environment continued to be ranked first only for the companies in the “Agriculture, forestry and fishing sector” for ASX (2 companies) and the “Electricity, gas, steam and airconditioning supply” sector for SGX (3 companies). Out of the 10 sectors, “Environment” was ranked last for six sectors for ASX, seven for Bursa, and five for SGX.

4. WHAT WILL HAPPEN WITH MATERIALITY ASSESSMENTS WITH THE ADOPTION OF ISSB STANDARDS?

The ISSB and SASB frameworks adopt a deductive approach to materiality, particularly in relation to financial disclosures. Companies begin by identifying SASB-defined material topics relevant to their industry. These topics are then assessed to determine whether the associated risks and opportunities could significantly affect the organisation’s cash flows or the management’s stewardship of economic resources, thus influencing decisions made by capital providers.

Within the ISSB framework, materiality is narrowly defined around financial relevance, specifically focusing on information that is useful to investors, lenders, and other providers of capital. Notably, there is no explicit requirement to engage directly with these stakeholders during the materiality assessment process. This often results in a predominantly deductive, internally driven evaluation process, concentrating on sustainability issues with direct or foreseeable financial implications.

In contrast, the GRI framework adopts a broader stakeholder-oriented model. It emphasises impact materiality by incorporating the perspectives of a wide array of stakeholders and considering the organisation’s environmental and societal impacts, regardless of whether these impacts have immediate financial consequences.

5. INTEGRATING ISSB, SASB, AND GRI APPROACHES TO MATERIALITY

The ISSB and SASB frameworks centre on financial materiality, targeting sustainability issues that influence an organisation’s economic performance. While this focus meets investor expectations and regulatory requirements, it may not capture higher-order impact materiality; issues that have profound implications for society and the environment but may not present near-term financial risks.

The SGX has outlined a phased and strategic approach to the adoption of the ISSB standards, guided by what it refers to as a “climate-first approach”. This approach prioritises the implementation of IFRS S2 – Climate-related Disclosures, while continuing to rely on existing sustainability reporting frameworks for general environmental, social, and governance disclosures.

Under this approach, companies listed on SGX are expected to maintain their current reporting practices. Most listed companies use GRI standards for general sustainability topics. Continuing with GRI would enable impact materiality to be addressed through inclusive stakeholder engagement and identifying environmental and social issues significant to people and the planet.

In parallel, SGX requires companies to begin transitioning their climate-related disclosures to align with IFRS S2. This includes using the SASB standards to enhance the robustness of financial materiality assessments. The focus here is on identifying sustainability-related risks and opportunities, particularly those linked to climate change and the energy transition, that could influence investor decision-making and affect a company's financial position or performance.

This dual-framework approach will enable sustainability reporting to remain comprehensive and balanced. It simultaneously addresses financial materiality in line with investor needs and regulatory expectations, while also capturing broader ESG impacts that are relevant to other stakeholders.

However, when SGX eventually moves towards the full adoption of both IFRS S1 and IFRS S2, the scope of disclosure would narrow. Only topics that present a financial material impact to the company would be required to be reported, potentially reducing the visibility of broader environmental and social issues currently captured under the GRI framework if companies do not voluntarily report.

6. REASSESSING MATERIALITY UNDER IFRS S1, S2 AND SASB STANDARDS AND DOUBLE MATERIALITY

A materiality reassessment aligned with IFRS S1 and S2 and SASB standards may result in a reprioritisation of sustainability topics within corporate disclosures. This is due to the specific focus of these standards on financial materiality, which highlights sustainability-related risks and opportunities that are likely to influence enterprise value and investor decision-making.

However, companies may consider not discarding previously disclosed sustainability topics solely because they may no longer meet the financial materiality threshold. Many of these issues may still represent high-impact materiality, reflecting significant consequences for people, the environment, and other non-financial stakeholders. Maintaining the disclosure of such topics fosters continuity and strengthens transparency in sustainability reporting.

By presenting both financially material and impact material topics, i.e., double materiality, companies will benefit from a more holistic and balanced approach to disclosure that remains responsive to evolving regulatory requirements while continuing to reflect broader stakeholder concerns. This dual focus also ensures preparedness for future shifts in regulatory expectations. Topics currently deemed to have high-impact materiality or negative externalities to people, environment, or non-financial stakeholders may evolve into financially material concerns as sector-specific or regional regulations emerge, potentially exposing companies to compliance costs or other financial consequences tied to previously unpriced externalities.

7. RETHINKING MATERIALITY IN UNCERTAIN TIMES

The U.S. decision to impose widespread tariffs has introduced significant geopolitical and economic uncertainty, with direct implications for sustainable business. While the full impact remains uncertain, the likely consequences include disruptions to clean energy supply chains, job losses in vulnerable exporting countries, and reduced attention to labour rights. These developments risk undermining social progress and delaying the energy transition, both central pillars of corporate sustainability strategies.

Even if these tariffs are reversed, the erosion of trust in global trade and weakened international cooperation could have lasting consequences. Companies must recognise that materiality is no longer confined to traditional ESG domains but is increasingly shaped by global economic shocks. This calls for more adaptive, forward-looking assessments that integrate geopolitical risk, scenario planning, and the resilience of business models in a fragmented world.

8. KEY TAKEAWAYS

Some key takeaways from this report are as follow:

1. A robust materiality assessment process is critical for effectively managing IROs or SROs and producing useful sustainability-related information for stakeholders.
2. In identifying SROs that are relevant to the entity, a variety of sources should be used.
3. Material SROs are contextual and dynamic.
4. Engaging with key stakeholders in identifying and prioritising SROs is essential.
5. The materiality assessment should consider the impact of SROs on the entity and how the entity impacts external stakeholders.
6. The materiality assessment should consider short-term, medium-term and long-term horizons.
7. The financial impact and likelihood of SROs should be evaluated to prioritise efforts and resources.
8. Evaluate the trade-offs when prioritising SROs, balancing short-term financial pressures with long-term strategic gains amid regulatory uncertainty and shifting stakeholder expectations.
9. Entities should be mindful of blind spots, particularly relating to environment-related SROs, when undertaking their materiality assessment.
10. The disclosure of the materiality assessment should indicate the relative importance of different SROs.

Ten questions that the Board should ask about the materiality assessment process and results include:

1. What is the process and methodology for identifying material sustainability-related risks and opportunities (SROs)?
2. Which internal and external stakeholders are involved, how are they identified, and how are they engaged in the process? Are stakeholders prioritised?
3. Have we considered the context of our business when undertaking the materiality assessment?
4. Are short-term, medium-term and long-term horizons considered when assessing the materiality of SROs?
5. Have we benchmarked our materiality assessment against our peers, standards and other external sources? Are any frameworks such as the Sustainability Accounting Standards Board (SASB) and Global Reporting Initiative (GRI) used? Are there any local regulations relating to choosing material topics?
6. Are we missing blind spots in our materiality assessment?
7. How often is the materiality assessment undertaken and refreshed?
8. Are the results of our materiality assessment linked to strategic planning, risk management, goal-setting and reporting?
9. How is the corporate materiality assessment rolled out throughout the group and how are variances in material SROs in different parts of the business and geographies considered?
10. Is the materiality assessment that is disclosed useful to help stakeholders understand the most material SROs?

9. CONCLUDING REMARKS

The recent Emissions Gap Report published by the United Nations Environment Programme (UNEP) titled “No more hot air...please” highlights the massive gap between rhetoric and reality in addressing climate change²⁰.

Ultimately, any commitments by governments will require businesses to fundamentally change the way they operate. If businesses do not consider environment-related factors to be material, commitments by governments may not translate into real action by businesses. While a “climate-first” approach to sustainability reporting may lead businesses to prioritise climate-related factors for sustainability reporting, there may also be a gap between reporting and reality, and between better reporting and more environmentally-friendly business practices.

This report urges boards to be more engaged with the materiality assessment and to ensure that the company is not having blind spots, particularly relating to environment-related factors that may not significantly impact the company in the short term. However, investors must also play a role in demanding better disclosures of material SROs, and questioning the prioritisation of material SROs and how they are

²⁰ United Nations Environment Programme (UNEP), Emissions Gap Report 2024 : No more hot air...please, 2024. (<https://wedocs.unep.org/handle/20.500.11822/46404?jsessionid=3D2493126E328048A04E07F4FE1E8F8F>)

addressed by companies. Recent reports of investors dialling back on their focus on sustainability is a cause for concern. Regulators need to remind investors that they should ensure their investee companies sufficiently prioritise environment-related factors and not put climate last.

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Mak Yuen Teen is Professor (Practice) of Accounting at the NUS Business School, National University of Singapore (NUS). He was a former Vice Dean of the School and the founder of the first corporate governance centre in Singapore at NUS, and is the founder and director of the Centre for Investor Protection at NUS. He holds first-class honours, master and PhD degrees in accounting and finance.

Prof Mak has served on three of the four corporate governance committees set up by the Singapore authorities to develop and revise the code of corporate governance for listed companies, including the first committee in 2000 and the most recent committee under the Monetary Authority of Singapore (MAS), which released the 2018 Singapore Code. He is currently serving a third three-year term on the Corporate Governance Advisory Committee under MAS.

He has served as director, chairman and deputy chairman of large not-for profit boards in Singapore, and as member of the audit advisory committee of two United Nations agencies based in New York. He is a member of the international advisory board of the Hawkamah Institute for Corporate Governance in Dubai and an advisory council member of the Vietnam Independent Directors Association.

He developed the first corporate governance rating for Singapore companies called the Governance and Transparency Index and the first Singapore governance rating for REITs and business trusts. He was nominated by MAS as the Singapore expert in the development of the ASEAN Corporate Governance (CG) Scorecard.

Prof Mak has extensive experience conducting training for directors, regulators and other professionals in Singapore and Malaysia, including the mandatory accreditation programme for Malaysian directors, the Financial Institutions Directors' Education (FIDE) programme for directors of Malaysian financial institutions, and programmes for listed company directors relating to nomination and remuneration matters, compliance and value creation roles of boards, governance of company groups, and corporate governance and sustainability.

He is also a regular commentator on corporate governance and ESG issues in the Singapore and international media, and regularly posts articles and commentaries on his website, Governance for Stakeholders.

He is one of only two individuals in Singapore to have been given the Corporate Governance Excellence Award by the Securities Investors Association (Singapore) for his contributions to improving corporate governance in Singapore. The Singapore Institute of Directors has also recognised him as a CG Pioneer. He also received the corporate governance excellence award from the Minority Shareholders Watchdog Group in Malaysia for his contributions to corporate governance in the region.

His earlier reports on sustainability published by Sustainable Finance Institute Asia (SFIA) cover the topics of integrating ESG factors into executive remuneration, sustainability governance structures and practices, and board oversight of climate-related risks and opportunities.

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Tina is also an active researcher, tutor, author, and speaker on sustainability-related topics. Her recent work concentrates on enabling companies to craft and report sustainability strategies using reporting frameworks such as TCFD, GRI, ISSB, and local stock exchange mandates, with a strong emphasis on climate disclosures and supply chain compliance.

Currently, she is researching how companies in the carbon-intensive sector align financial and non-financial performance objectives while maintaining their legitimacy in the face of transition risk, investor scrutiny, and shifting societal expectations. The research is funded by the UK Energy Research Centre (UKERC) and conducted in collaboration with Warwick Business School (WBS).

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