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DIRECTORS BULLETIN

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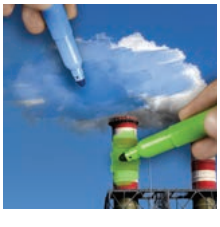

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Turning the Tide

By **PAULINE GOH**
Chair, SID Bulletin Committee

DIRECTIONS

An enduring legacy of the global pandemic is the intense focus on environmental, social and governance (ESG) matters, and a renewed focus on sustainability initiatives. In this first issue of the new year, we explore how climate change has impacted every aspect of our lives and livelihood, and beyond.

Similar to healthcare crises, climate change can give rise to financial calamities. Extreme weather events can trigger swings in asset prices, while weather-related catastrophes can rack up significant economic losses for countries, businesses and insurers.

Setting net zero emissions targets has been a rallying cry to the climate change crisis. Ken Hickson starts off a series on this subject with a primer on net zero and his view of the outcome of the Conference of the Parties (COP26) to the UN Framework Convention on Climate Change (page 12). KPMG's Net Zero Readiness Index (page 20), SGX's sustainability reporting initiatives (page 58) and the Climate Governance Initiative (page 22) are some of the tools that can help directors understand the impact of environmental issues in the boardroom.

Drawing from these resources, Michael Schaper explains what directors need to know about climate risk governance and outlines the challenges facing boards (page 6). And Jeffrey Chan spells out the legal liabilities of directors for not mitigating climate change (page 30).

The fact is that companies are not going to avoid addressing the issue. Climate-related risk management and financial disclosures are fast becoming critical components of the financial report, argues Andrew Buay (page 44). Cherine Fok shares how the accounting profession is taking up the cudgel to do so (page 54). To understand how boards can drive better climate risk disclosures for resilience, Simon Yeo offers pointers on charting a roadmap for action (page 50).

With the weight of evidence pointing to how successive generations have exploited the planet's resources without regard to the sustainability and health of the ecosystem, the burden of action now lies with governments, businesses and communities. As the board is at the apex of a company, we, directors, play a crucial role in that change.

We have wronged the earth, and now it is time to start righting the wrongs. The need for ESG initiatives has never been more urgent. The world needs a tidal wave of change. ■

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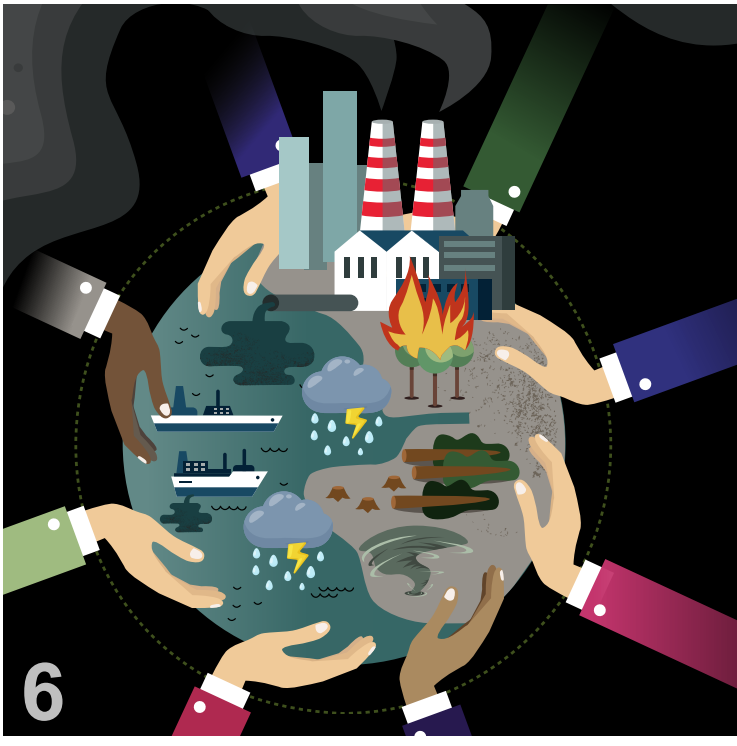

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Getting on Board with Climate Change

By **MICHAEL T SCHAPER**

Climate change is an emerging challenge for companies and their directors. Regulatory changes and stakeholder expectations are forcing directors to take on new responsibilities and conduct regular assessments of risks and opportunities into the boardroom agenda. There is a growing urgency to move from talk to action.

The United Nations (UN) has forecast that, under current trends, temperatures regionally will continue to rise. Rainfall trends will increase in some parts of the region and decrease in other areas. There will be fewer but more extreme tropical cyclones. Higher sea levels may threaten the viability of major metropolitan regions such as Manila, Bangkok and Jakarta. Low-lying islands like Singapore are especially at risk.

The decisions taken at the recently concluded annual conference of parties at Glasgow (COP26) will have a very real impact on the next steps towards limiting global warming, cutting greenhouse gas emissions, and preparing for a warmer climate.

A shifting global climate – and economy

Business has to play its part in dealing with climate change. This will affect many different aspects of how companies operate, including production processes, finance, management, supply chains, transportation, energy consumption, stakeholder relationships, marketing and human resources. See box, “Challenges for Directors”.

Challenges for Directors

Many directors know very little about global warming, emissions and associated issues. This makes it difficult to exercise due diligence and consideration when dealing with these matters across the board table. Here are a few key aspects every director needs to consider:

1. Initial assessment.
What is the company's current exposure to climate-related issues? This can include its current "carbon footprint" (emissions impact); the legal obligations imposed by governments; understanding the sentiments of the firm's major stakeholders; and the level of preparation for future extreme weather events. What risks does the company face, and what is the overall fiduciary, legal and practical responsibility of the firm with regards to climate change?

2. What emissions target should the firm aim for?
Several different targets are currently being bandied around in public debate. Many leading firms are now moving to a net zero emission goal by 2030 or 2050. Other corporations have committed themselves to becoming negative emitters.

3. How should the company operationalise and oversee the governance of climate risks?
Who is to be operationally responsible for managing climate change within the business? What metrics should be reported to the board? Should it become part of the purview of the board's audit and risk committee, or set up in a separate, specialist board committee?

4. Cost.
What will the overall expenses of carbon abatement be in the next few years, and of longer-term adjustment to a warmer world? These figures can often be substantial, and difficult for firms to accurately forecast. In addition to new operating and capital costs, there is an increasing risk of stranded assets if plant and equipment can only operate when producing a high level of emissions. Insurance premiums are also likely to increase for firms exposed to extreme weather vulnerabilities, and it may be difficult to obtain suitable policies going forward. Finally, directors will need to determine if their firms are likely to face a carbon tax, which already exists in jurisdictions such as the European Union and in Singapore, and is likely to become more common and more expensive over time.

5. What is the likely future regulatory and reporting environment?
The clear trend over time has been for governments to demand increasingly higher levels of environmental performance. Does the firm have a clear understanding of what these might be? New sustainability reporting and climate-related disclosures may also be required for particular firms, such as those listed on a stock exchange or operating under an industry code of practice.

6. Corporate skills base.
What skills and knowledge do the firm's employees need to have to deal with this issue? Is additional training and development needed? Do specialist staff need to be recruited?

Company boards around the world are increasingly being asked how they are addressing these issues. It is not just a matter of emissions reduction, but also about risk management and strategic planning. Issues that are increasingly becoming important to companies, shareholders and senior management now include:

- **Extreme weather events.** The UN Intergovernmental Panel on Climate Change in July 2021 noted that temperatures have already begun to increase, and are being accompanied by noticeable changes in weather patterns around the world. These are increasing the number and severity of business disruptions, hampering transportation and supply systems, increasing insurance premiums for firms, and creating more damage to people and property.

- **Regulatory and legal risk.** While businesses have usually been encouraged to reduce emissions on a voluntary basis, there is an increasing risk of more formal regulation, mandatory emissions trading systems and limits on output imposed by governments. At the same time, an increasing number of corporations are being sued by external groups for allegedly breaching their duties of care by failing to adequately deal with emissions reductions. By May 2020, more than 1,500 cases of climate change litigation had been filed globally against various companies.

- **Financial impacts.** An increasing number of financial institutions (including banks, venture capital funds, managed investment funds, and retirement/annuity funds) are critically examining where they place their money, and disinvesting from companies with poor environmental, sustainability and emissions records. This can curtail a firm's ability to borrow capital and lead to the withdrawal of investor funds. The growth and mainstreaming of sustainability principles across pension funds, mutual funds and lending requirements represent a very powerful reason for directors to assiduously manage climate risks.

- **Consumer and stakeholder expectations.** Firms are increasingly subject to pressure from shareholders, consumers, suppliers, non-governmental organisations, advocacy groups, labour unions and other external stakeholders in regards to climate change. These bodies are seeking more commitment by public corporations to promptly move to net zero (or, in some cases, negative) emissions outputs. In many cases, advocacy bodies and consumer groups are increasingly willing to support boycott campaigns against firms seen as high carbon emitters. There has also been increased shareholder activism at company general meetings and in voting for director elections.

- **Supply chain risks.** Many Southeast Asian firms are closely integrated into various international supply chains. They are thus indirectly vulnerable to global warming impacts on the other firms they trade with. For example, they may experience adverse ripple effects if another corporation in the same system is damaged by extreme weather events. As ASEAN seeks to build a stronger cross-border regional economy, more firms will be exposed to an increasingly complex suite of environmental impacts on supply chains.

An emerging global trend

Many CEOs and directors have now recognised the need for more attention on the issue of climate change. Between 2014 and 2019, for example, respondents to the World Economic Forum (WEF) annual Global Risks Report consistently cited climate change and extreme weather events as the leading future macro-economic risk they were likely to face. In response, WEF and PwC jointly set out a series of guiding principles for company boards on the issue, the major elements of which are shown in the box, "WEF Principles for Effective Climate Governance".

WEF Principles for Effective Climate Governance

1	Climate accountability	Boards should be accountable for the company's long-term resilience relating to climate change.
2	Command of the (climate) subject	Boards should include directors with knowledge, skills, and background in climate-related issues.
3	Board structure	Climate considerations should be integrated into the board structure and committees.
4	Material risk and opportunity assessment	Boards should regularly assess short-, medium- and long-term materiality of climate-related risks and opportunities.
5	Strategic and organisational integration	Climate issues should be part of strategic investment planning, decision-making processes and risk management.
6	Incentivisation	Boards should consider including climate-related targets and indicators in executive incentive schemes.
7	Reporting and disclosure	Material climate-related risks, opportunities and strategic decisions are to be consistently and transparently disclosed to stakeholders.
8	Exchange	Directors should stay informed about latest climate-relevant risks and regulations; regularly exchange ideas with peers, policy makers, investors and other stakeholders.

One of the leading global forums for climate change and company directors today is the Climate Governance Initiative (CGI), a network of director organisations across the world. (See page 22, "Cimate Governance Singapore Launched").

The CGI exists to promote the WEF principles for boards, focusing on non-executive directors. It aims to raise climate awareness within director communities and their professional bodies; embed climate issues into board responsibilities and decision-making; provide practical suggestions to directors; and help them develop the skills needed to deal with a changing climate.

CGI chapters now exist in over 20 countries, with the greatest concentration being in Europe. In Asia, however, only six jurisdictions are members or in the process of joining: Singapore, Malaysia, Hong Kong, India, Australia and New Zealand.

The director landscape in Southeast Asia

Several hundred firms in Southeast Asia are signatories to the Global Reporting Initiative, which allows firms to report on their sustainability performance using a common set of international metrics, including carbon emissions. An ASEAN office has been based in Singapore since 2019.

In April 2021, company directors in Southeast Asia's most sophisticated and valuable bourse – the Singapore Exchange (SGX) – were effectively put on notice by the publication of a legal opinion commissioned by the Commonwealth Climate and Law Institute. (See page 30, "Legal Liabilities of Directors for Mitigating Climate Change").

It concluded that directors of corporations were obliged to consider climate change risks as part of their commitment to the best interests of the company, and (building upon the 2016 sustainability reporting requirements imposed by the SGX) had a clear duty to disclose any material impacts of climate change risks. It also pointed out the personal liabilities of directors who breach these requirements.

Singapore is amongst the most active countries in the region addressing climate issues, with strategies that include a sophisticated whole-of-government approach to the issue, as well as an existing carbon tax. Malaysian regulators have also recently stepped up their activities in this area, with both Bank Negara and Bursa Malaysia issuing corporate and director guidance this year.

Yet, the level of director activity in climate change issues appears to be low.

Many ASEAN businesses seem to be generally aware of climate change, and some have developed strategies relating to energy efficiency and greenhouse gas emissions reduction. But few have looked more strategically at and integrated climate change into their overall business planning.

What next?

Clearly, more can be done in the region to facilitate greater director focus on climate change adaptation. Change in this field is coming for company directors in Southeast Asia – along with a range of new responsibilities and expectations.

A first step for many ASEAN jurisdictions may be to form a local CGI chapter, or some other similar director-focused climate initiative. This will allow local directors to access some of the global networks of other firms that have already begun the decarbonisation journey. Understanding a firm's risks, examining case studies showing how other companies have made the adjustment, and building relationships with other directors is a useful way to expedite the change process. Given that so few firms in Southeast Asia have become involved in the CGI, there is plenty of scope to encourage much greater participation.

Increasing the direct involvement of director organisations is another step forward. Institutes and director professional bodies can play a leadership role in proactively putting a focus on emissions abatement and developing client resilience. Just like the CGI at the cross-border level, there is a need for national associations to provide governance guidance, ideas and information directly to their members.

Moreover, education and information about this issue should be offered to all directors, not just those in stock exchange-listed corporations. Unlisted private sector firms, small businesses, nonprofit organisations and statutory corporations also face climate challenge, and their boards need to understand how they can deal with this issue.

Finally, boards in the region should look carefully at their recruitment of new directors. Non-executive director positions, especially, are ideal points in which to secure candidates with a knowledge of climate issues, and can potentially help firms to develop resilience as well as identify some of the many new business opportunities emerging as nations decarbonise. To do so, though, firms will increasingly need to rely on more formal, open and genuinely competitive recruitment processes for non-executive directors rather than the traditional "old boys' network." ■

A version of this article first appeared in ISEAS *Perspective No 131 (6 October 2021), published by ISEAS – Yusof Ishak Institute.*

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Net Zero Emissions: What company directors need to know

By **KEN HICKSON**,
Chairman, Sustain Ability Showcase Asia (SASA)

Net zero emissions targets have dominated the headlines. What is it, and why does it demand the attention of businesses and governments everywhere? How can the board of directors come up to speed on this aspect of sustainability?

It has been a business imperative for some years now to deal with sustainability reporting, climate change action, along with addressing environmental, social and governance (ESG) issues and corporate social responsibility (CSR). The latest buzzword is net zero emissions.

As nations barter and haggle over how to tackle climate change, understanding the alphabet soup of sustainability-related terminology and their related implications is no mean feat.

The box, "A Primer on Net Zero Emissions" provides a basic background to those new to its concept.

A Primer on Net Zero Emissions

Net zero emissions ("net zero") is a response to the climate change crisis.

What is the climate crisis?

There is irrefutable evidence that the planet is getting hotter. Global average temperatures are now 1 degree Celsius higher than in the pre-industrial era. While a degree may not sound like much, we already feel the effects of climate change with erratic weather patterns: heatwaves, floods, loss of polar ice, and rising sea levels. This will only get worse as global warming intensifies.

In the 2015 Paris Climate Agreement, countries agreed to a common target of holding the rise in global average temperature to well below 2 degrees Celsius, with 1.5 degrees Celsius being the ideal target.

What causes climate change?

Scientists and governments now accept that climate change is caused by higher levels of greenhouse gases in the atmosphere. The most common greenhouse gases are water vapour, carbon dioxide, nitrous oxide, methane and fluorocarbons; with carbon dioxide being the most dangerous.

How can it be stopped?

Since excesses of greenhouse gases trigger global warming, reducing them will help the planet recover. This can be achieved in two ways:

1. Lower the emissions of greenhouse gases being sent into the atmosphere. Activities with a significant impact include industrial processes, power generation, transport and intensive agriculture.
2. Remove greenhouse gases emissions from the atmosphere. These include planting more trees or capturing the carbon created during the industrial process before it is released.

What does net zero mean?

Net zero means achieving a balance between the greenhouse gases put into the atmosphere and those taken out.

Reaching net zero requires a country (or organisation or community or individual) to balance the amount of greenhouse gases emitted with the amount removed. When what is added is no more than what is taken away, we reach net zero.

This state is also referred to as carbon neutral. Note that zero emissions and zero carbon are slightly different. Zero carbon usually means that no emissions were produced in the first place.

Who has committed to a net zero target?

A net zero target means that a country or company or community commits to net zero emissions by a certain year.

Most countries of the world, especially the heavy emitters, have committed to a net zero target, some by 2030. Singapore has yet to commit to a specific date.

This has also become popular with companies, big and small, who have announced their intentions to reach net zero emissions, usually ranging from 2030 to 2050.

How can a company achieve net zero?

Here are some examples of what a company can do:

- **Operational reductions.** Reduce emissions from operating activities such as the energy used to operate office and manufacturing facilities. Instead of utilising those obtained from the direct burning of fossil fuels, it could utilise renewable energy (a quick win is rooftop solar panels). Air-conditioning usually accounts for 70 per cent of the energy used in most buildings in Singapore.
- **Value chain reductions.** These are outside the company's boundaries but still within its influence. Supply chain emissions within the value chain commonly represent a large share of a company's emission footprint.
- **Carbon removal and carbon credits.** When companies cannot avoid emissions, they can remove them using technologies such as carbon capture and storage, or purchase of carbon credits (See page 24, "Navigating the Voluntary Carbon Markets")

As can be seen, net zero refers to the equal balance of greenhouse gas produced by a country or organisation and the amount removed from the atmosphere.

The prevalence of countries signing up to a net zero target and many companies following suit will increase the pressure on other companies to follow.

For directors who want to better understand and apply the necessary changes needed for businesses to safely head towards the goal of reaching net zero emissions, here are five tools and platforms that could help:

1. Net Zero Standard by the Science-Based Targets Initiative
2. Net Zero Readiness Index by KPMG
3. Climate Governance Initiative
4. Green Compass by A*Star
5. Sustainability Reporting by SGX

Net Zero Standard (SBTi)

The Science Based Targets initiative (SBTi) is an international coalition established in 2015 to enable companies to set emission reduction targets in line with leading climate science. Ten Singapore companies are members: APRIL, CapitaLand, CDL, ComfortDelGro, Flex, Olam, Sembcorp Industries, Singapore Exchange, Singtel and Zuellig Pharma.

SBTi launched the Net Zero Standard, which is designed to help companies around the world work towards a "global green and gold standard" that is clear and relatively easy to adopt. Companies adopting the Net Zero Standard are required to set both near- and long-term science-based targets.

Through the standard, companies aim to achieve deep decarbonisation of 90 to 95 per cent before 2050. The SBTi sets clear parameters that these residual emissions – which must be neutralised through carbon removals – cannot exceed 5 to 10 per cent of a company's emissions depending on its sector. Neutralisation activities can take the form of technological removals, like direct air capture with geological storage (also called carbon capture and storage), and nature-based solutions, like reforestation.

Net Zero Readiness Index (KPMG)

The Net Zero Readiness Index (NZRI) is a global index for countries (as distinct from companies) developed by KPMG. (See page 20, "How Ready Are We For Net Zero?" for the inaugural report). It provides the benchmarking tools needed by businesses, large and small, as they work to meet national and global targets.

The NZRI compares the progress of 32 countries in reducing the greenhouse gas emissions that cause climate change, and assesses their preparedness and ability to achieve net zero emissions of these gases by 2050.

Directors would be wise to check out where Singapore and their sector stands in terms of readiness to deal with climate change impacts, and how the other countries are stacking up. They could find some handy hints to take on board for their company's operations in Singapore, as well as regionally and globally.

Climate Governance Initiative

The Climate Governance Initiative is an international movement that seeks to embed climate considerations into board decisions, and equip all board members with the expertise to navigate the risks and realise the opportunities arising from climate change.

The Climate Governance Initiative is an expanding network with 17 chapters, including in the UK, US, Canada, France, Germany, Singapore and Malaysia. It was developed by the World Economic Forum's team of advisers, with inputs from business leaders, climate governance experts, legal and audit professionals, and academics.

The Singapore chapter, Climate Governance Singapore, was launched on 28 October 2021. SID and Singapore Management University are partners in this initiative. (See page 22, "Climate Governance Singapore Launched").

Green Compass (A*Star)

Perhaps not so well known to Singapore companies and business leaders is the Green Compass initiative launched by the Agency for Science, Technology and Research (A*Star) in July 2021. Green Compass seeks to enable companies to adopt a new and sustainable business approach by improving resource efficiency.

The Compass will consider a company's practices holistically in areas such as its product life cycles and management of energy, water, carbon emissions and materials. After companies have chosen the environmental sustainability dimensions of relevance, the respective assessment questions will be generated. Upon its completion, the results will highlight and prioritise areas of improvement which have the highest financial and strategic impact.

Sustainability Reporting (SGX)

The Singapore Exchange (SGX) introduced sustainability reporting on a "comply or explain" basis in June 2016. Since then, listed companies have been required to report on sustainability: the company's material stakeholders and ESG factors, its policies, practices and performances in relation to the material ESG factors, and targets and plans to address the risks and opportunities.

SGX has prepared sustainability reporting guides and other resources to help listed companies produce their reports and worked with consultants to provide sustainability training workshops.

Singapore Exchange Regulation (SGX RegCo) has proposed a roadmap for climate-related disclosures to be made mandatory in issuers' sustainability reports, amid demand for such information from lenders, investors and other key stakeholders. It is also consulting the public on include requiring assurance of sustainability reports and one-time sustainability training for all directors.

What else is there for directors to do?

Directors should keep track of the latest happening in this area so that they can respond to it. For example, COP26, which recently concluded, was considered crucial for reaching a global agreement on dealing with the climate crisis and getting the world to net zero emissions. Many observers were disappointed with the outcome. Others remain hopeful. See box, "COP26 Was Not a Cop-Out".

There are also many existing private and public sector initiatives and programmes to help businesses in Singapore work towards net zero and get in line with the government's latest Green Plan.

The computations by UNESCAP show that just a 1 per cent improvement in resource efficiency of material resources (domestic material consumption) and energy combined can deliver monetary benefits of up to US$275 billion (S$373 billion) in the region in terms of resource costs at current prices.

COP26 Was Not a Cop-Out

The Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) is a two-week conference that has taken place annually since 1995. COP21 in 2015 produced the Paris Agreement, the first universal global agreement on climate change.

COP26, which took place in Glasgow in November 2021, was significant because climate had risen to the top of the global agenda. The UN Secretary-General called the most recent report of the Intergovernmental Panel on Climate Change a "code red for humanity".

According to the UN Intergovernmental Panel on Climate Change, the world needs to achieve net zero emissions by 2050 to meet the target cap of 1.5 degrees Celsius. There was great hope that agreement could be reached on this in Glasgow.

The negative

As expectations were generally high on what could/would be achieved at COP26, many climate advocates expressed disappointment with the outcome:

- Commitments on climate goals are not sufficient to reach below 2 degrees Celsius (let alone 1.5 degrees Celsius) on temperature rises.
- India and China watered down the wordings on phasing out coal and subsidies for fossil fuels.
- Wealthy nations failed to deliver on a pledge to mobilise US$100 billion annually to help poorer countries address emissions and adapt to climate change.
- On the carbon market, the rules appear to still allow poor quality units into the system.
- There is low confidence that certain pledges, such as deforestation, will be delivered where they are most needed.

The overall costs of climate change will be the equivalent to losing at least 5 per cent of global gross domestic product (GDP) each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20 per cent of GDP or more. In contrast, the costs of action – reducing greenhouse gas emissions to avoid the worst impacts of climate change – can be limited to around 1 per cent of global GDP each year, according to economist Nicholas Stern.

The positive

Nevertheless, other observers say that saving humanity from the climate crisis is an immensely complex challenge beyond the remit of a single conference. Instead, they highlight the positives, such as:

- India, a major emitter, made its first commitment to net zero, albeit in 2070.
- Coal and fossil fuels were directly referenced for the first time in a COP agreement.
- Over 100 countries signed the pledge to reduce methane emissions by 30 per cent by 2030 from 2020 levels.
- More than 100 countries, covering 85 per cent of the world's forests, committed to halve deforestation by 2030.
- Guidelines for a global carbon market were approved.

Singapore

For Singapore, the response to and implications of COP26 include:

- COP26 has provided much clearer guidelines as to what can be done – and is being done – to decarbonise the global and local economy. Singapore needs to do more to align and play an important role in ASEAN. For a start, we need to set a net zero target.
- Singapore has committed to reduce fossil fuel emissions in every way possible – even agreeing to eliminate coal altogether – even though it is natural gas, petrol and diesel, which are the ever-present fuels used in much greater volume.
- There is a new determination to maintain our forest and tree cover to a greater extent, and this will likely be taken into account in urban and economic development.
- Transport emissions are big for Singapore. It is heartening to hear immediately after the Glasgow meeting of renewed commitments locally to decarbonise the shipping industry and air transport – by encouraging the introduction of clean energy and biofuels.

While some company directors may feel that the cost of dealing with climate change and investing in sustainability measures are more trouble than benefit, many other businesses are demonstrating that they can make more money by saving on costs. In time, the pressures to reduce greenhouse gas emissions will certainly increase. Businesses must accept that the risks – and the costs – of doing nothing far outweigh the assurance of staying on the sidelines. ■

How Ready Are We For Net Zero?

Singapore ranks 15th in the first-ever index that measures the readiness of countries to achieve net zero emissions by 2050.

The Net Zero Readiness Index (NZRI) is a tool developed by KPMG that compares the progress of countries in reducing the greenhouse gas emissions that cause climate change, and assesses their preparedness and ability to achieve net zero emissions of these gases by 2050.

The inaugural report released in November 2021 evaluates 32 countries, including members of the G20 intergovernmental forum and G20 invitees, which are emerging or large economies; members of the Organization of the Petroleum Exporting Countries; and countries that have a net zero target in place.

According to Richard Threlfall, Global Head of KPMG IMPACT, "the faster this report is out of date, the happier we will be".

How the NZRI works

The NZRI uses the World Resources Institute definition of net zero. Primarily, this involves reducing greenhouse gas emissions caused by humans as close as possible to zero.

For each of the 32 countries, the NZRI considers 103 indicators of key drivers to achieving net zero. The indicators are split between national preparedness and sector readiness.

National preparedness considers a country's national commitment to decarbonise, its past decarbonisation performance and the national enabling environment for decarbonisation.

Sector readiness covers the five highest emitting sectors: electricity and heat; transport; buildings; industry; and agriculture, land use, land use change and forestry (in the report referred to as agriculture, land use and forestry).

The Index looks at the indicators for sector readiness through three lenses: decarbonisation status, government action and delivery capability. The indicators are aligned to the fifth assessment report of the UN's Intergovernmental Panel on Climate Change published in 2014.

The 32 participating countries are grouped into two categories:

- Top-performing 25 countries in the race to net zero (see box, "Top 25 Countries in the Net Zero Readiness Index 2021").
- Seven countries to watch where there are significant opportunities to advance their decarbonisation efforts through large-scale projects and emerging escalation initiatives: India, Indonesia, Nigeria, Russia, Saudi Arabia, South Africa and Thailand.

How Singapore fares

The top six countries, led by Norway, are in Europe, and are clear leaders in the inaugural NZRI. Each of these countries has already cut emissions, and each has announced a net zero target date. Seven of the 25 top-performing countries are in the Asia Pacific: Japan, New Zealand, South Korea, Singapore, Australia, China and Malaysia.

Singapore is ranked 15th in the index – 14th in sector readiness and 17th in national preparedness. The Singapore government has not set a formal target date for achieving net zero emissions, although it aims to halve emissions from an expected 2030 peak by 2050, with net zero following as soon as viable.

Among some of its challenges are limited space for renewable energy generation and a significant manufacturing sector, as well as being a hub

Top 25 Countries in the Net Zero Readiness Index 2021

Ranking	Country	Net Zero Readiness Index	National preparedness	Sector readiness
1	Norway	49.2	82.1	60.0
2	UK	48.4	86.3	56.1
3	Sweden	44.7	83.8	53.4
4	Denmark	43.8	79.3	55.2
5	Germany	40.4	72.1	56.0
6	France	39.8	78.9	50.5
7	Japan	37.6	67.1	56.0
8	Canada	34.2	74.9	45.7
9	New Zealand	32.1	66.5	48.3
10	Italy	29.9	62.5	47.8
11	South Korea	29.1	57.3	50.7
12	Spain	28.0	61.2	45.8
13	Hungary	28.0	66.3	42.3
14	US	27.9	61.5	45.3
15	**Singapore**	**25.6**	**57.2**	**44.7**
16	Chile	24.2	58.5	41.4
17	Australia	23.5	57.1	41.1
18	Brazil	22.5	58.1	38.8
19	Poland	20.0	46.5	43.1
20	China	19.4	46.7	41.5
21	Malaysia	16.5	45.1	36.5
22	Argentina	15.7	46.1	34.2
23	Mexico	14.6	42.9	34.1
24	Turkey	13.5	42.6	31.7
25	United Arab Emirates	12.8	43.1	29.7

Source: KPMG International 2021

for shipping, aviation and tourism. Oil and gas refining and petrochemical processing generate around three-quarters of industrial emissions.

However, Singapore has transformative plans for change. In February 2021, the government published a 2030 Green Plan (See page 66). There are plans to quadruple solar power generation by 2050 and to deploy floating panels on reservoirs. Singapore is also considering importing green electricity from Malaysia and even Australia. The use of liquid natural gas as a transitional fuel is being developed, and the Green Plan includes commitments to improve energy efficiency in homes, schools and offices.

Singapore is ranked eighth in the transport sector, partly due to very low transport emissions per person, incentives for electric vehicles and an active clean technology industry in the sectors. Although it is later than some countries in starting to adopt electric vehicles, new diesel cars and taxis will be banned from 2025, with further road tax incentives to adopt electric vehicles and a plan to phase out all internal combustion engine vehicles by 2040.

Singapore is also a leading developer of clean shipping fuels, including liquified hydrogen, liquid ammonia and synthetics, as part of its ambition to remain the world's biggest maritime fuel hub and a leading port. Singapore ranks fifth in agriculture, land use and forestry and plans to produce 30 per cent of its food locally by 2030, including through vertical farms, which grow food in towers.

The government has implemented a carbon tax and new mandates to reduce waste, including a plan to address food, electronic and packaging waste, adopting new technologies and circular measures. ■

Climate Governance Singapore Launched

The international Climate Governance Initiative comes to Singapore. It seeks to embed climate considerations into board decisions and equip board members with the expertise to navigate the risks and realise the opportunities arising from climate change.

The Singapore chapter of the Climate Governance Initiative – Climate Governance Singapore (CGS) – was launched on 28 October 2021, to raise awareness of boards of directors on the impact of climate change. Minister for Sustainability and the Environment, Grace Fu, attended the launch.

Globally, the Climate Governance Initiative is an expanding network with 17 national chapters, including the UK, US, Canada, France, Germany and Malaysia. These chapters promote the World Economic Forum's Climate Governance Principles and support effective climate governance in their jurisdictions.

This global network is committed to working together to share knowledge and mobilise, educate and equip non-executive director members with the skills and knowledge necessary to address climate change at the board level.

Bringing climate change into boardrooms

Climate change is shaping a new reality, creating risks and opportunities for businesses in a diverse number of ways. Investors, regulators and other stakeholders are now challenging companies to take responsibility by adopting an integrated, strategic approach to addressing the climate emergency.

Most boardrooms are grappling with how to frame the risks and opportunities and embed a viable transition strategy into their business models. Boards of directors play a critical role in ensuring the long-term stewardship of the companies they oversee.

The urgent need to address the climate crisis also requires businesses to accelerate the transition to a new economic model that limits global average temperature increases. It is therefore imperative

for board members in Singapore to understand and engage in this challenge, and entrench a viable transition strategy into their business' long-term prospects, especially in the face of ongoing pressure from stakeholders such as investors, regulators, employees and consumers.

CGS aims to equip and support board members to play an informed and leading role in boardroom discussions and strategic decision-making on the risks and opportunities associated with climate change. Board members will have access to workshops, conferences and a curated library, where they can leverage on the expertise of renowned experts in risk management, strategic, financial and human capital planning, remuneration, and legal and governance models from Singapore and throughout the initiative's global network.

SID will partner with CGS in engaging with the director community, and lead the advocacy and engagement efforts amongst directors in Singapore on climate change at the board level. Singapore Management University will deliver a suite of training programmes, and organise regular events and public programmes to improve the awareness and preparedness of the stakeholder community to address the challenges of climate change better.

Raising important issues

A group of advisory board members has been convened prior to the launch of CGS. The advisory board members will draw on their influence and networks, and enable access to business and thought leaders, to support the advancement of CGS. The advisory board members will also advise on policies, strategies and development plans, as well as to review the progress and achievements of CGS. The advisory board members include:

- Tan Chuan-Jin – Speaker of the Parliament
- Claire Chiang – Senior VP, Banyan Tree Holdings
- Koh Boon Hwee – Chairman, Altara Ventures
- Lee Chee Koon – Group CEO, CapitaLand Investment
- Loh Boon Chye – CEO, Singapore Exchange
- Wong Kee Joo – CEO, HSBC Singapore
- Philip Yuen – CEO, Deloitte Southeast Asia

A steering committee comprising business leaders from corporates across a range of sectors will provide governance and direction, and are responsible for the management of CGS.

Understanding climate change

A panel discussion on "Understanding the Climate Challenge" was held during the launch ceremony. Andrew Martin, Managing Principal of Baker & McKenzie Wong & Leow was the moderator. Panel members were Esther An, Chief Sustainability Officer of City Developments Limited; Winston Chow Associate Professor of Science, Technology and Society at SMU; Adrian Chan, SID Vice-Chairman; Zoë Knight, Managing Director and Group Head of the HSBC Centre of Sustainable Finance.

SID Chairman Wong Su Yen said, "As we navigate through a decarbonising world coupled with a rapidly changing climate, the launch of Climate Governance Singapore today could not be more timely. With the World Economic Forum's Climate Governance Principles as the foundation of this initiative, and Singapore Management University as our knowledge partner, I am delighted that the Singapore Institute of Directors can become the conduit to directors in Singapore." ■

Navigating the Voluntary Carbon Markets

By **HUM WEI MEI,** Vice President for Carbon & Environmental Markets, AirCarbon Exchange

Singapore is scaling up its efforts to develop an international carbon trading and services ecosystem to support decarbonisation. From 2022, Singapore will be host to three global carbon exchanges: AirCarbon Exchange, Climate Impact Exchange and Cyberdyne Tech Exchange. How can companies navigate the sector successfully?

A total of 112 stock exchanges in the world have signed on to the Sustainable Exchanges Initiative, and 60 have implemented written environmental, social and governance (ESG) guidance for listed companies, including the Singapore Exchange.

As ESG reporting becomes an integral part of corporate governance Singapore companies are likely to face increased pressure to reduce their carbon footprint. However, residual, unabated carbon emissions are inevitable. Carbon credits allow companies to compensate for these residual carbon emissions and contribute towards emission reduction projects worldwide. (See page 12, "Net Zero Emissions: What company directors need to know".)

Singapore is scaling up its efforts to develop an international carbon trading marketplace and a services ecosystem to support decarbonisation.

AirCarbon Exchange, which was launched in 2019, is a Singapore-based, global carbon exchange with a customer base that spans over 30 countries. It has transacted over 6 million carbon credits to date. In September 2021, AirCarbon Exchange was recognised as the Best Carbon Exchange in Environmental Finance's Voluntary Carbon Market Rankings (2021).

Singapore Exchange, DBS Bank, Standard Chartered and Temasek have also announced their intention to create Climate Impact X, a Singapore-based global carbon exchange and marketplace, expected to be operational in 2022. Separately, Cyberdyne Tech Exchange is an existing licensed platform that trades green infrastructure assets, including carbon credits.

Global context

According to the UN Intergovernmental Panel on Climate Change, the world needs to cut climate pollution in half from current levels by 2030, and reduce them to net zero by 2050 to meet the Paris Agreement's target of limiting global warming to 1.5 degrees Celsius.

To support such rapid decarbonisation, both actions pledged by countries under the Paris Agreement and voluntary actions through the carbon markets will be necessary. According to the Taskforce on Scaling Voluntary Carbon Markets (TSVCM), voluntary action through the carbon markets will have to increase 15-fold by 2030 and 100-fold by 2050 from 2020 levels to help the world meet its targets.

The voluntary carbon markets are a critical conduit through which capital, technology and other resources may be directed towards climate action and the sector is set for super charged growth in the years to come.

In the first eight months of 2021, the voluntary carbon markets posted close to a 60 per cent increase in value from the previous year, and is on track to host US$1 billion (S$1.36 billion) worth of transactions by year's end. The Institute of International Finance projected that the potential size of the voluntary carbon market could be as high as US$100 billion a year by 2050.

The international carbon markets are actually comprised of two types of carbon markets:

- Compliance carbon markets are created and regulated by mandatory national, regional, or international carbon reduction regimes and usually have rules determining the kind of carbon credits which are admissible within its context. Both companies and countries may be part of a compliance carbon market. For example, the world's largest compliance carbon market is the EU-Emissions Trading Scheme and only European Union companies in sectors covered by the scheme participate in it.

- Voluntary carbon markets, on the other hand, exist in parallel to the compliance markets.

Companies participating in the voluntary carbon markets aquire and apply carbon credits on a voluntary basis. Companies which have decided to adopt net zero targets as part of their corporate sustainability strategy, for example, fall within the ambit of the voluntary carbon markets.

While there are a number of frameworks and standards detailing how to calculate and disclose carbon emissions and other ESG-related information, there are relatively few guidelines for companies wondering how to approach the voluntary carbon markets.

Role of voluntary carbon crediting standards

It may come as a surprise that it has been almost 20 years since the first voluntary carbon crediting standard, Verified Carbon Standard (now known as Verra), was established. Voluntary carbon crediting programmes such as Verra first began because businesses, municipalities, nonprofit organisations, and individuals recognised the value of voluntarily contributing to emission reduction projects.

Since then, more independent carbon crediting standards have been established and a thriving supporting ecosystem of specialised service providers, such as carbon quantifiers, verifiers, registries and other actors, have evolved.

Verra and the Gold Standard (GS) are the two main organisations responsible for around 80 per cent of the world's "good delivery" voluntary carbon credits. Collectively, Verra, GS, Climate Action Reserve (CAR) and American Carbon Registry (ACR) are widely recognised as some the most established independent, voluntary carbon crediting standards.

Recognition of voluntary carbon crediting standards

Prior to the recently established governance body under the TSVCM, there had not been a unifying body whose aim was to harmonise voluntary crediting standards. In spite of this, the voluntary carbon markets have increasingly gained both legitimacy and acceptance. Some compliance markets have begun to recognise and accept selected types of voluntary credits.

In California, for example, carbon credits that were created as voluntary carbon market offsets under the CAR Programme were subsequently accepted to the California Compliance Carbon Offset Programme. Countries like Mexico and South Africa have also recognised carbon credits issued by voluntary carbon crediting programmes. Under South Africa's Carbon Tax Act, tax-liable entities can satisfy up to 10 per cent of their tax obligations by purchasing carbon credits issued under Verra or GS.

In October 2016, the member states of the International Civil Aviation Organization made the historic decision to adopt a global market-based measure for aviation emissions. The scheme recognises carbon credits generated under a spectrum of voluntary carbon standards and allows participating airlines to compensate for unabated emissions using these credits.

Another critical the reason the voluntary carbon markets are receiving attention follows from the decisions taken at the UN Climate Change Conference (COP26) in late 2021. Verra was quoted as saying that the discussions in Glasgow effectively "confirmed the role of the voluntary carbon markets". (See box, "Implications for Singapore-Based Companies".)

Climate change has indeed brought about a myriad of challenges to companies and their boards. Effective boards must mobilise capital and resources to co-create a better world and fight climate change instead of merely being subject to it. The voluntary carbon markets offer an important channel for doing so.

Implications for Singapore-Based Companies

As corporates in Singapore make their foray into acquiring carbon credits, here are some points to consider.

1. **Carbon credits are part of a broader corporate sustainability strategy.**
   Companies should reduce their greenhouse gas emissions wherever possible, and only use carbon credits to offset unavoidable emissions. While most reporting guidelines define how the use carbon credits should be reported, companies have significant leeway to develop their corporate philosophy in relation to what types of carbon credits they should support and how these should align to the values and mission of the company.

2. **Voluntary actions remain unaffected by decisions made at COP26.**
   The recent decisions made at COP26 mean that the voluntary carbon market has been recognised as an important component in addressing climate change. Countries may elect to utilise such credits, provided they align to the requirements set out in Article 6 of the Paris Agreement. However, companies acting in the voluntary carbon markets remain free to decide on the type of carbon credits they use to compensate for their own carbon footprint.

3. **"High quality carbon credits" and how to find them.**
   Many companies wish to acquire "high quality carbon credits" but are not sure how to identify them. In practice, carbon credits issued by established carbon crediting standards such as Verra, GS or CAR, all have processes and procedures in place to ensure that the carbon credits generated represent a verified reduction or removal of carbon emissions. These are generally accepted by industry as "good delivery" carbon credits.

4. **Price may not reflect value.**
   At present, there is a wide range of carbon offsets in the voluntary carbon market, and their prices can range from US$2/tonne to over US$100/tonne. The prices of carbon credits often reflect a variety of things such as the implementation cost of the carbon project, associated co-benefits, marketing costs, or even markups by middle men and brokers. Carbon exchanges have developed standardised contracts for carbon credits. These help to set a benchmark price for carbon credits with a specific set of characteristics, deemed critical by the market, and offer buyers a path for acquiring competitively priced carbon credits.

5. **Adopting a portfolio approach to acquiring carbon credits is an option.**
   While there has been a trend of companies claiming carbon-neutrality through the use of carbon credits sourced from specific nature-based projects, there is actually no obligation for corporates to commit themselves to carbon credits from any particular project. One benefit of a diversified portfolio of carbon credits is that it may allow a company to better manage the risks and costs of going carbon neutral while simultaneously contributing to various deserving carbon projects with a spread of co-benefits. ■

Renewable Energy Re-energising Hope

By **STEVE LEONARD**

Extracting and burning fossil fuels is harmful to the well-being of the planet and all its residents. Better energy sources are being developed, and with the support of businesses, regulators, scientists, investors, customers, suppliers and communities, the transition to renewable energy can be realised.

A recent Cornell survey of nearly 90,000 peer-reviewed climate-related papers found that over 99 per cent supported the view that earth's climate is warming due to human activity. According to the latest UN report, we are now on red alert, with some climate change already irreversible. However, there is still a brief window to lessen the impact we will otherwise experience.

Burning fossil fuels is not the only source of greenhouse gases; methane from livestock is a proven contributor as well. But the evidence is clear that we need to dramatically reduce our consumption of fossil fuels as a source of energy.

Encouraging trends

Sustained and determined commitment to developing and using renewable sources of energy is urgent and vital. Though the world is still far from where it needs to be, there have been some encouraging trends in recent years.

Between 2009 and 2019, the global average cost of electricity generated from new solar plants fell 89 per cent, and the cost of electricity generated from new onshore wind farms fell 70 per cent. Increasingly, new, unsubsidised solar and onshore wind plants are cheaper to build, fuel, and operate than new coal and gas plants.

In 2020, more than 260 gigawatts of capacity from renewable sources was added worldwide, a record amount and an almost 50 per cent increase compared to 2019; 80 per cent of all capacity added globally in 2020 was renewable.

In short, better energy sources for the planet are now making better sense economically too. However, while entrepreneurial scientists around the world are successfully increasing the amount of electricity being generated from all types of renewable sources, there are still huge technical challenges when it comes to the storage and distribution of that power.

From here to there

When the industrial entrepreneur John D Rockefeller started Standard Oil in 1870, it was the rail and river distribution network across which the oil moved from field to refinery to customer that made things work at scale.

Similarly, the challenge now is getting renewable electricity from where it is produced to where it is consumed. Sources of renewable energy (such as hydro, thermal, solar, or wind) are generally not moveable, so developers must move the power generated from those locations to where it will be stored or consumed.

A recently completed 725-kilometer cable connecting the UK and Norway is a great example. Through the North Sea Link, the UK can swap its wind energy for Norway's hydropower or the other way round. The interconnect allows electricity generated from different renewable sources in the two countries to flow in either direction, depending on supply and demand.

In many aspects of energy production, lower unit costs are achieved through centralisation and economies of scale. In the years ahead, renewable-source energy production needs to be built on decentralisation. In other words, generating energy as close to the point of consumption as possible. Entrepreneurs are hard at work exploring new solutions.

Leadership matters

The state of Hawaii is a vanguard in this respect. In 2018, the Hawaii legislature wrote a law codifying its commitment to going carbon neutral by 2045. Investors, companies, entrepreneurs, suppliers and consumers were encouraged to work together to focus on the production of clean energy and reduction of emissions.

To accelerate the transition to renewable sources of energy, we need leaders with open minds, clear vision, and strong convictions. Board directors, as custodians of entities of all sizes, have an important role to play in providing that leadership.

Boards can advocate for funding, regulation and legislative action, and they can support entrepreneurship within and outside their

companies. Established organisations already have resources – human and financial capital, customers, and partners – all of which every startup needs. They can partner with entrepreneurs to help new ideas get their footing. They can also support internal labs and forward-looking teams to ask hard questions and find answers.

In addition to looking to the future, we must invest money, talent, and time to address the past and present. There are millions of people employed in fossil fuel industries and trillions of dollars of associated infrastructure. There are also decades of environmental issues to amend.

Investors and entrepreneurs want to see economic rewards flow from the risks they take on in this journey. It's easy to agree it is "right" to restore land and sea, but how do we determine the economic as well as social returns needed to attract the right money and the best talent to the hard work ahead? Transitioning to renewable energy won't be simple, and it won't be quick. But science tells us we don't have a choice if we want to save our planet and everything living on it. ■

Steve Leonard is CEO of Singularity Group and an independent director of the public company Maxeon Solar Technologies.

Legal Liabilities of Directors for Mitigating Climate Change

By **JEFFREY CHAN WAH TECK**

Directors must ensure their companies comply with regulatory measures to mitigate climate change. They must also ensure their companies make the necessary disclosures as required by law and directives applicable to the company. Failure to do so can result in criminal and civil liabilities for their companies, and to themselves personally.

The importance that Singapore places on climate change and it effects was underscored when Parliament, on 1 February 2021, engaged in a seven-hour debate on a motion to accelerate and deepen Singapore's efforts to address climate change as a nation. At the end of the debate where all parties supported the objectives of the motion, Parliament passed the motion which declared:

"That this House acknowledges that climate change is a global emergency and a threat to mankind and calls on the Government, in partnership with the private sector, civil society and the people of Singapore, to deepen and accelerate efforts to mitigate and adapt to climate change, and to embrace sustainability in the development of Singapore."

Significantly, this Parliamentary declaration underscores the role of the private sector in Singapore's efforts to mitigate and adapt to climate change.

The high priority placed by the Singapore government on the effects of climate change and the need to address it was underscored again by Minister for Sustainability and the Environment, Grace Fu, in her statement to the 26th Conference of Parties to the United Nations Framework Convention on Climate Change (COP26) in 2021. Minister Fu reiterated Singapore's commitment to achieve net zero emissions and that Singapore will not shy away from taking bold action to achieve this.

Actions to address climate change

Climate change is caused by the build up of greenhouse gases in the atmosphere leading to global warming. To mitigate the effects of climate change, global warming must be reduced. A slew of initiatives to address global warming has been put in place at both the international as well as national levels.

At the national level, states have enacted numerous laws as well as industry standards and practices to mitigate the emission of greenhouse gases. Many of these laws prescribe penalties for actions or omissions that can exacerbate carbon emissions.

Singapore is keenly aware of the dangers that it faces from the consequences of climate change. This includes being overwhelmed by rising sea levels as well as disruptions in its international trade. Numerous regulatory measures have been put in place to address the emission of greenhouse gases. Most importantly, much effort has been made to ensure that the public is sensitised to the dangers of climate change and the need to minimise the emission of greenhouse gases.

The main measures in Singapore to address climate change are the enactment and enforcement of various laws that address environmental issues generally and climate change specifically. Singapore has always had legislation addressing environmental issues to protect public health. In more recent times, additional legislation on environmental protection has been enacted with the declared intention to combat climate change.

These include the following:

- Carbon Pricing Act (Act 23 of 2018)
- Energy Conservation Act (Cap 92C, 2014 Rev Ed)
- Transboundary Haze Pollution Act (Act 24 of 2014)
- Resource Sustainability Act 2019 (Act 29 of 2019)

Many provisions in these legislative instruments criminalise various activities which may adversely affect the environment and directly or indirectly contribute to climate change. These are made punishable with substantial fines and/or imprisonment.

Businesses and climate change

The business sector has substantial stakes in climate change as business activities are, or can be, affected by the consequences of climate change. Business operations are largely responsible for carbon emissions, from large undertakings in the oil and gas sector to humble home industries such as small-scale manufacturing or even home bakers.

All businesses are exposed to significant risks from climate change. These can be categorised as either physical risks or transition risks.

Physical risks include global warming affecting agricultural output and food production, rising sea levels affecting coastal regions and low-lying settlements, and weather pattern changes disrupting industries such as shipping and construction.

Transition risks are "financial and reputational risks posed to organisations by the extensive policy, legal, technology, and market changes to address mitigation and adaption requirements that the transition to a lower-carbon economy may entail". These include changes to national policies and regulations to reduce their greenhouse emissions to net zero by 2050 or sooner.

Many regulatory measures are designed to mitigate climate change impact directly on business operations, regardless of the nature of the business. On the other hand, businesses can contribute to the mitigation of climate change, such as adopting environmentally friendly business practices. Foremost would be a culture of compliance with regulatory measures.

The business sector was well represented in COP26. Numerous business groups, including nearly all major international business associations, participated in the proceedings and there was almost universal support for the need to reduce carbon emissions and limit the rise in global temperatures. While COP26 did not achieve in promulgating this as a legally binding rule, this was an agreed objective for the world as a whole to work towards.

Role of directors

Directors play a crucial role in the governance of companies. Section 157A of the Companies Act provides that the business of a company shall be managed by, or under the direction or supervision of, the directors.

Directors provide the governance of a company and ensure that a company conducts its business in accordance with the applicable laws, taking into account the interests of its stakeholders. These include a wide range of persons and entities, foremost among which would be the shareholders, employees, customers and business partners, and importantly, the government and the community.

A crucial role of directors is to set the directions for the company and also to hold management accountable to the shareholders and other stakeholders.

Duties of directors

Section 157(1) of the Companies Act provides that directors shall "…at all times act honestly and use reasonable diligence in the discharge of the duties of his office". Section 157(2) requires that a director not make improper use of his office or any information obtained in that capacity, among other things, to cause detriment to the company. Additionally, directors are fiduciaries and owe duties at general law to act *bona fide* in the interests of the company, and to avoid any action that may result in them being in a position of conflict of interest with the company.

The degree of care and diligence as a reasonable director is referenced to a continuum depending on various factors such as the individual's role in the company, the type of decision being made, the size, and the business of the company. Critically, this standard will not be lowered to accommodate any inadequacies in the individual's knowledge or experience. Instead, it will be raised if the director

holds himself out as possessing or in fact does possess some special knowledge or experience.

This means that no director can seek to exclude liabilities that he may face as a director on the basis that he is only a "nominee director" and has no involvement in his company's affairs.

Liabilities of directors for mitigating climate change

In discharging or failing to discharge their duties, directors can be liable to criminal penalties as well as civil remedies in favour of an aggrieved party. In the area of climate change, Section 71(1) of the Environmental Protection and Management Act penalises officers of a company in breach of any of the provisions of that Act if that breach took place on account of consent or connivance of these officers, and, also, if the breach occurred on account of any act or default on their part.

An even more stringent provision can be found in section 68(2)(b)(iii) of the Carbon Pricing Act. This provides that where an officer of the corporation or an individual involved in the management of the corporation and in a position to influence the conduct of the corporation "… knew or ought reasonably to have known that the offence by the corporation … would be or is being committed, and failed to take all reasonable steps to prevent or stop the commission of that offence…", such an individual would be guilty of the same offence as the corporation.

This means that even omissions by directors in a situation where they only ought reasonably to have known that an offence was being committed would suffice for personal criminal liability to arise. These provisions impose a high duty on directors of companies to ensure that their companies comply with the provisions of these statutes.

Apart from criminal liabilities, directors are liable for civil remedies should their failure to exercise reasonable diligence as a director result in losses for a stakeholder of the company or the company itself. This principle applies with full force on matters relating to climate change. Failure to take into account climate-related risks insofar as these risks have a material and adverse impact on the financial performance of the company can render the director in breach of both common law and statutory duties.

There are a wide range of remedies that can be obtained against directors for breaching their duties. They can be ordered to pay compensation, and also provide an account of profits received by them as a result of damages resulting from such breaches. In several cases, directors were made personally liable for breaches of their duties.

Another remedy against directors, which is common in other jurisdictions, are suits brought against the governance of a company by its shareholders or non-governmental organisations (NGOs). Shareholder activism is relatively uncommon in Singapore but in the area of climate change, there are increasingly numerous instances of international NGOs launching legal actions against companies and corporations to compel these companies to change their business practices and operations in order to reduce carbon emissions.

As of May 2020, 1,587 instances of climate change-related litigation have been filed all over the world. The majority were filed in the US, Australia and Europe. However, cases have also been initiated in Asia, including in Indonesia and the Philippines.

Duties of disclosure

The disclosure obligations of listed companies in Singapore are set out in the Singapore Exchange (SGX) Listing Manual. Rule 703(4) requires listed companies to disclose information necessary to avoid the establishment of a false market in its securities, or which is likely to have a material effect on the price or value of the securities of that issuer.

Developments related to climate change are conceivably "… developments that affect materially the present or potential rights or interests of the issuer's shareholders." These can affect the business of the company and thus the value of its shares and returns to its shareholders. The fact that information is generally available, as may be the case concerning a company's exposure to climate change risks, is not a reason for failing to disclose under Rule 703: Appendix 7A.

In 2016, SGX promulgated Listing Rule 711A, which requires every listed company to prepare an annual sustainability report for its financial year no later than five months after the end of the financial year. Under Rule 711B, the sustainability report must describe the listed company's sustainability practices with reference to, among other things, environmental, social and governance (ESG) factors. These would include the impact of climate change on the company's business operations.

While the Listing Rules are not statutory, in instances of non-compliance, SGX may sanction the company in various ways such as through reprimand(s) or de-listing the company. However, as section 203(1) of the Securities and Futures Act provides that a listed company must not intentionally, recklessly or negligently fail to notify SGX of such information as is required to be

disclosed by the Listing Rules, this effectively enables the Listing Rules relating to disclosure obligations to have the force of law and enforceable as such.

Furthermore, it is noteworthy that while the company itself may not be subject to criminal penalties for contravening the Listing Rules, the company's officers, including its directors who intentionally, recklessly or negligently fail to make the required disclosure(s), are subject to prosecution for an offence under section 203(1) of the Securities and Futures Act.

While there is no equivalent public disclosure regime for non-listed companies, section 199(1) of the Companies Act requires all companies to prepare true and fair profit and loss accounts and balance sheets. The veracity of these accounts and balance sheets are the responsibility of the directors, who accordingly are required to take reasonable care to ensure that those documents present a true and fair view of the company.

Applicability of the "business judgment rule"

The business judgment rule provides a defence to directors whose companies encounter losses despite the directors acting properly. However, a director will not be protected by the business judgment rule if he fails to make a conscious decision, or does not exercise his judgment, or fails to properly inform himself of the relevant facts and circumstances before undertaking a course of action.

Where a director is accused of failing to disclose climate change risks, his culpability must be assessed against the businesses of his company in order to determine whether or not these risks to the company should have been disclosed. This assessment will necessarily turn on the facts, but it bears noting that invocation of the business judgment rule will not necessarily protect directors seeking to avail themselves of this principle as a defence.

The scope and ambit of the business judgment rule are also likely to evolve as knowledge concerning climate change risks becomes more prevalent. Developing standards in Singapore and elsewhere are also likely to inform whether or not a particular decision would be protected by the business judgment rule.

Take action

The emphasis Singapore is placing on mitigating climate change, and the wide public sensitivity about climate change and carbon emissions mean that directors can no longer take this issue lightly. Directors must take action to ensure that their companies comply with all the regulatory measures put in place to mitigate climate change, and, when circumstances require, ensure that their companies make the necessary disclosures as required by law and directives applicable to the company.

Given the clear signal from the government that it will take bold action to address climate change, directors should also ensure that they keep abreast of regulatory developments in this area as it is likely that new regulatory measure will impose personal liabilities on them as directors to ensure compliance.

All this means that directors of Singapore companies would be well advised to acquaint themselves well with all the activities of their companies which may impact, or may be impacted by, climate change, and take action as may be necessary to ensure that climate change issues are addressed by their companies in accordance with the applicable regulations and directives. Failure to do so can result in criminal and civil liabilities for their companies and themselves personally. ■

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Changing the Climate in the Boardroom

By **RON SOONIEUS** and **DAN CULLEN**

New research reveals that many boards are failing to walk the talk when it comes to the importance of climate change, but there is hope in the horizon.

Through the Glasgow Climate Pact, nearly 200 countries have agreed to strengthen their targets for cutting greenhouse gas emissions. Companies around the world must act – and their boards must show leadership. How have directors coped with climate change to date? How far is the issue integrated into corporate governance and management processes? And what practical steps can boards take to make real progress on addressing climate change?

INSEAD and Heidrick & Struggles sought to answer such questions in a recent global survey of 300 board directors. The study focused specifically on climate change, rather than the broader "sustainability" or "ESG".

The results revealed a stark fact: With respect to climate change, there is a big gulf between what many directors say and what they do. Nevertheless, there are reasons to be optimistic.

1. Climate change is moving up the agenda.

Climate change has become a firm fixture on most board agendas. Some 75 per cent of respondents believe the issue is "very" or "entirely" important to the strategic success of their companies.

Furthermore, 63 per cent report that their board has a clear understanding of the risks and opportunities that climate change presents to the business. In addition, 60 per cent claim that they and their fellow directors are "very" or "entirely" aligned on the importance of the issue and what to do about it.

That three out of four respondents grasp the strategic importance of climate change should be a cause of optimism. New regulations are coming, corporate governance codes are changing, activist investors are reshuffling boards, and there is even talk of directors being held personally liable for corporate greenwashing. Acting on climate change is becoming part of a company's licence to operate.

On the flipside, 72 per cent of respondents say they are "very confident that their company will meet its climate change goals". Is this confidence misplaced, or are the goals ambitious enough?

2. But there is a lack of targets and inadequate reporting.

Take carbon emissions reduction. A startling 43 per cent of the sample admit that their companies are not yet working to such targets (although

some are in the process of setting targets). Moreover, half of the respondents say they are satisfied with current reporting to the board on climate change. Note that "reporting on climate change" includes the impact of wildfires and floods on the business, as well as the business's impact on rising global temperatures.

Boards need to insist that executives set ambitious and realistic decarbonisation targets, while ensuring that they are balanced with overall business targets. If expertise allows, they should specify the gold standard: Scope 3 targets that cover the entire value chain, from suppliers' operations to employees' commuting. Only 16 per cent of the sample currently have targets in this category.

Boards should also insist on better reporting. Alongside updates on overall decarbonisation performance and impact of climate change on the entire portfolio, directors should demand more specifics. What are the likely effects of climate change on a given product or facility? What is the risk of that facility becoming a worthless "carbon-stranded" asset?

In order to evaluate such reports, boards will almost certainly need to educate themselves. In fact, 85 per cent of those surveyed say their boards need to increase their climate knowledge. And 46 per cent say their boards do not even know enough about the implications for financial performance.

3. Climate expertise is not sufficiently prioritised.

Some of the more alarming findings uncovered by the survey are as follows.

- 69 per cent say climate knowledge is not a formal requirement for joining or staying on their boards.
- 65 per cent say climate expertise is not a formal requirement when recruiting a new CEO.
- 74 per cent say climate change is not (or is only slightly) integrated into executive performance metrics.
- 49 per cent say climate change is not (or is only slightly) integrated into the company's investment decisions.

The good news is that there are many easy measures that boards can implement. These include adding climate (and wider ESG) knowledge to the board's competency matrix; requiring climate expertise in the next CEO search; creating climate-related key performance indicators for executives – with bonuses attached; and considering climate change in every major decision, whether about new investments or old assets.

Why, then, have so few acted already?

It could be that boards are only paying lip service to climate change. However, it is more likely that directors are overwhelmed by the complexity and scale, thus failing in their climate and wider ESG responsibilities. Most likely, boards are caught in a vicious circle, where climate experts may lack board-level business experience, and directors may be deficient in climate knowledge.

On climate change, and many other topics (from cyber security to diversity, equity and inclusion), boards must rethink who can add value to a board beyond traditional requirements. If adding director expertise is not an immediate option, boards must find other ways to inject knowledge, from external specialists to advisory boards to crash courses at business schools.■

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A Practical Guide for Boards on Sustainable Growth

With changing societal expectations, companies' business models are evolving. Covid-19 has forced businesses to focus on sustainability and to embrace lasting value creation that benefits not only shareholders but also other internal and external stakeholders.

There is a heightened emphasis on the relationship between environmental, social and governance (ESG) issues. In March 2021, ecoDa published its "Five Corporate Governance Guidelines to Accelerate Change and Sustainable Growth in Europe". It outlines good practices already implemented in several European countries for sustainable success and economic growth.

In November 2021, ecoDa and Mazars followed up with a guide aimed at helping board members and leadership teams navigate their companies' sustainability journey. A Practical Guide for Boards and Leadership Teams on Sustainability offers insights on key issues. It also identifies the questions that should be on the board agenda, from why boards and leadership teams should commit to fostering sustainability to how to move to determined action.

The guide also poses a series of questions designed to enable directors to identify areas where further action is needed, and a tool to assess the stage at which a business is currently situated along its sustainability journey.

Seven critical success factors

Sustainability is increasingly embedded in national corporate governance codes. There is growing debate in the European Union and other jurisdictions aiming to cast sustainability as a fiduciary duty for directors.

Sustainability needs to be seen as an issue for all board members, not just directors in selected positions. However, future-proofing the sustainability of the business has to be an ongoing priority rather than a one-off recalibration. The seven critical success factors set out here will help boards implement the "commit, think, act" approach. See box, "Seven Critical Success Factors for a Sustainable Board".

1. Leadership and tone from the top

The board should wholeheartedly commit to achieving sustainable success and put in place an appropriate structure to enable it to achieve its

Seven Critical Success Factors for a Sustainable Board

goal. Board members should also act as personal role models. For example, by linking their remuneration significantly to sustainability goals, and taking decisions that may have a short-term adverse impact on profitability, but will benefit the long-term goals of the business. They should also keep up to date on sustainability developments and adapt their strategy accordingly.

2. Purpose-led

The ultimate responsibility for defining purpose rests with the board, and they have a duty to take a longer-term perspective extending beyond the tenure of any management team. Each business should have an inspiring, durable and credible purpose which, if fulfilled, will lead to sustainable success for the business, its stakeholders and society. The purpose should be approved by the board and shareholders following full consultation with other stakeholders. With a well-defined purpose as its foundation, board members and senior executives are then empowered to ensure that the business model and strategy are aligned to it.

3. Stakeholder orientated

Strong emphasis must be placed on engaging in a dialogue with stakeholders and shareholders. This includes treating them fairly, both in business and financial terms. In doing so, the board must seek to understand issues of importance to all stakeholders and provide feedback on any concerns raised. The relationship the board seeks to develop with its stakeholders, including shareholders, as defined by goals and priorities, should be set out in a clear statement.

4. Strong organisational culture of sustainability

The board must clearly articulate the culture and values of the business and how these support its commitment to delivering its strategy for achieving sustainable success. These values must be at the heart of the business and fully considered in decision-making, including on matters relating to its employees and business transactions such as investments and disposals. An employee's alignment with the values should play a pivotal role in recruitment, progression and reward.

5. Sustainability deeply embedded throughout the business

Ownership of purpose starts with the board, who must put in place appropriate structures, control and information systems, and processes for delivering it. This requires engaging effectively and genuinely with shareholders, employees and other stakeholders such as customers, suppliers, investors and other providers of finance. Metrics used to determine promotion and remuneration policies need to be closely aligned to sustainability targets.

6. A learning approach – a journey

Sustainability is a journey. It is not an endpoint that you finally reach. It is a path towards realigning the company's purpose, its strategy and business model in harmony with nature, people and communities. As companies increasingly engage in sustainable business practices, the importance of understanding how to continuously learn about sustainability – and spread this learning across the business – becomes critical.

7. Openness in reporting

Reporting requirements on non-financial information are increasing and include the board or leadership team's approach to and the setting of performance targets and metrics. The key to success with sustainability is long-term commitment and conviction, honest reporting and steady progress. The corporate landscape is changing, and boards need to be ready and sufficiently agile to respond to changes. ■

Time for Boards to Bite the ESG Bullet

By **MARCUS LAM**, Executive Chairman, PwC Singapore

When the big boys of the business world make it loud and clear that environmental, social and governance (ESG) issues sit at the heart of their investment approach, it is a wake-up call for corporate boards to bite the bullet.

ESG initiatives are no longer about dressing up with feel-good stories of sustainability, diversity and ethics to appear socially responsible. Today, ESG covers environmental issues like climate change and natural resource scarcity; social issues like labour practices, product safety and data security; and governance matters such as board diversity, executive pay and tax transparency.

Stakeholders across the board – customers, employees, suppliers and communities – are demanding, with significant voice and expectations, ESG-led value creation. Top next-generation talents are voting with their feet and weighing career decisions with a watchful eye on their employers' stand on ESG. Investors and rating agencies that determine brand perception and access to capital are drawing the line under ESG expectations. And regulators are already

incorporating ESG elements into mandatory reporting regimes.

In 2020, 155 companies, with a combined market capitalisation of over US$2.4 trillion (S$3.2 trillion) and representing over five million employees, signed a statement urging for policies supporting efforts to hold global temperature rise to within 1.5 degrees Celsius above pre-industrial levels, in line with reaching net zero emissions well before 2050. Of the 73 countries committed to net zero carbon emissions by 2050, five have set legally binding targets on achieving net zero emissions.

Leading the ESG agenda

The urgency to build trust and deliver sustained outcomes in an environment of such enhanced societal and business expectations has never been so intense and important. In response, the world is moving fast in making ESG a top priority. Amid the heightened interest among various stakeholder groups across companies, corporate board leaders agree that ESG issues entail real risks and, more importantly, unfold bigger opportunities.

In leading the way on ESG, boards have a responsibility to assume an oversight role, not only ensuring the company's strategy embeds ESG but also delivers results, while taking into account the associated risks. Here's how boards can do it.

1. **Ensure the company's purpose reflects its ESG commitments, and link purpose, risk and messaging.**
   Businesses need to ensure that the organisation's purpose is reflected through its messaging and activities, while looking at it with a risk lens. As part of its oversight role, the board needs to engage with management to understand how the company's purpose, messaging and risks all tie together.

- **Purpose and messaging:** An organisation's purpose should be clearly articulated, keeping in mind key stakeholder needs, and should be aligned with business strategy. Boards need to ensure that the management is communicating the company's purpose and goals in furtherance of long-term sustainable success, with both quantitative and qualitative information. Robust processes need to be in place to monitor competitors' activities, other benchmarking data and what the rating agencies are reporting.

- **Accountability:** Boards should look to hold the management accountable in leading and driving the ESG agenda, clearly defining the approach to ensure such oversight. They must understand what ESG standards and frameworks the management has evaluated to ensure they are addressing the most significant industry risks and issues. Consider linking executive pay to performance on prioritised ESG goals, underscoring the strategic importance of these issues to the company.

- **Risks and enterprise risk management (ERM):** Know if the company's existing risk processes include ESG risks identification or if the processes need to be expanded to capture broader risks. The ERM process should include assessment and mitigation plans for all identified ESG-related risks. The board needs to understand how the management prioritises ESG risks and opportunities and if these are included in capital allocation decisions.

2. **Report metrics to develop quantitative messaging, aside from qualitative messaging.** An effective ESG messaging with a cohesive story reinforces the company's purpose statement. ESG metrics provide quantitative facts bringing that purpose to life while measuring progress toward goals. With a focus on the current state and milestones to achieving long-term goals, the board can guide the process to develop consistent and controlled policies for quantifying and reporting metrics.

   - **Align metrics** reported externally with those used by management in running the business. Organise metrics in a systemic way while leveraging standards or frameworks. Offer comparison figures to demonstrate consistency.

   - **Determine the appropriate format** and how frequently to report. To provide context, identify the most relevant metrics considering the entity's industry and markets.

   - **Materiality** is an important criterion in deciding which metrics to disclose and could potentially impact brand and long-term value. Consider the materiality concept most important to the company's stakeholders. Financial materiality, most relevant to financial investors, accounts for how ESG issues impact a company's financial performance and its ability to create long-term value. Social materiality, relevant to a broader range of stakeholders (including many ESG investors), focuses on how a company's actions impact people and the earth.

   - **Implement controls** over the preparation and reporting of metrics with the same rigour as controls over traditional financial reporting.

3. **Ensure reliability of ESG information.** Once the company has settled on the qualitative and quantitative messaging it will disclose, the board should verify if the information is consistent and reliable. After all, investors will be using it to analyse the company and make investment decisions. Boards need to ensure the following.

   - **Robust policies and procedures** for the development of their disclosures, and understand which international frameworks or standards their disclosures are aligned with and if they are investor-grade.

   - **Strong internal controls** for the completeness and accuracy of the disclosures. If any gaps are identified, the board may ask the management about plans on mitigating those gaps.

   - **Independent assurance** requirements, if any, to ensure stakeholders' confidence in the accuracy of disclosures and serve as a differentiating factor among peers.

4. **Disclosure platforms.** With the messaging determined and an assessment of the reliability of the information complete, the board should understand where the company will be disclosing its messaging.

   - **Right platform** addressing various stakeholder preferences. For example, customers or employees most likely refer to the company's website for ESG information, while investors mostly refer to either corporate responsibility reporting, annual reports, or proxy statements.

- **Consistent disclosures across various platforms** and appropriate for the different audiences. For example, disclosure of material risks in a corporate responsibility report in alignment with those identified in the company's annual report.

- **Incorporating ESG messaging in operational discussions**, such as quarterly analyst calls. The board should consider its exposure when including ESG information in quarterly/yearly reporting and announcements.

5. **Know where the responsibility lies.**
Given the ESG strategy should be embedded within the business strategy and focus on material risks and business drivers, the board needs to understand how the company is measuring and monitoring its progress against milestones and long-term goals. In addition, the board must be aware of how the ESG messaging and activities align with the company's purpose and stakeholder interests and how the ESG risks are being identified, incorporated into the ERM and mitigated. Detailed oversight can be assigned to specific committees to help the ESG strategy launch and deliver smoothly. For example:

- **Audit committee** to oversee:
1) Disclosures: Whether the ESG disclosures (both qualitative and quantitative) are investor grade, which ESG frameworks and/or standards is the company using?
2) Processes and controls: Are there processes and controls in place to ensure ESG disclosures are accurate, comparable, and consistent?
3) Assurance: Should independent assurance be obtained to ensure ESG disclosures are reliable?

- **Compensation committee** to oversee:
1) Accountability: Are the ESG goals and milestones effectively integrated into executive compensation plans?
2) Talent and culture: How is management organised to execute the ESG strategy? Are the right people and processes in place? Does the company have a culture which embraces ESG efforts?

- **Nomination and governance committee** to oversee:
1) Engagement: Is the company's ESG story being effectively communicated to investors and other stakeholders?
2) Board composition: Does the board have the necessary expertise and skills to oversee ESG risks and opportunities?
3) Education: Does the board understand why ESG is important to investors and other stakeholders? Is the board appropriately educated on ESG?

Sustained outcomes

In summary, ESG issues should be embedded at the heart of a company's business strategy and purpose. Increasingly, sustainability reporting and ESG metrics are putting the spotlight on disclosures and "walking the talk". Boards that are yet to contextualise their organisations against the present and future ESG landscape are most certainly risking their organisation's ability to create long-term value.

ESG issues vary widely by industry and company maturity, and there is no one-size-fits-all solution, but it is increasingly clear that directors have a big role to play in guiding management to allocate the appropriate resources and attention. Companies that value being a frontrunner on ESG issues see the direct connection to building trust and delivering sustained outcomes. ■

Rising Tide on Climate Risk Management and Financial Disclosures

By **ANDREW BUAY**,
Vice President, Group Sustainability,
Singtel

Photo credit: Andrew Buay

Climate change is no longer a topic for the "weatherman". Company directors need to understand what these developments mean for their companies and their own responsibilities as directors.

Climate-related concerns remain one of the key issues for company stakeholders despite the ongoing Covid pandemic. It has rapidly progressed from an esoteric topic "for the future" to a "here and now" issue backed by science and increasingly shaping the flow of capital.

As governments, regulators, investors and other stakeholders increasingly expect companies to respond to the issue and disclose the business and financial impacts of climate change, company directors need to understand what these developments mean for their companies and their own responsibilities as directors.

Parallels between Covid-19 and Climate Crisis

	Covid 19 Pandemic Crisis	Climate Crisis
Low probability of a high impact and extreme "black swan" scenario	What if there is a sustained global pandemic?	What if global temperatures rise by > 4 degrees by the end of the century?
Systems-wide impact and dependencies	Global, government, private sector and community impacted	Global, government, private sector and community impacted
Disruption to global supply chains	Offshore and outsource operations and foreign worker dependency	Physical disruptions or policy shocks creating supply chain and counterparty risks
Impact to local community and customers, in turn, impacting business	Health, well-being, and employment impact	Community displacement, social and economic vulnerability from increasing climate-related natural disasters
Government regulations and policies significantly impacting business	Disruptive pandemic operating restrictions	Disruptive carbon taxes, energy efficiency standards
Cross-border	Travel restrictions	International carbon tax tariff on import of "high carbon" goods and materials

Accelerated by parallels from the pandemic

Contrary to expectations that the Covid pandemic would have put global warming and climate change on the backburner, the many parallel analogies between the two existential crises have probably fuelled greater attention to climate risks. See box, "Parallels between Covid-19 and Climate Crisis".

Even while the pandemic was underway, many parts of the world witnessed weather extremes and disasters which would have been previously assessed as having a one-in-a-hundred-year probability, all happening within a few years of each other. Examples include the extensive and devastating bushfires across New South Wales,

Photo credit: Andrew Buay

Australia which were followed by massive flooding a few months later.

Rising tide of concerns with the financial impacts of climate risks

While the alignment of the science behind climate change was a key driver of changing sentiment, a key shift from a corporate angle really started in 2015 when the Financial Stability Board undertook public and private sector consultations to formulate how the financial services sector could take into consideration climate-related risks. In particular, "how could such risks potentially impact investors, funds, insurers and banks through their portfolio of investments and clients?"

This led to the creation of the Task Force on Climate-Related Financial Disclosures (TCFD). In 2017, TCFD released its first report and recommendations to help the financial sector identify and use better information, disclosures, and analysis to make informed decisions and price in climate-related risks.

Although initially targeted at the financial sector, the TCFD recommendations and framework have gained momentum across financial regulators and are being adopted as the "gold standard" by many stock exchanges, investment funds and other corporates and sustainability-linked indices.

As of October 2021, it was estimated that over 1,650 publicly listed companies across the world had begun some form of TCFD-based disclosures. Over 120 governments and regulators across 89 countries and jurisdictions are either adopting or actively considering the framework of corporate disclosures related to climate risks. Major investors like Blackrock have also been active in advocating directly to the CEOs of their portfolio companies.

There is an increasing trend of major shareholders voting against AGM resolutions when a company was deemed to have inadequately considered climate-related issues – whether in terms of their business contributing to greenhouse gas/carbon emissions, or risk management, or management inaction relating to the climate agenda.

Since the start, the Singapore Exchange has been a key member of the TCFD working group and has been consulting with various organisations. In August 2021, it proposed mandatory use and disclosures by listed companies in a public Consultation Paper on Climate and Diversity. These embedded recommendations relating to corporate disclosures are aligned to the recommendation of the TCFD.

TCFD guiding the "how"

Climate change remains a complex topic for most corporates and sectors. The TCFD framework provides a practical and progressive approach to how companies can think about the topic. (See box, "Four Elements of the TCFD Recommendations"). The framework focuses on four core elements:

Four Elements of the TCFD Recommendations

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the company's governance around climate-related risks and opportunities	Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	Disclose how the company identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
a) Describe the board's oversight of climate-related risks and opportunities	a) Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term.	a) Describe the company's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the company to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management's role in assessing and managing climate-related risks and opportunities	b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy and financial planning.	b) Describe the company's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2˚C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management.	c) Describe the targets used by the company to manage climate-related risks and opportunities and performance against targets.

- How climate risks are governed within the company.
- How climate can impact the business strategy in terms of risks as well as opportunities.
- How companies describe their risk management processes.
- How companies disclose the relevant targets and metrics related to the topic.

The aim of the TCFD framework is to progressively have companies translate these risk and opportunities into financial impacts. This is to guide management action and financial planning, as well disclosures and guidance to investors, shareholders and lending institutions.

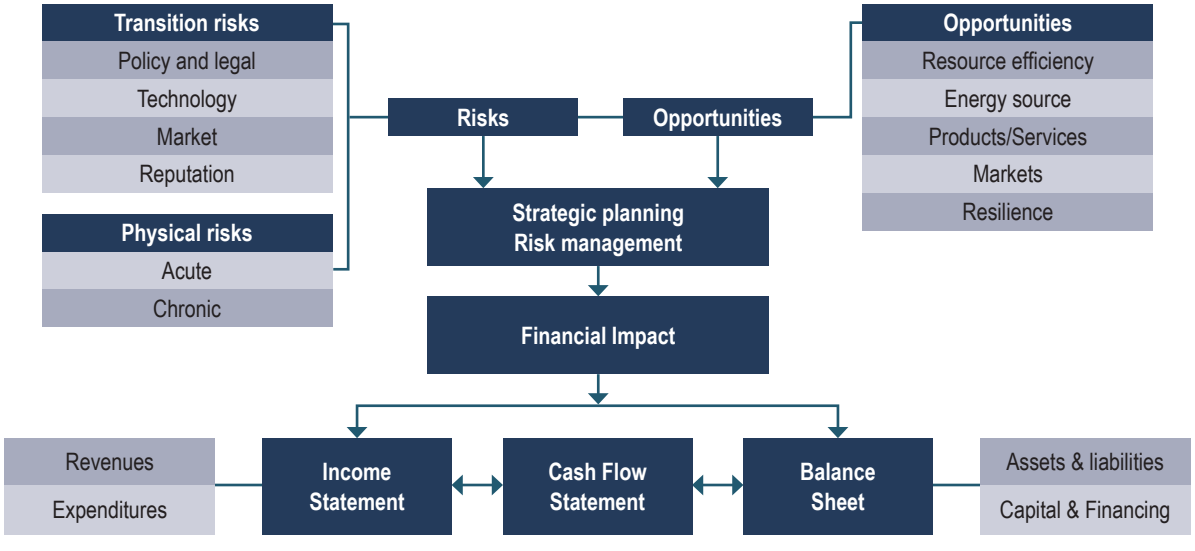
The financial analytical process involves considering how such physical and transitional risks can be translated to and linked to the business drivers and financial metrics of the company, and finally reflected in its impact to income, cashflow and balance sheet. See box, "Climate-Related Risks, Opportunities and Financial Impact".

Photo credit: Andrew Buay

Examples of physical risks with financial impact could include damage to physical infrastructure and assets; costs of infrastructure adaptation; increase in insurance; or impact to customer and supply chain.

Transitional risks could include regulatory and policy shocks such as carbon taxes; new energy efficiency standard resulting in premature obsolescence of technology; and even activism and reputational risks.

Climate-Related Risks, Opportunities and Financial Impact



Source: Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures

Questions Directors Can Ask Management About Climate Risks

- What is management's view on the relevance of the climate agenda to the business?

- What aspect of the company operations, assets, supply chain and customers could be adversely impacted by extreme climate-related weather events and natural disasters?

- What climate-related government regulations or policies could have material impact to the business or the financials of the company?

- How does management plan to factor these into the company's enterprise risk management process, analyst guidance and eventually corporate disclosures?

- Are there areas our business could be subject to "activism": whether from investors, AGM resolutions or other climate related activists?

- How might climate transitions pose an opportunity for the business?

A third and less known component is litigation risks. These can include class action suits for unexpected share price or financial performance downgrades due to climate-related physical or transitional factors not adequately disclosed. They could also be breach of contracts and counterparty risks.

The key aspect of the analysis is whether such exposures could have a material impact on the company's financial position in the short or long term.

Not an overnight journey

The corporate journey of climate risk management is not an overnight one but a progressive and iterative process. Initially, there may be more questions than answers. Often, it is in the internal management dialogue and reflection that will yield value and not just the hard and tangible financial metrics of the short term.

Engaging in the topic earlier is important to get ahead of the risks, changes to stakeholder interest, and regulations that could impact the company. (See box, "Questions Directors Can Ask Management About Climate Risks").

Once the company has a handle on the risks, it will also start to see the benefits and opportunities that come with it, whether in terms of cost efficiencies, or new services and solutions that could address the climate issue. Better customer engagement and reputation is also another benefit.

One thing for sure is companies will start to witness the flow of capital that is increasingly driven by climate-related considerations. This could be divestments of climate risky businesses or investments in climate solutions. Sustainability linked financing is also on the uptrend for which climate-related metrics like emissions reduction are a common performance target to either lending discounts or penalties. ■

How Boards Can Drive Better Climate Risk Disclosures for Resilience

By **SIMON YEO,** EY Asean Climate Change and Sustainability Services Leader

Companies can manage their climate risks and opportunities more robustly by addressing the key gaps in their climate risk disclosures.

In recent years, there has been a growing spotlight on climate-related disclosures by companies, driven by pressure from regulators, investors and consumers. To build trust and gain confidence in a sustainable future, it is imperative that companies fully understand their climate risks and opportunities, decisively drive their climate strategies and better communicate their performance.

Stakeholders want a more comprehensive disclosure than ever before, but the picture is incomplete. An EY study on climate-related disclosures by Singapore companies suggests that more work is needed.

The *Singapore Climate Risk Disclosure Barometer 2021* examined the coverage and quality of reporting on the Task Force on Climate-related Financial Disclosure (TCFD) recommendations by 93 companies across 11 sectors. (See box, "About the TCFD Recommendations").

Companies are assessed across all four aspects of the TCFD recommendations – governance, strategy, risk management, and metrics and targets. They are scored on their coverage (the number of recommended disclosures they make) and on quality (the extent or detail of each disclosure).

It was found that just under half of those examined have disclosed some climate-related risks, while only 14 per cent have disclosed information for all 11 TCFD recommendations. What's more, quality scores are significantly lower than coverage scores – at an average of 18 per cent across the companies analysed.

When compared with global counterparts, the difference is stark. Singapore companies are found to significantly lag behind global businesses in both quality and coverage of disclosures.

This is of concern. The climate crisis can fundamentally affect an organisation's business

About the TCFD Recommendations

The TCFD recommendations on financial climate risk disclosures are designed to improve the understanding of the impact of climate risks on organisations while helping them provide forward-looking information to investors on their climate-related risks and opportunities to support informed capital allocation.

TCFD recommendations are built on four core elements – governance, strategy, risk management, and metrics and targets.

- **Governance:** the organisation's governance around climate-related risks and opportunities.
- **Strategy:** the actual and potential impacts of climate-related risks and opportunities for the organisation's business, strategy and financial planning.
- **Risk management:** the processes used by the organisation to identify, assess and manage climate-related risks.
- **Metrics and targets:** the metrics and targets used by the organisation to assess and manage relevant climate-related risks and opportunities.

model, strategy, risks and opportunities. The very viability of the business may, in fact, be at risk. Organisations must therefore keep climate risks and opportunities front-of-mind as they chart their future growth strategies. They need to understand the physical and transition risks they face, and the opportunities they can leverage to protect and enhance their company's value.

The research highlights a few areas that boards can focus on in driving more robust climate risk disclosures.

Drive greater transparency on leadership oversight

The board's responsibility for the monitoring and management of material environmental, social and governance (ESG) issues is a core principle and mandated under the Singapore Exchange sustainability reporting rules. By extension, where climate change is identified as material to the business, disclosures in board statements should include specific actions that the board has taken to consider climate-related risks and opportunities as part of its strategy formulation, and how it oversees the management and monitoring of these factors.

Yet, few companies are disclosing board or senior management oversight of climate risks and opportunities. Coverage scores for governance disclosures stand at only 32 per cent – the lowest among disclosures on the four core elements of the TCFD recommendations. Even fewer delineate the roles and interaction between that of the board and management on climate-related issues.

Apply climate scenario planning

Under the strategy category of the TCFD recommendations, companies should describe three areas: the climate-related risks and opportunities faced; their impact on the organisation's business, strategy and financial planning; and the resilience of the organisation's strategy.

Singapore companies' disclosures on strategy are below par – only 20 per cent of those analysed in the study cover all three areas, while the average quality score stands at 15 per cent.

Notably, many companies limited their disclosures to climate risks, without considering climate-related opportunities. Disclosure on the resilience of their strategy to climate impacts also appears to be lacking. This could be because companies are underutilising structured approaches such as scenario analysis to assess the resilience of future strategic trajectories. In fact, only 17 per cent of the assessed companies perform scenario analysis. Considering that scenario analysis helps turn theories into tangible strategies and is perhaps the most critical aspect of the TCFD framework, boards should steer management to address this gap more proactively.

To do so, companies must understand the relative size and timeframe of physical and transition risks in their geography and industry, and construct worst-case, best-case and most-likely case scenarios, while considering the regulatory and market assumptions across different time horizons. The landscape is always evolving so scenario analyses must be updated whenever significant assumptions change.

View climate risks holistically

Nearly half of the companies disclose their practices in identifying, assessing and managing climate risks. However, their climate risk assessments are mostly limited to certain parts of the business and only include qualitative

analysis. Also, less than a third of the companies disclose how climate risks are integrated into the company's enterprise risk management system.

Climate-related risk management must be clearly linked with the company's overall risk management processes. For example, climate risks should be recorded in an enterprise-wide database or included in the agenda of firm-wide risk reporting meetings. Risk management disclosures should elaborate on the frequency and methods of assessment of climate-related risks by the senior management and board.

It is not just in risk management that companies need to take a holistic view. They should also focus on accelerating decarbonisation across their value chains. The findings show that alarmingly few companies consider their climate-related supply chain impacts, even though the TCFD recommends that Scope 3 emissions – emissions from up and down the value chain – should be measured and reported if appropriate.

Businesses need to go beyond emissions from their operations (Scope 1 and Scope 2) in pursuing decarbonisation, considering that supply chain emissions are, on average, 11.4 times higher than operational emissions. Boards should assess if the business is deploying decarbonisation strategies across the whole value chain, including proactively involving supply chain partners in the efforts.

Charting a roadmap for action

With the net zero transition gaining momentum, Singapore companies need to act now to accelerate their decarbonization journey and improve their climate risk disclosures. How can boards guide the business to create a strategic climate action roadmap?

Step 1: Understand and assess the impact of climate change on the business: Companies should first identify where their material exposure to climate risks and opportunities lie. Mapping out their entire value chain and analysing their carbon footprint to identify the emission hotspots is important. So is performing scenario modeling to stress test the business and quantify the financial consequences of material climate risks and opportunities.

Step 2: Develop and implement a clear climate strategy: After defining their carbon ambition targets, companies should develop a robust climate strategy that factors global and local developments, stakeholder expectations, and current tools, technologies and resources. Implementing processes to monitor and evaluate the effectiveness of their strategy is crucial.

Step 3: Communicating decarbonisation approach and performance: Companies should provide timely and transparent disclosures – backed up with clear carbon commitments – that allow stakeholders to fully understand and evaluate their climate strategy and performance.

Making quality climate risk disclosures doesn't happen overnight. It would require changes to the organisation's governance and risk assessment processes, and collaboration across the sustainability, risk, finance, operations, and investor relations business functions. In fact, it may take several reporting cycles before an organisation can generate invaluable information for stakeholders to help them make informed decisions.

The earlier an enterprise embarks on its decarbonisation journey, the better positioned it will be to engage with investors and shareholders on the climate-related impacts and opportunities for the business, ultimately building resilience and trust with its stakeholders. ■

Get Ready to Account for Sustainability

By **CHERINE FOK**

What gets measured gets done. The accounting profession is lending its weight to ensuring that the grey areas of climate change and sustainability get properly measured with new accounting standards.

While the push for sustainability has become stronger in recent years, a major sticking point of the ESG movement is the lack of universally accepted standards for how companies can measure and report on their sustainability performance. Towards this end, nonprofits and standards bodies who had previously worked independently to develop standards for sustainability reporting are banding together for common standards in performance and reporting.

Investors and other stakeholders have traditionally looked towards the financial reports as the ultimate accounting for a company's performance. The accounting profession has also joined in this push for more disclosures on ESG matters.

The quiet revolution had been led by the IFRS Foundation, the body that oversees the work of the International Accounting Standards Board (IASB) in setting financial reporting requirements for most companies in the world, across more than 140 jurisdictions.

The IFRS Foundation is striving to put sustainability reporting on the same footing as financial reporting by establishing a sister body to the IASB – the International Sustainability Standards Board (ISSB). The ISSB aims to develop sustainability disclosure standards that are focused on enterprise value. The goal is to drive globally consistent, comparable and reliable sustainability reporting.

Prototype standards

The IFRS Foundation created prototypes to give the ISSB a running start in developing its first two exposure drafts:

- Climate-related disclosures, building on the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations and Sustainability Accounting Standards Board (SASB) industry-based standards.
- General sustainability disclosure requirements.

Built on the latest thinking of existing frameworks and standards, the prototypes are developed with the following considerations:

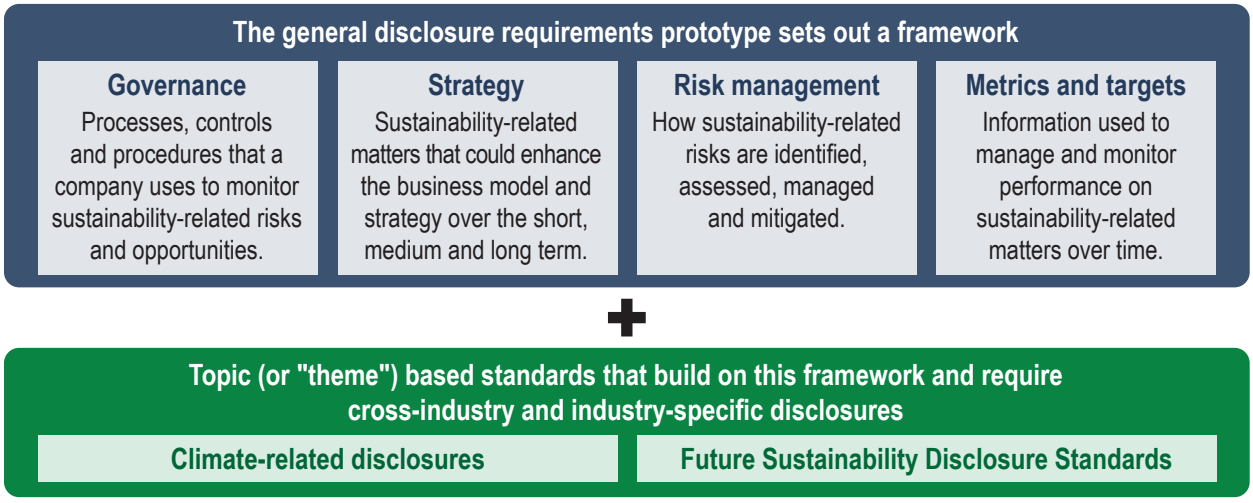
- Aligned to the four pillars of the TCFD's recommended disclosures: governance, strategy, risk management, metrics and targets.
- Enhanced by climate-related industry-specific metrics derived from the SASB's 77 industry-specific standards.
- Additional input from other frameworks and stakeholders, including from the IASB's management commentary proposals.

Importantly, the prototypes bring financial reporting concepts to sustainability reporting by using a similar approach as the IFRS standards. For example, the general disclosure requirements prototype was inspired by IAS 1 Presentation of Financial Statements, which sets out the overall requirements for presentation under IFRS Accounting Standards.

The disclosures set out in the standards are summarised in the box, "Disclosure Requirements".

How they affect companies

Companies will face pressures from investors



Source: KPMG International

and regulators to adopt these new accounting standards.

Investors are increasingly willing to use their voting power to drive transparency over sustainability matters. They have generally supported the adoption of TCFD and SASB standards, and will, therefore, expect companies to adopt the standards quickly.

Regulators are expected to adopt the standards as a baseline. Given the strong support from International Organization of Securities Commissions (IOSCO), the standards could influence local requirements or be adopted in their entirety. Many countries already include broad requirements for the disclosure of investor-relevant information, hence may therefore already require material sustainability-related information.

Audit requirements are not within the ISSB's remit. Regulators may choose to require assurance.

How companies can prepare

While the remit of accounting falls on the accountants, they need to prepare their organisation.

They should first educate the organisation on sustainability reporting and climate-related risks and opportunities, and what it means for the company.

Secondly, they should work towards making finance and sustainability reporting a boardroom agenda. The board needs to consider sustainability when making commitments, decisions and reporting on climate-related issues.

Third, they should engage with the current process owners so that both understand how information is defined, captured and reported, and where the control gaps are.

Fourth, they should explore the options for efficiencies. Certain aspects of data collection and computations can be moved into systems and processes that are already related to sustainability reporting.

The prototypes are part of the evolution from fragmented, voluntary frameworks to authoritative pressure from investors, lenders, customers and standards setting. Eventually, these IFRS standards will need processes and controls to provide sustainability information of the same quality and timeliness as financial information. Accountants and their companies should start getting ready for them now. ■

Cherine Fok is Practice Lead, Sustainability Services at KPMG in Singapore.

Integrating Sustainability into Corporate Governance

By **LAWRENCE LOH**

SID SINGAPORE INSTITUTE OF DIRECTORS | BOARDROOM MATTERS

The board of directors is the main influencer of corporate governance within a company. Poor corporate governance can cast doubt on a company's operations and its profitability. While the key elements of sustainability embrace environmental, social and governance (ESG) issues, sustainability can only be advanced in businesses if it is embedded deep in the board's governance mandate.

How can sustainability be effectively mainstreamed into the boardroom agenda? In Singapore, listed companies are required to adhere to the Code of Corporate Governance on a comply-or-explain basis.

The current Code was issued in August 2018. While a quantum improvement from the earlier versions of 2012, 2005 and 2001, the world has changed since. Recent events, including the global pandemic, natural disasters and the effects of climate change, have brought the issue of sustainability to the fore. Interestingly, the term "sustainability" is mentioned only once in the current Code ("sustainable", "sustainably" and "sustained" are each similarly mentioned once).

Sustainability has to be one of the core parts of the Code in form and, more critically, in substance. Perhaps it is now time to review the Code to correct this lack of balance.

Governance assessment

The recently-released Singapore Governance and Transparency Index (SGTI) by CPA Australia, NUS Business School's Centre for Governance and Sustainability (CGS) and Singapore Institute of Directors is a stark indicator of the need to sharpen the focus on sustainability.

Amongst the five domains of the SGTI assessment, the specific one related to sustainability – engagement of stakeholders – has the lowest relative scores. In fact, it has plateaued in SGTI 2021. Some areas for improvement, such as in addressing the health and safety of customers and employees, ensuring the sustainability of value chain processes, and the training and development of employees, are obvious.

At a broader level of disclosure, about one-third of companies provided non-financial performance indicators, which is well below the almost nine-tenth offering financial performance indicators. This is indicative of the relative tilt of corporate leadership in listed companies.

Sustainability assessment

Drilling down, some detailed insights can be discerned from the Sustainability Reporting Review 2021 by Singapore Exchange and CGS. This review assesses all companies listed on the Exchange, particularly in the alignment with

the five required components of sustainability reporting in the listing rules.

All Singapore listed companies have been required to prepare a sustainability report yearly, beginning with the financial year ended 31 December 2017.

Nonetheless, only 72 per cent of companies consider sustainability as part of strategic formulation. Even less (48 per cent) involve their boards of directors in determining material ESG factors, while a mere 54 per cent oversee management on such factors.

Interestingly, only 26 per cent of companies link top executive remuneration to sustainability performance. This is despite the finding that 70 per cent link sustainability targets with business strategy and 46 per cent link these targets to financial performance which, even in itself, is relatively low.

On a broader level, the review uncovers that 61 per cent of companies include subsidiaries within the scope of sustainability reporting, and only 21 per cent make disclosures on the full business operations including supply chains.

Board synthesis

The combined findings of the two reports highlight causes for concern. It appears that sustainability is still not entrenched at the board level. It may well be that there is low acceptance by directors on the criticality or relevance of sustainability. Or the fact that sustainability is still viewed as more esoteric and less urgent to address immediately than financial, operational or business concerns.

If anything, given the escalating importance attached to sustainability by stakeholders, particularly investors and even consumers, it behoves boards to heed sustainability-related matters. And this includes making the necessary disclosures.

Larger companies generally perform better in sustainability reporting than smaller firms – big-caps perform better than mid-caps, which in turn do better than small-caps. Yet, companies listed on the Mainboard perform poorly compared to companies listed on the Catalist board, on average. This suggests that the sponsor guidance for Catalist companies may contribute to the good showing for Catalist-listed firms. Thus, some hand-holding could bring the smaller Mainboard-listed firms up to par in sustainability.

Take, for instance, a critical aspect of sustainability – climate change. While 45 per cent of companies include climate change factors amongst their economic and ESG considerations, only 2 per cent use globally accepted frameworks such as those recommended by the Task Force on Climate-Related Financial Disclosures (TCFD) for their reporting; these are notably the large-cap companies.

More can and should be done to nudge firms to prioritise sustainability reporting and factoring ESG into their long-term business strategy.

This is where the Code of Corporate Governance can be improved, to provide more guidance on the specific provision of non-financial performance indicators, linking top executive remuneration to sustainability performance, and disclosures on the full business operations (including subsidiaries) and supply chains. A good start would be to mandate the use of globally accepted frameworks such as the TCFD framework. That would help usher in a better climate of sustainability-focused governance. ■

The author is a former member of the Corporate Governance Benchmarks Committee of the Singapore Institute of Directors.

Boardroom Matters is a regular column by SID in The Business Times *and its online financial portal* BTInvest, *where this article was first published in September 2021.*

The Golden Thread Running Through Sustainability

By **MICHAEL TANG**
Head, Listing Policy and Product Admission, Singapore Exchange Regulation

REGULATOR'S VOICE

Environmental, social and governance (ESG) issues have become mainstream considerations for businesses today. With much of the attention paid to the environmental aspects (such as climate change and pollution) and increasingly the social aspects (such as workplace health and safety), it may appear to the casual observer that the governance aspects (such as board structure and accountability) are neglected.

That would be a mistake.

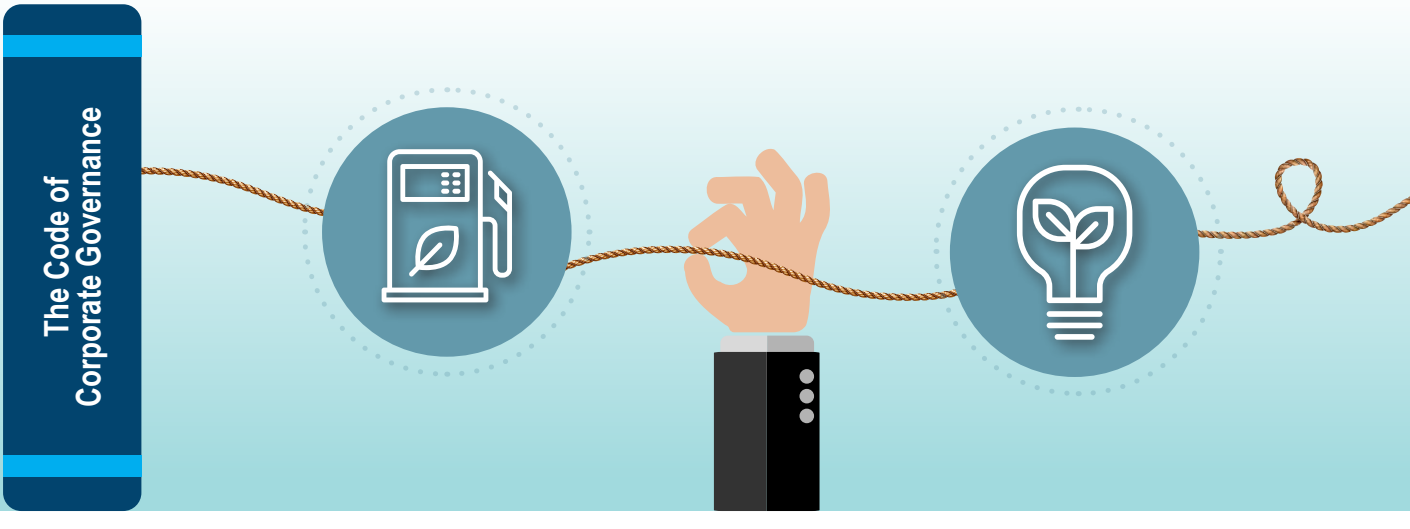
It is said that the term "ESG" was first coined in a landmark study *Who Cares Wins* published in 2004, a project initiated by Kofi Annan and facilitated by the United Nations Global Compact. The initiative brought together global financial institutions to develop guidelines on ESG issues, connecting the financial markets to a changing world.

The report states that sound corporate governance and risk management systems are crucial pre-requisites to successfully implementing policies and measures to address environmental and social challenges. The term, "ESG", highlights the fact that these areas are closely interlinked.

Environmental issues and social issues must be analysed alongside corporate governance issues. Governance is the golden thread running through sustainability.

Sustainability starts with governance

The preamble to the Code of Corporate Governance



(Code) states that sustainability, accountability and transparency are tenets of good governance, and places the responsibility for good corporate governance on boards.

The central role of boards in the proper management of ESG issues is a key reason why Singapore Exchange Regulation (SGX RegCo) requires a board statement in sustainability reports. The sustainability report must contain a statement from the board on its role in determining material ESG factors and overseeing the management and monitoring of these factors.

When we surveyed financial institutions in early 2021, they confirmed our belief that without a strong governance structure, sustainability reporting becomes more of a recording exercise, instead of a cohesive framework that can be used to achieve desired business outcomes.

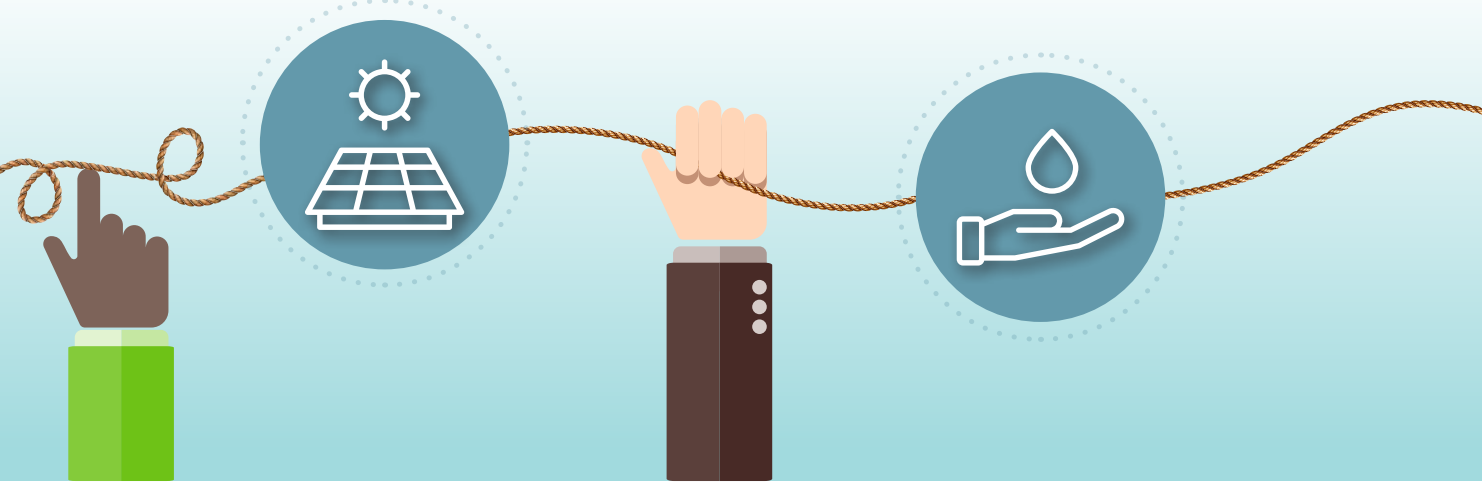
These findings led to the recent public consultation paper, "Climate and Diversity: The Way Forward" published by SGX RegCo in August 2021 (Consultation), where we proposed to strengthen the governance of sustainability issues. These proposals have now been implemented in the Listing Rules as well as the accompanying Sustainability Reporting Guide.

Among others, we proposed a refinement to ask boards to consider sustainability issues in the context of the company's business and strategy. Sustainability issues are business issues. This enhancement sharpens the focus on ESG factors that arise from the issuer's business and the board's strategic response.

In addition, we proposed that the sustainability report should also describe the respective roles of the board and management in the governance of sustainability issues. Management has the responsibility to ensure that ESG factors are monitored on an ongoing basis and properly managed, while the board takes ultimate responsibility for the issuer's sustainability reporting. The board's close interaction with management will enable the board to satisfy itself on the effectiveness of sustainability governance within the company.

Leverage on existing risk and control structures

Today, boards must comment on the adequacy and effectiveness of the issuer's internal controls (including financial, operational, compliance and information technology controls) and risk management systems. This requirement is an extension of the principle in the Code that the board is responsible for the governance of risks



to safeguard the interests of the company and its shareholders.

It can no longer be denied that ESG risks have an impact on the company. The global momentum to combat climate change, for example, means that companies must take action to deal with climate risks and report on these activities to stakeholders. Boards would need to review whether the internal structures within the company are appropriately established to do so.

The internal control and risk management systems should therefore cover material ESG risks and opportunities and the sustainability reporting process. In order to fulfil these responsibilities, boards can leverage on existing governance frameworks.

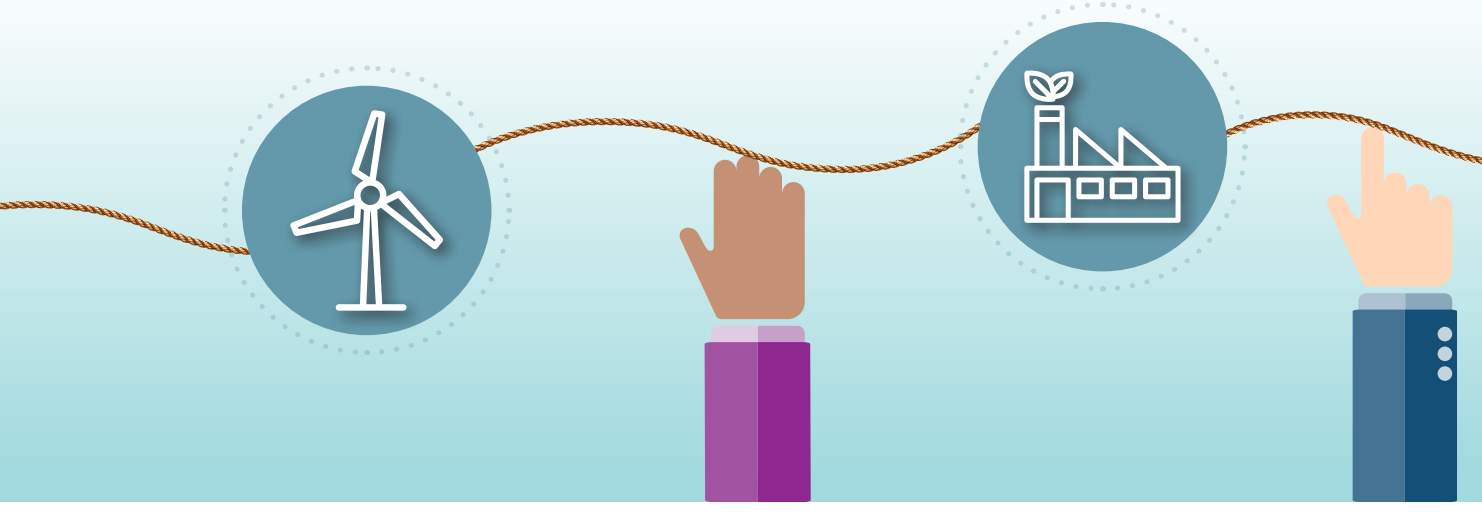
For example, the enterprise risk management structures could be extended to look at ESG risks. The World Economic Forum's Global Risks Report 2021 cites extreme weather, climate action failure and human environmental damage as the highest likelihood risks of the next 10 years. Knowing these trends, a responsible board would need to consider how to manage the associated risks. We ask that companies integrate ESG risks into enterprise risk reviews to enable boards to have a holistic view.

Another area would be internal audit. The Institute of Internal Auditors recognises a role for internal audit to play in sustainability reporting, such as conducting a review of the sustainability reporting process. Internal audit can thus provide reliable assurance to the board on the effectiveness of ESG risk management, including ESG reporting. Internal auditors should cover key aspects of the sustainability reporting process in their internal audit plan.

Progressive regulation needs progressive boards

Companies differ in size, industry, operations and needs. Given the broad spectrum of companies, corporate governance rules are calibrated and designed to be applicable to different companies to varying degrees. A secondary benefit of such design is to allow consensus on best practices to develop. Over time, as practices mature, what was a best practice by early adopters could become a minimum requirement for all companies. From an ecosystem perspective, this differentiation mitigates the weight of compliance while still advocating market improvement over time.

The corpus of corporate governance rules comprises statutory law, subsidiary regulations, listing rules and codes of best practices.



The Code itself is also structured in a calibrated manner.

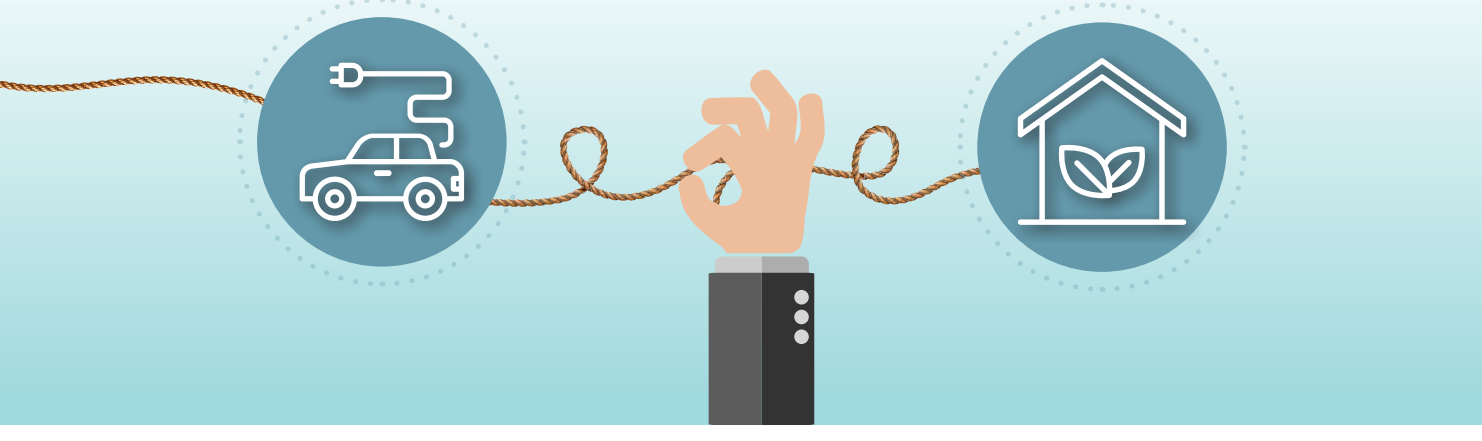
- The Principles of the Code set out basic tenets of corporate governance that all listed companies must comply with.
- The Provisions set out general practices that companies should adopt on a "comply or explain" basis. If they choose to adopt alternative practices, there is flexibility to do so, provided adequate explanation is made of how such substituted measures still meet the aim and philosophy of the requirement.
- A set of Practice Guidance gives more details on best practices that can be adopted on a voluntary basis.

Mandatory requirements apply to set baseline standards that all companies must comply with, such as the establishment of an audit committee by all listed companies in Singapore. The voluntary aspects, including recommendations on a "comply or explain" basis, depend on adoption by individual companies.

In relation to sustainability as well, a progressive approach is adopted. While the Listing Rules set certain basic requirements on the sustainability report (such as the inclusion of a board statement, or climate risks and opportunities consideration), companies are afforded flexibility in various areas. These include the determination of material ESG factors, and the adoption of a phased approach to gradually improve on their sustainability reporting. The quality of reporting is also an area for which the board is accountable – if any question is raised regarding the issuer's sustainability reporting, the board and management should make sure it is addressed.

For a progressive approach to work, boards must give thought to what is best suited for the business and operations. The Code and the Sustainability Reporting Guide set out various recommendations that would benefit companies. In deciding which of these recommendations to implement, and when to do so, companies must not solely take the perspective of operational efficiency or practical convenience. Instead, they need to consider what would meet the spirit of the recommendations, while serving the needs of the company and its stakeholders.

The business environment is challenged by the pandemic, climate change, and new and disruptive technologies. The old adage, that change is the only constant, continues to ring true today. Boards are the master weavers of the corporate tapestry, and sustainability, its worthy loom. ■



Dear Mr Sid

Re: Changing the Climate on Climate Change

I am at my wit's end trying to convince management and my fellow board members in our publishing company to do our part for climate change.

Nearly two years ago, at my first board meeting, I ventured to say that climate change would be the board's biggest challenge in the coming years. I sensed some eye-rolling around the table, and then the chairman firmly stated that we would be focusing on matters we could impact, such as profits, cash flow and compliance, and leave climate change to the scientists and politicians.

Suitably chastened, I resolved to change attitudes through small but meaningful steps. I proposed saving energy and trees by no longer printing the board "papers". There was grumbling, but I prevailed. I suggested we junk the 10-year-old air-conditioning system in the office (maybe not the boardroom) and open the windows, but management has not yet implemented this. I even brought my own coffee mug and pushed others to do the same instead of using paper cups.

I sent reading materials and links about global warming, net zero emissions and sustainability to my fellow directors. One said she appreciated them, but another asked me to stop "spamming" him.

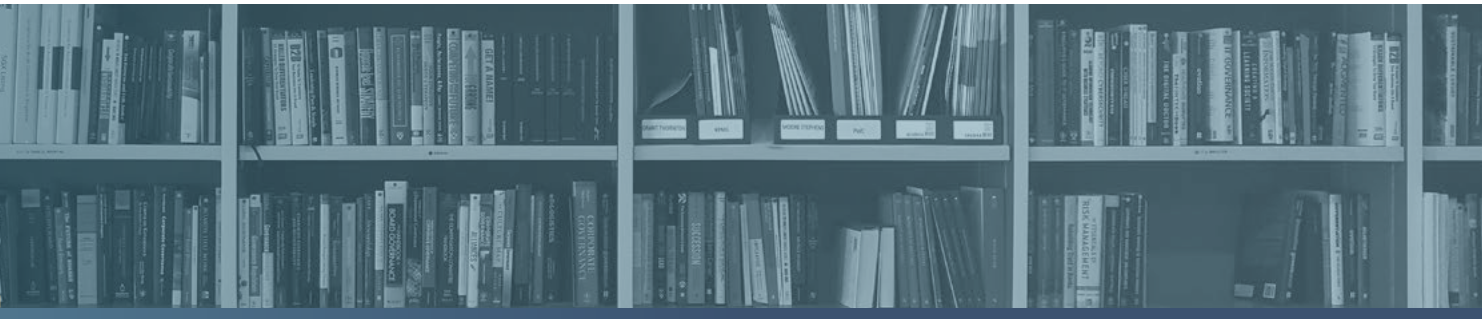
Our business will be dead before the earth dies. We publish educational materials, printed in India and distributed internationally, including to Eastern Europe and Latin America. Sales have been flat.

Six months ago, I proposed we completely transform our business from printed books to e-books. It's a win-win-win. E-books is the trend. Going digital will save on the cost of printing, transport and distribution. Most of all, we save trees and the earth. To mollify me, the chairman suggested acquiring a small e-book firm to "better understand that business". But one board member muttered that I was an environmental terrorist. He should call me a publishing saviour instead.

Mr Sid, how can I convince them that the planet is about to go to hell?

Yours forever (or at least for as long as we've got),

Guardian-of-the-world



Dear Guardian-of-the-world

I commend you on being ahead of your board members on the contentious subject of climate change and sustainability.

You are right that climate change is a pressing issue, and net zero emission targets of greenhouse gases (GHG) is a critical goal for countries, and increasingly for companies. Carbon tax and credits are harbingers of things to come. So, boards should prepare for that eventuality.

However, some of your approaches could be misconstrued as extreme, and you might want to take a more balanced and holistic view of the situation. Let me give you two examples: air-conditioning and books.

Air-conditioning

You are correct to focus on air-conditioning as it typically accounts for about 70 per cent of the energy usage of buildings in Singapore. However, to completely eliminate it may not be realistic either (and it's elitist to have it only in the boardroom).

Lee Kuan Yew once famously hailed air-conditioning as the most important invention of the 20th-century because "it changed the nature of civilisation by making development possible in the tropics". He went on to say: "Without air-conditioning, you can work only in the cool early-morning hours or at dusk. The first thing I did upon becoming prime minister was to install air conditioners in buildings where the civil service worked. This was key to public efficiency."

While we should accept that air-conditioning may be needed for office productivity, there are nevertheless steps that can, and should, be taken to reduce energy consumption and carbon emissions.

The first is to reduce usage. The whole office, for example, need not be entirely air-conditioned. Common areas such as corridors and some rooms with adequate windows and fans may not require special cooling. For air-conditioned rooms, setting the temperature at about 25˚C would save energy because most offices tend to be excessively cooled.

Air-conditioning technology is also important. Yes, you should junk the 10-year-old air-conditioning system, but replace it with an energy-efficient one. Newer systems consume less than half the kilowatts of the older systems, and newer refrigerants (such as R-410A) do not contribute to ozone depletion as the older ones that use chlorofluorocarbons.

If you want to further reduce GHG emissions, use clean energy for your air-conditioning and other electrical needs. You can encourage management to look at solar panels or

purchase green electricity – either solar energy or carbon neutral electricity.

You could justify to the board that all these actions are cost-effective and sustainable, and still recognise that air-conditioning is needed for the staff and board to function effectively.

Printed vs digital books

Your driving rationale for going digital is to save the trees. You believe that digital media is the environmentally preferred choice and print media is the environmentally destructive choice. That is a common assumption, but the reality is more nuanced.

Yes, paper cuts down trees. Chemicals used to enhance paper quality contribute to GHG emissions, and the binding glues and inks also have their environmental footprint. Plus, all the processes involved in getting books into the hands of readers consume energy.

However, the fact is that digital media also consumes significant amounts of energy. While e-readers don't require trees, ink or glue, they consist of electronic components (screen, CPU, battery) which need extraction and transformation of materials such as copper and rare earth. The e-readers and the data centres that host the e-books before they are downloaded all require electricity – continually. What's more, an e-reader has a shorter life-span (about three years) compared to a paper book, which is also more shareable than an e-reader.

The studies on this subject suggest that the breakeven point on the amount of GHG emissions depends upon how well-used the e-readers are and how often the paper books are shared. From the individual standpoint: If someone reads a limited number of books, printed books will have a smaller carbon footprint, but if he/she is a heavy reader, e-books are much more environmentally friendly.

Business model

Rather than just saving trees, you should focus on what your customers want and demand. In general, it is likely to be a hybrid of digital and printed books for some time to come.

I agree that you need to venture into e-books. However, a business transformation takes some thought and time. The devil is in the details of where and how. For example, e-readers (including laptops, iPads) are likely to be cost-prohibitive in the developing countries of Eastern Europe and Latin American, where your current markets are. The acquisition of an e-book company might be the fastest way to get past the learning curve.

As a climate change advocate, you should persuade the company to go into the broader aspects of eco-publishing, which is about managing publications based on sustainability principles.

The first aspect of eco-publishing is to decide whether to publish a book in printed or e-form. As explained above, depending on how the books will actually be used and read should affect this decision. If the book is to be printed, print runs also have an impact on the carbon footprint, depending on the rate of returns of the books.

For printed books, there should be in-depth consideration of the paper, inks and formats. You should opt for ecological paper (recycled paper or virgin fibres from responsibly managed forests), sustainable ink (usually made with vegetable oils), and paper formats which reduce

environmental footprint. You can tell the board that one big benefit of eco-efficiency is image and prestige, which would draw readers.

Then, there is the cost of getting printed books into the hands of your customers. The printing press in India likely adds significantly to the carbon footprint with the containers and long shipping routes needed. You might want to consider printing locally, closer to where customers are.

Sustainability committee

In summary, there could be better options for the company to be sustainable and do its part for climate change in significant ways. Some of these ideas, such as clean energy and eco-publishing, are neither extreme nor new. They could be used to persuade your fellow board members if you emphasise their realisable business benefits.

You are already partially there. After all, the chairman did agree to look at e-books.

A more effective way to get the company on the sustainability path is to form a sustainability committee, instead of doing it on your own. You can offer to chair it and bring in like-minded fellow board members – though, maybe not the ones who accused you of spamming or being an environmental terrorist.

All the best in helping to save the planet.

Yours in green

Sid

Mr Sid ■

Who is Mr Sid?

Mr Sid is a meek, mild-mannered geek who resides in the deep recesses of the reference archives of the Singapore Institute of Directors.

Burrowed among his favourite *Corporate Governance Guides for Boards in Singapore*, he relishes answering members' questions on corporate governance and directorship matters. But when the questions are too difficult, he transforms into Super SID, and flies out to his super network of boardroom *kakis* to find the answers.

Mr Sid's References (for this question)

Board Guide
Section 4.10: Corporate Social Responsibility and Sustainability
Appendix 4K: The Evolution of CSR and Sustainability
Section 7.2: Community

Board Risk Committee Guide
Section 5.11: Sustainability Reporting

Boardroom Matters
Vol I, Chapter 46: Towards a New Normal for Business, by Robert Chew
Vol I, Chapter 50: Embracing the 'New Capitalism", by Graham Owens
Vol III, Chapter 47: For Whom Shall Boards Govern?, by Lawrence Loh
Vol III, Chapter 48: Improving Social and Financial Bottom Lines, by Patrick Liew
Vol IV, Chapter 47: What's the Big Deal About Sustainability?, by Lawrence Loh

Directors Bulletin
2019 Q4: Purpose and Profitability – Rethinking Business-As-Usual, by Melissa Kwee
2017 Q3: Impact of Sustainability Trends on Business, by K Sadashiv
2014 Q3: The Emergent New Capitalism, by Stephen B Young

SID Directors Conference Book
2014: Get Ready for the Breakthrough Decade, by John Elkington
2014: The Capitalism We Need, by Constant Van Aerschot

The Singapore Green Plan

The Green Plan seeks to get every Singaporean on board, and motivate individuals and organisations to help transform Singapore into a global city of sustainability.

The Singapore Green Plan 2030, introduced in February 2021, is a whole-of-nation movement to advance Singapore's national agenda on sustainable development.

It charts ambitious and concrete targets over the next 10 years, strengthening Singapore's commitments under the UN's 2030 Sustainable Development Agenda and Paris Agreement, and positioning Singapore to achieve its long-term net zero emissions aspiration "as soon as viable". The plan has thus not set a formal target date for achieving net zero emissions.

Sustainable development

Sustainable development is at the core of the Green Plan. It is about future-proofing the economy. The key initiatives of the Green Plan are set out in the box, "Green Plan Programmes".

To support the Singapore Green Plan 2030, the 2021 Budget provided a slew of incentives and support measures. Among them are:

- Agri-Food Cluster Transformation Fund: S$60 million to support tech adoption in the agri-food sector.
- Electric Vehicles (EV): S$30 million over five years for EV initiatives, such as creating 60,000 charging points at public car parks and private premises by 2030. It will lower the Additional Registration Fee floor to zero from January 2022 to December 2023 and revise the road tax treatment for EVs to narrow the cost difference between EVs and internal combustion engine cars. It also raised petrol duty rates by 15 cents per litre for premium petrol and 10 cents per litre for intermediate petrol.
- Green financing: Up to S$19 billion of public sector green projects have been identified to be financed with green bonds.

A whole-of-society effort

The public sector will take the lead in environmental sustainability initiatives.

Individuals are exhorted to take action through adapting their personal habits (reduce, reuse, recycle), support local produce, get involved with community "ground-up" initiatives, take public transport, walk or cycle, and adopt energy-efficient technologies.

Organisations and businesses are encouraged to adopt environmentally friendly habits, such as reducing the amount of energy, water and paper. To engage businesses, the government has rolled out the following measures.

- Green Finance Masterplan: To build up financial system resilience to environmental risks, develop green finance solutions and markets, and leverage innovation and technology, Singapore can become a leading centre for Green Finance in Asia and around the world.
- SG Eco Fund: This S$50 million fund supports projects that improve and advance environmental sustainability in Singapore.
- Green Procurement: Sustainability will be a consideration in business procurement by the government.
- Green and Sustainability-Linked Loan Grant Scheme (GSLS): The first of its kind globally, the GSLS seeks to support corporates of all sizes to obtain green and sustainable financing.
- Research, Innovation and Enterprise (RIE) 2025: Singapore's R&D strategy will include

Green Plan Programmes

City in nature

Singapore will set aside 50 per cent more land – around 200 hectares – for nature parks. Every household will live within a 10-minute walk of a park. The government has pledged to plant one million more trees across the island, which will absorb another 78,000 tonnes of carbon dioxide and provide more green spaces for humans and wildlife.

Energy reset

With limited space for large-scale renewable energy projects, Singapore will strive to become more energy efficient by (1) Shifting to natural gas, (2) Quadrupling solar energy deployment by 2030, (3) Introducing green technology to 80 per cent of all buildings over the next decade, and (4) provide incentives to move towards electric vehicles. These efforts will reduce energy consumption by more than 8 million megawatt hours per year – translating to reduced domestic greenhouse gas emissions by at least 3 million tonnes per year by 2030.

Green economy

An Enterprise Sustainability Programme will help enterprises, especially small- and medium-sized enterprises, develop capabilities to ride this green wave. The 2019 broad-based carbon tax supports projects that help enterprises reduce their greenhouse gas emissions. Inroads into green finance will help realise Singapore's ambition to become a leading centre for green finance in Asia and globally.

Resilient future

By increasing greenery and piloting cool paint on building facades, Singapore is working to moderate the rise in urban heat. It is also looking at ways to make its food supply chain more resilient by partnering with the agri-food industry to develop alternate food sources and farming methods. The 30-by-30 target aims to meet 30 per cent of the population's nutritional needs through locally produced food by 2030.

Sustainable living

Advancing the concept of a circular economy with a high recycling rate means that precious resources can be used many times over. Singapore is already a pioneer in wastewater recycling (NEWater) and is now developing technology to turn incinerated waste into NEWSand for construction. These efforts will reduce the waste sent to landfills by 30 per cent. The government has put a cap on the growth of its vehicle population. It seeks to raise trips on mass public transport from 64 per cent to 75 per cent by 2030 by improving public transport systems and encouraging walking, cycling and active mobility.

Green government

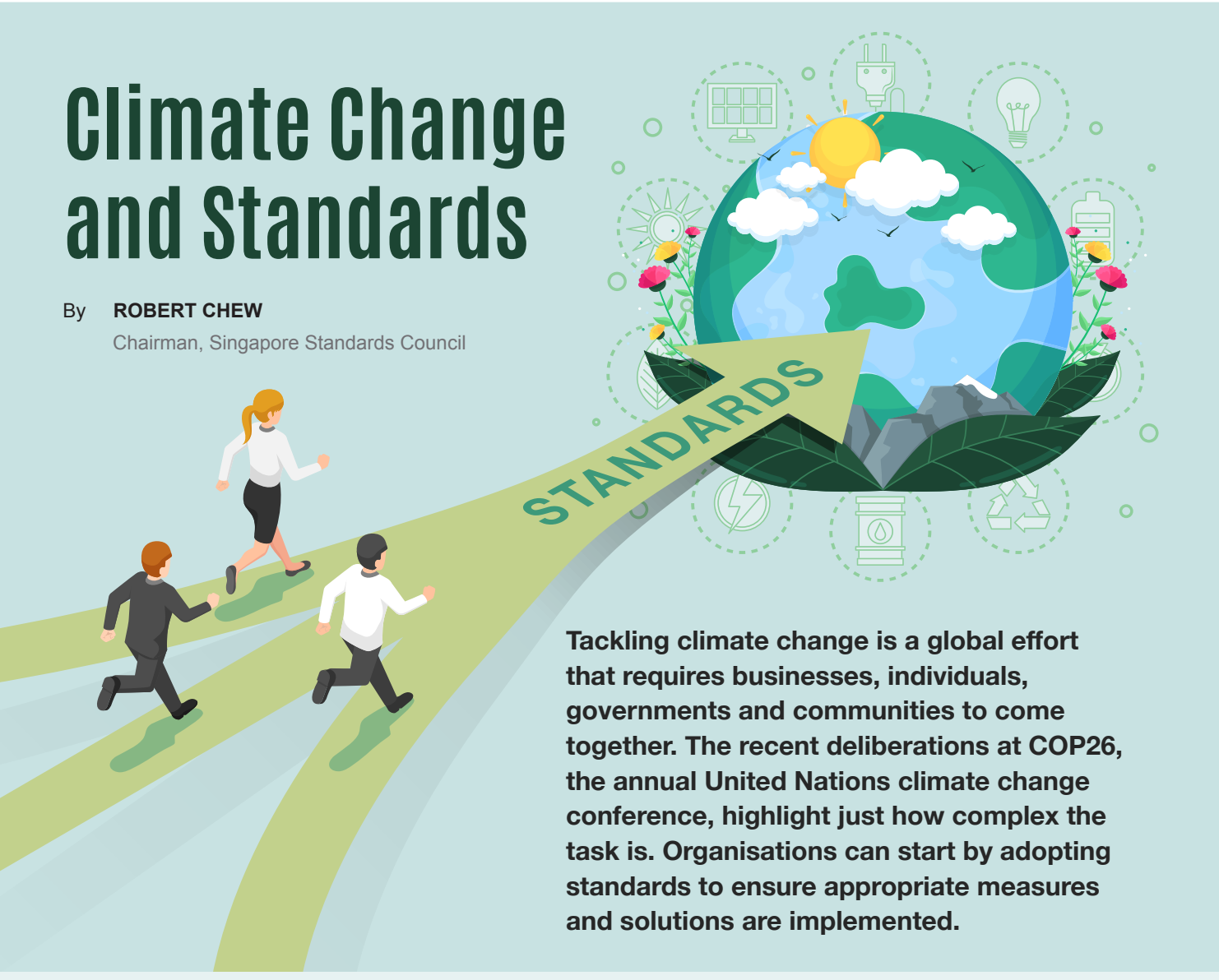
GreenGov.SG is a refreshed initiative to support the national sustainability agenda. The government will set new and more ambitious targets for itself than the national targets. It will enable a sustainable economy and green citizenry by embedding sustainability in its core business. It will seek to excite public officers to contribute actively to sustainability in Singapore.

a focus on new sustainability solutions such as carbon capture, utilisation and storage, low-carbon hydrogen, energy-efficient materials, and solutions for the circular economy, amongst others.

- BCA Green Mark: The BCA Green Mark Scheme seeks to create a more sustainable built environment in Singapore by promoting sustainable design, construction and operating practices in buildings. ■

Climate Change and Standards

By **ROBERT CHEW**
Chairman, Singapore Standards Council



Tackling climate change is a global effort that requires businesses, individuals, governments and communities to come together. The recent deliberations at COP26, the annual United Nations climate change conference, highlight just how complex the task is. Organisations can start by adopting standards to ensure appropriate measures and solutions are implemented.

The latest Intergovernmental Panel on Climate Change (IPCC) Report released on 9 August 2021 addressed the most up-to-date physical understanding of the climate system and climate change. It provided the starkest warning yet of major inevitable and irreversible climate changes across the globe.

"It has been clear for decades that the earth's climate is changing, and the role of human influence on the climate system is undisputed," said Valérie Masson-Delmotte, Co-Chair of the IPCC Working Group I.

The report provides new estimates of the chances of crossing the global warming level of 1.5 degrees Celsius in the next decades. It finds that unless there are immediate, rapid, and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5 degrees or even 2 degrees will be beyond reach.

Despite such dire warnings, supported by solid scientific evidence, progress on climate change remains elusive. Perhaps because this is a global problem, where everyone's problem is then "not mine", and because of the (until now) long-

term implications and costs. Furthermore, many probably find navigating towards sustainable solutions daunting.

However, adopting standards is one of the quickest and surest ways to ensure that businesses are implementing the right measures to go green.

The enormity of climate change

Since the Industrial Revolution, the use of fossil fuels has begun to affect the earth's climate in ways that few could have imagined a century ago. Entire nations have cultivated a deep dependence on fossil fuels, driving earth's temperature up.

The consequences of this change to the climate are seemingly everywhere and have escalated in recent years. Average temperatures are rising, precipitation patterns are changing, ice sheets are melting, and sea levels are rising.

These changes affect the availability and quality of water supplies, how and where food is grown, and even the very fabric of ecosystems on land and in the sea.

Still, climate change and its associated risks may appear as distant and remote in both time and space to many. The natural daily and seasonal variability of the weather can mask the changes in the overall climate.

It is even harder to pay attention to climate change during a global pandemic, but climate change is not any less important. It has to be embedded in the boardroom agenda, and cannot be an afterthought or an appendix. Climate change affects us all and is of immediate strategic importance even as we work towards a resilient Covid-19 society. The only way to avoid the worst-case climate change scenario is to accelerate our efforts immediately.

Climate change is such a huge topic that thinking about a meaningful response seems to be an insurmountable task. Indeed, addressing climate change requires many solutions; there is no magic bullet.

The simplicity of the solution

Yet, most of these solutions exist today. Many of them hinge on us changing the way we behave, and the way we produce and consume energy. The required changes span technologies, behaviours, and policies that encourage less waste and smarter use of our resources.

For example, improvements to energy efficiency and vehicle fuel economy, increases in wind and solar power, biofuels from organic waste, setting a price on carbon, and protecting forests are all ways to reduce the amount of carbon dioxide and other gases trapping heat on the planet.

Countries and businesses are adopting these solutions systematically. Sustained adoption and innovative technological solutions would assure a meaningful reduction in carbon emission, energy use, as well as improve water efficiency and waste management.

In fact, adopting standards is one of the quickest and surest ways to ensure that a business is implementing the right measures and solutions to go green. (See box, "Businesses Using Standards to Go Green").

Standards

A standard is a document that describes the requirements of a product, service, system, or process. Standards address a range of issues, such as defining product functionality and compatibility, facilitating interoperability, enabling sustainability, and supporting consumer health and safety. Standards are developed in a consensual manner for universal adoption.

Businesses Using Standards to Go Green

City Square Mall adopted SS 530 – Energy efficiency for building services and equipment, which specifies the minimum energy-efficiency requirements for new installations and replacements of systems and equipment in buildings. The mall identified chillers as high energy users, consuming 30 to 50 per cent of the total energy usage in the mall, and installed high energy-efficient chillers coupled with proper system design, system configuration, and constant monitoring of system performance stipulated in SS 530. This resulted in monetary savings of about 15 per cent per year.

Systems on Silicon Manufacturing Company adopted SS 577 / ISO 46001 – Water efficiency management systems, which specifies requirements for organisations to have a systematic approach towards monitoring, measurement, documentation of water usage in their premise, as well as establishing, identifying and implementing measures to improve water efficiency. The company saved 3.3 million cubic metres of water annually and achieved a 70 per cent water recycling rate.

Sources: Singapore Standards Council, Enterprise Singapore, City Developments Limited, Systems on Silicon Manufacturing Company

In Singapore, Enterprise Singapore and the Singapore Standards Council actively collaborate with industry partners, research institutes, and government agencies to develop sustainability-related standards. Over 60 Singapore standards have been published thus far. See box, "Examples of Sustainability-Related Standards", for a list of some standards.

However, this approach needs much wider awareness and broader adoption.

There is potential for the adoption of standards in every area of business. Internationally, ISO and IEC have produced more than 2,300 environment-related standards that businesses can reference.

These standards not only help the environment but are also a driver for innovation and industry growth, in areas ranging from waste management and renewable energy to electric vehicles. Standards are useful tools and can be strategic enablers for businesses in their journey towards a safer and better planet.

Today, society is starting to pay the price for a warmer planet, and with it, the costs incurred in trying to address the impact of climate change. This generation is paying now so that future generations can have a planet to live in.

As former UN Secretary-General Ban Ki-Moon once said, "There can be no Plan B because there is no Planet B."

It is imperative for all boards to start directing their business to address climate change if they have not done so, and use standards to fast track this.

Examples of Sustainability-Related Standards

ISO 14001 Environmental Management Systems: Organisations can refer to the framework laid out in this standard to establish an effective environmental management system and improve their overall environmental performance.

ISO 14064 Greenhouse Gases: This standard helps organisations quantify, monitor, report, and verify greenhouse gas emissions using a set of tools, thereby keeping pollution levels in check.

ISO 46001 Water Efficiency Management Systems – Requirements with Guidance for Use: This standard provides organisations with a framework and guidelines on developing a management system to improve water efficiency.

ISO 50001 Energy Management Systems – Requirements with Guidance for Use: This standard provides organisations with guidelines on developing an energy management system to improve energy usage.

SS 587 Management of End-of-Life ICT Equipment: This standard helps organisations manage their ICT equipment (e.g. personal computers, printers, and mobile devices) when the equipment has reached its end-of-life cycle, through equipment recycling and resource recovery.

SS 594 Terminology for Waste Management: Organisations involved in waste management can refer to this standard which defines terms used in waste and waste management, including in the local Singapore context, for consistency.

SS 627 Specification for Different Grades of Industrial Recycled Water from Refineries and Petrochemical, Chemical and Utility Plants: This standard provides guidelines on control measures and the quality of industrial recycled water for applications.

SS 628 Specification for Compost used in Agriculture and Horticulture: Organisations involved in manufacturing, supplying, or using compost can refer to this standard which specifies the requirements of local compost, including physical, chemical, and biological properties.

SS 632 Specification for Organic Primary Produce: This standard provides requirements for production, post-harvest practices, packaging, storage, transport, and labelling of organic produce grown in urban and indoor conditions.

SS 633 Code of Practice for Food Waste Management for Food Processing/ Manufacturing Establishments: This standard, targeted at food manufacturers, lists recommendations for efficient use of food resources and proper food waste management. ■

Improving SME Resilience with ESG

By **RALF SCHMIDT**

Growing awareness of companies' sustainability performance and greater demand for supply chain transparency are global trends. This can put a strain on local businesses but also provides an opportunity to reset and transform for the new normal.

The Covid-19 pandemic has hit smaller businesses especially hard, and many are still in survival mode. The 2019/2020 Singapore Business Federation National Business Survey found that 76 per cent of small- and medium-sized enterprises (SMEs) surveyed felt little to no impact from the growing focus on climate change and environmental sustainability.

As boards reassess their business models, having an environmental, social and governance (ESG) policy provides an opportunity to adapt and stay ahead of the competition. Apart from the obvious reason to commit to sustainable development for environmental and social concerns, the motivation to set up an ESG policy becomes clear in the context of the stakeholder ecosystem.

Incentives for setting up an ESG policy

The corporate world is moving from the shareholder to the stakeholder model. Early adoption can differentiate an SME, bring advantages compared with its competitors, and drive innovation for sustainable solutions. Sustainability increases resilience in the following ways.

First, sustainability compliance enables greater access to finance, as investors scrutinise ESG performance in financing assessments. On the flipside, companies that are not compliant may be penalised. SMEs that supply to multinational companies may find their ESG policies in the spotlight as a condition for doing business. Suppliers respond more readily to sustainable supply chains and companies with good ESG ratings.

Second, adopting sustainable business practices helps align business operations, e.g. reduced energy consumption and waste reduction help improve profitability and optimise resources.

Third, stakeholders are demanding sustainable business practices. Employee retention and commitment are improved with better work conditions, fair wages, safety and security at the workplace, and non-discriminatory practices. Customers are also factoring ESG into their purchasing decisions.

Increasingly, as governments, private and public institutions commit more resources to building a low-carbon future, companies, even smaller ones, must take on sustainability as a strategy to future-proof their business.

How to get started

The commitment for ESG has to start from the top, with the board, CEO and senior management. For a start, defining an ESG policy can help chart out the key sustainability areas for the company. SMEs at different stages of the sustainability journey will have varying priorities.

Resources include the 17 Social Development Goals (SDG) of the United Nations and the Global Compact Network Singapore's SME Guide to Corporate Sustainability. When identifying the key areas of focus, the company's values, strategy, operations, geographic footprint and risk appetite have to be considered.

Key Components of Enterprise Sustainability Programme

Develop sustainability capabilities in enterprises

Strengthen sector-specific capabilities

Foster a vibrant and conducive sustainability ecosystem

Source: Enterprise Singapore

For example, SMEs in the food and beverage industry can look at responsible consumption and production, good health practices, sanitation, gender diversity and climate action. While similar to large businesses, SMEs that ensure a people-first ESG policy can involve the local community and build employee and customer loyalty more readily.

Once the policy has been defined, ESG needs to become part of the organisational culture. Everyone in the company should be involved and included as applicable to their respective roles, more so in smaller businesses. The policy has to be made transparent and communicated effectively, and resources for training, staffing, tools and measurement metrics have to be allocated.

Under the Enterprise Sustainability Programme launched by Enterprise Singapore in October 2021, SMEs can tap on government grants of up to S$180 million to support training workshops, capability and product development projects, and key enablers such as certification and financing. See box, "Key Components of Enterprise Sustainability Programme".

Next steps

Depending on the nature of measures, some rewards, like reduction in energy consumption, can be realised relatively quickly, while others may take effect over a longer period.

Progress and outcomes should be measured regularly and reported for all stakeholders – internal and external. There are various tools available, for example the SDG Monitor which is an easy-to-use tool for linking actions to the SDGs and creating dashboards with the progress for monitoring and communication.

SMEs should prepare for increasing pressure on sustainability issues from all their stakeholders – investors, customers, employees and communities. Boards can help by evaluating the sustainability risks of the business, from physical proximity to regulatory changes. The designation of a Chief Sustainability Officer or a board committee can help ensure that ESG is firmly embedded in the boardroom agenda.

The 2021 *Singapore Directorship Report* by SID found that only eight firms have a board-level sustainability committee, and all of them were large firms, with capitalisation of S$1 billion and above. It is time that SMEs start their sustainability journey and make an impact.

Regardless of size, ESG must be integrated into the company values and organisational culture for long-term sustainable growth. ■

Ralf Schmidt is the Head of Global Finance at Indefol, and the Honorary Hamburg Ambassador to Singapore.

Can Current ESG Investments Address the Climate Crisis?

By **CYNTHIA MOREL** and **MADHUMITHA ARDHANARI**,
Senior Sustainability Strategists,
Forum for the Future (APAC)

While environmental, social and governance (ESG) integration in Asia was still in its relative infancy two years ago, the Covid-19 pandemic has increased ESG investments. The example of the protein system shows that while the push for ESG metrics is a step in the right direction, it falls short of enabling the deep transformations needed to build a just and resilient future.

Recent deliberations over the international climate agreement and global emissions caps have raised awareness of climate change risks. While fossil fuels and renewable energy have dominated the headlines, the extent of ESG investments is wide-ranging.

The food system is a critical base that can shape the region's climate trajectory. Using the case study of the protein system from the Forum for the Future's Protein Challenge Southeast Asia project, it can be seen that there are potential blind spots in the ESG investment trend and the role of financial actors in shaping climate action.

The protein system

The "protein system" encompasses actors, industries, resources and processes working to deliver the world's protein needs. Historically, dairy, poultry and beef sectors were considered as separate; yet they all contribute to the same human nutritional need of protein sustenance.

Research suggests it will be impossible to grow the animal-based protein supply to match future demand and keep within the Paris Agreement emission targets using today's production systems. According to the UN's Food and Agriculture Organization, global livestock production alone contributes to 14.5 per cent of greenhouse gas emissions. Moreover, if livestock production continues to grow on its expected trajectory, cumulative emissions between now and 2050 could be equivalent to one-third of the total remaining 1.5 degrees Celsius carbon budget.

If we are to remain on this trajectory for global warming, current production and consumption habits will need to change. This is particularly urgent in Asia as markets shift towards a higher per capita consumption of meat and seafood, with corresponding greenhouse gas emissions forecast to grow almost 90 per cent between 2017 and 2050.

Central to whether present and future populations are adequately fed, depends on the actions taken today to shape a sustainable protein system that genuinely addresses underlying risks and vulnerabilities. We cannot afford to get this wrong.

Investment in alternative proteins is growing exponentially

Increasingly, animal protein producers are engaging more deeply with questions of how to improve the sustainability of production. Policymakers are exploring new economic opportunities for protein production and innovation. And innovators are developing new plant-based options that mimic meat, as technology startups roll out cell-based meat options. Much of these considerations are driven by the rise of ESG.

The region's potential for disruptive change cannot be overstated. Southeast Asia has seen a 440 per cent increase in vegan and vegetarian plant-based product launches since 2016, albeit from a low base. Given their steep pricing, these may not be entering mainstream diets, but their potential to disrupt livelihoods within the traditional protein system is significant – particularly for smallholder businesses.

While there is more attention, commitment and innovation around alternative protein, the key question is the level of transformation being delivered. Are these actions operating in silos or adopting a holistic view of impacts across the value chain? To what extent do alternatives support the goal of affordable nutrition? Do these alternatives leverage the potential of local crops and traditional knowledge systems? In short, is current innovation in alternative protein supporting a deep transformation of the protein system?

Investing in a new protein system

For sure, investment in alternative proteins in Southeast Asia will be one of the solutions to addressing the protein challenge. The need to reduce greenhouse gas emissions related to livestock, mitigate the risk of zoonotic diseases, and address climate change will impact the security of food supply.

However, to enable transformation, we need to broaden the scope of delivering future-fit food systems. A crucial starting point is for ESG investment to tackle a wider range of impacts

related to protein production and consumption. These include:

1. **Social inequities:** The current emphasis on farm consolidation compounds problems facing smallholder producers. A drive to produce enough protein should consider the access afforded to local populations and the unlocking of human capital. The livestock and fishing sectors have been tainted with allegations of human trafficking and forced labour, as well as antibiotic use for livestock, risking the emergence and spread of antibiotic resistance among humans. Southeast Asia is a region that still suffers fundamental nutritional deficiencies and food poverty, in that affordability of healthy food remains out of reach for many.

2. **Ecological fragility:** Focusing on decoupling protein production from environmental impact and sparing land from agricultural expansion is insufficient to enable more regenerative forms of agriculture that exist in balance with nature. Deforestation and overfishing are driving the loss of natural ecosystems in a region that is an important biodiversity hotspot, with 64 per cent of the region's fisheries at medium-to-high risk of overfishing.

3. **Adaptability:** A strong preference for specific solutions or protein types risks overlooking a diversity of approaches that may be critical for resilience in the face of critical uncertainties.

A futures approach to present challenges

One approach to the complex environmental issues that addresses these dynamics is a futures approach. This means going beyond the narrow focus of primarily mitigating the environmental impacts of production to enabling the growth of systems that can operate in balance with nature and that address the underlying drivers and vulnerabilities.

Some potential future threats include rice harvest failures in the Mekong Delta, coral reef collapses and a global water crisis from drought and dwindling aquifers, for example.

See box, "A Just and Regenerative Protein System" for three emerging visions for

A Just and Regenerative Protein System

Three emerging global and regional visions

Vision 1: A Decentralised Protein System

Smallholder and worker knowledge empowerment; civil society and social movements play a key role. This could mean placing smallholder farmers in the spotlight as landscape managers and custodians of food cultures.

Emerging examples in Southeast Asia: Indonesia's *Green Rebel Foods*, which works directly with farmers from different parts of the country to source key ingredients.

Vision 2: Replenishing soil and restoring degraded land and ocean ecosystem health

Doing so while boosting local livelihoods and rights; involves exploring alternative plant-based protein economies that support regenerative agricultural practices and build soil fertility.

Emerging examples in Southeast Asia: Using future-fit crops to help regenerate depleted soils; *AGREA International's* partnerships with local research centres in the Philippines help reforest areas and provide shade for other crops by planting dwarf jackfruit strains strategically in typhoon areas.

Vision 3: Using local culture and traditional knowledge to encourage a diversity of protein sources

There is an incredible plethora of plant-based protein alternatives cultivated by generations of indigenous farmers that are lost in mainstream markets. For a region as diverse as Southeast Asia, it would be particularly meaningful to highlight these livelihoods.

Emerging examples in Southeast Asia: Everyday citizens and consumers are also advocating for localising and diversifying food systems. Groups like the Philippines's permaculture movement and Singapore's Foodscape Collective are increasingly involved in engaging local communities to increase community urban farming.

Three Ways to Reinvent the Protein System

Set a collective vision for a just and regenerative protein system

Actors need to look beyond individual deals in low-carbon protein or influencing specific company strategies. Instead, they must engage in building a system-wide vision—together with a spectrum of different actors—of a future-fit protein system. This will be key for identifying how different actors can set a goal for a just and regenerative protein system and ultimately support the delivery of that in practice.

Embrace your agency to actively shape a future-fit system

All financial actors are already—consciously or unconsciously—shaping the future of the protein system through their behaviours and investment decisions. This, in turn, affects others' behaviours and subsequent investment decisions. Embracing this agency and shaping this influence to be in support of a future-fit protein system that is just and regenerative holds huge power and potential.

Incorporate a more holistic approach to screening and managing protein impacts

Financial actors need to go beyond just a focus on greenhouse gas emissions, biosecurity risks and securing supply to account for (and address) a wide range of risks and opportunities associated with the protein. They can drive the development and use of holistic ESG metrics that incentivise a shift to a regenerative and just protein system.

working towards reinventing the protein system.

Funders, entrepreneurs, non-governmental organisations, civil society, policymakers – those who contribute to the protein system in different ways – have an opportunity to think about solutions differently and reinvent how the protein system works regionally (see box, "Three Ways to Reinvent the Protein System").

Reinventing how the world works

Protein is just one critical challenge sitting at the intersection of our global climate, public health and food security crises. Governments, businesses and communities have to work together to tackle these immense problems. The pandemic has offered a glimpse of what a climate-constrained world (where critical social and environmental thresholds are hit) might look like.

Traditional ESG measures are falling short of solving intractable, complex and wicked problems because the current framework is limited to engaging with – and reacting to – today's challenges when solutions must in fact be future-fit.

Taking a futures approach has far-reaching implications for every major social and environmental challenge in the region. Fossil fuel pollution, extreme weather events, the water crisis and more will benefit from understanding wider systemic disruptions and dynamic areas for positive change to then imagine what a just and regenerative future might look like.

If we fail to take a holistic and long-term approach to these immense challenges, we run the risk of achieving a shallow transition that extends the same problems we are already facing while creating new ones. Just and regenerative systems will enable us to act at the roots of our challenges and secure our future together. ■

Fifty Shades of Greenwashing

By **SEERAM RAMAKRISHNAN**

Greenwashing, or the process of conveying a false impression by providing misleading information about how a company's products are more environmentally sound than they actually are, can be damaging to a company's reputation. How can businesses ensure they remain focused on sustainability and keep their messaging authentic and accurate?

Sustainability has gained importance on the agenda of policymakers of countries as well as captains of industries and businesses. Net zero, a frequently cited business aspiration, is an economy-shaping, industry-shaping, and way-of-living-shaping trend. This stance featured heavily in discussions at the 2021 UN Climate Change Conference (COP26) in Glasgow.

What is net zero? Faced with compelling evidence that earth's vital signs are unduly affected, nations pledged to voluntarily reduce respective carbon emissions, undertake measures to adapt to the impacts of climate change, and transition to net zero carbon emissions economies. Expeditious implementation by all stakeholders of economies is necessary to reach the tough goal of a net zero carbon world by 2050.

These developments provide perfect storm conditions for "Greenwashing"; wherein the greenwashing refers to superficial climate pledges not backed by transparent, verifiable, trustworthy and tangible commitments, targets and goals.

Fact or fiction?

Sceptics point to the hollow or vaguely worded climate change pledges of nations that are not backed by science-based lasting commitments. Business leaders are accused of embellishing companies' manifestos with green credentials to benefit from popular sentiment and get ahead of the competition for their own business and personal gains. Sadly, the public – customers and consumers – remain confused about what are truly sustainable choices.

A recent Youth Recovery Plan report by the Davos Lab, an initiative of the World Economic Forum's Global Shapers Community, a network of 14,000 young people, is noteworthy. Calling for international bodies to reduce greenwashing, the report claims that companies are increasingly projecting an ecologically responsible image despite continuing environmentally harmful practices.

There are a multitude of reasons for greenwashing. Captains of industry may lack deeper knowledge and understanding of interrelation between financials and carbon neutral principles. Often, they are under pressure from equity shareholders of the companies who are primarily interested in rates of returns and dividends.

Company leaders are driven to take a short-term view of the business and produce quick results. Most businesses do not have competent managers who are knowledgeable about sustainability, and lack leaders who can reinvent supply chains and value chains with new business models to successfully transition to sustainable products and services.

There is a general lack of adequate checks and balances to improve corporate accountability for sustainability. While consumers may pay lip service to sustainable consumption, they may not be ready to accept carbon neutrality and climate change premiums.

The circular economy

Companies often have to make judicious trade-offs among the carbon footprint, circularity or recyclability, and human health effects of their products so as to improve their overall corporate sustainability performance. For example, a material with lower carbon emissions does not always have higher circularity. (See box, "Bag or Trash"). In other words, such trade-offs must be analysed properly while taking all factors into consideration.

Critics are quick to draw parallels with the earlier promulgations by corporations such as Corporate Social Responsibility (CSR), and Environmental, Social and Governance (ESG) reporting. These pledges are just feel-good initiatives designed to capitalise on the

Bag or Trash

The cotton tote bag is an example of unintended consequences of brands, retailers and consumers rushing to embrace an earth-friendly mindset while not being aware of the holistic view of the product. The media has successfully (and rightly so) raised the awareness of undesirable environmental effects and human health effects of single use plastics derived from non-renewable fossil fuels.

Substituting plastics, which take a very long time to degrade in the environment, with materials derived from the renewable sources first appeared to be a nice thing to do. Reducing the use of plastic bags could reduce littering and pollution, protect marine bio-diversity, and avoid the problem of overflowing landfills.

A life cycle assessment study by the Danish Environmental Protection Agency advised that a polypropylene plastic bag, a paper bag, and a cotton bag ought to be utilised 37, 43 and 7,100 times, respectively, for the same environmental benefits to accrue.

In another example, replacing plastic bags with paper bags is not as straightforward as it would seem. Contemporary analysis suggests that replacing plastic bags entirely with paper bags can actually increase the overall environmental impact, as paper production and recycling are associated with intensive usage of chemicals and energy.

Companies trying to be earth-friendly should be encouraged. However, they must be aware of counter-productive outcomes of greenwashing, as in the case of mass-producing cotton tote bags as an environmentally friendly option. Although the producers, retailers, and regulators are aware of the importance of sustainability, there is no global alignment on how to measure sustainability across these interlinked aspects.

flavour of the times, and based on favourable assumptions. They are not backed by transparent data, verifiable facts and methodology, and well-scrutinised assumptions.

Unintentionally, greenwashing perpetuates myths and generates quick fixes based on incomplete understanding, thus damaging the trust of the public and customers. (See box, "How to Avoid Greenwashing").

In a KPMG poll of 1,325 CEOs from 11 sectors worldwide last year, the report found that the climate agenda has grown in importance for CEOs around the world. Singapore CEOs, however, are struggling to tell their ESG goals convincingly for their organisations. They find it difficult to raise reporting standards in ESG to match those in financial reporting. More than half of Singapore CEOs said the ESG programmes have reduced their financial performance.

Sovereign wealth funds collectively hold over US$10 trillion (S$13.5 trillion) worth of assets, mainly in sectors such as infrastructure, real estate and private equity. Hence, they are influential in future-proofing the world against climate risks. According to the International Forum of Sovereign Wealth Funds, the industry has invested about US$10 billion dollars in

How to Avoid Greenwashing?

1. Deepen sustainability, net zero carbon and ESG literacy to all stakeholders of the company.

2. Integrate sustainability, net zero carbon and ESG into the business strategy, risk management and operational processes. Set science-based ESG targets and goals and explain clearly to all stakeholders of the company.

3. Integrate sustainability, net zero carbon and ESG targets and goals with financial reporting.

4. Ensure adequate resources and skills are in place to achieve the set targets and goals. Also, put in place accountabilities and incentives to deliver on sustainability goals and targets.

5. Develop a more robust, transparent, and fact-based approach for measuring sustainability performance so as to enable all stakeholders to make more informed decisions.

renewable energy since 2015, which is less than one third of funds invested in the oil and gas businesses. In other words, their investment decisions are not yet fully embracing the spirit of ESG and sustainability.

ASEAN is making efforts to transition from its heavy reliance on "dirty" fuel energy sources, namely coal, oil and gas to renewable energies. But according to the ASEAN Center for Energy, the region is projected to miss its aspirational goal of greening its energy mix so that 23 per cent will be from renewables by 2025.

Cited reasons include skills and technology lag, lack of sustainability and climate change premiums, and smaller economies of scale, which contribute to higher costs of renewables in the region when compared to the global averages. This underscores the role of governments in upgrading the transmission grids and ensuring reliability and security.

By performing well in terms of ESG, businesses can build reputation and deliver value to shareholders against the backdrop of the net zero carbon and sustainability agenda being pursued by nations. Moreover, they can resonate with the minds and hearts of people who are increasingly sensitised to climate change issues and the need for a carbon neutral world.

Carbon neutrality should be a core business principle alongside financial considerations and balance sheet, which has dominated the decision-making processes and strategies of corporate leaders for decades. Businesses must be encouraged to develop a thorough understanding of net zero carbon and sustainability, and to make deeper ESG commitments so as to unlock value for all stakeholders, including employees, customers and communities. ■

Seeram Ramakrishna is a professor at the National University of Singapore and a member of SID's ESG Committee.

Why Green Buildings Matter

By **YVONNE SOH**, Executive Director, Singapore Green Building Council

A "green" building, by design, construction or operation, reduces or eliminates negative impacts, and can create positive impacts on our climate and natural environment. Varying climate conditions, unique cultures and traditions, diverse building types and ages, and wide-ranging environmental, economic and social priorities shape different approaches to green buildings.

Green buildings preserve precious natural resources and improve our quality of life. The concept of green building was introduced in Singapore when the Building and Construction Authority (BCA) launched the BCA Green Mark scheme in 2005. Since then, over a thousand buildings and projects have met the required standards.

Evolution of green buildings

The scheme evaluates both new and existing buildings for their environmental impact and performance. The Singapore Green Building Council (SGBC) was set up subsequently in 2009 to connect Singapore to the global green building movement and keep Singapore abreast of advancements in this field. See box, "What is a Green Building".

What is a Green Building

Any building can be a green building, whether it's a home, an office, a school, a hospital, a community centre, or any other type of structure, provided it includes features listed below.

- Efficient use of energy, water and other resources.
- Use of renewable energy, such as solar energy.
- Pollution and waste reduction measures, and the enabling of re-use and recycling.
- Good indoor environmental air quality.
- Use of materials that are non-toxic, ethical and sustainable.
- Consideration of the environment in design, construction and operation.
- Consideration of the quality of life of occupants in design, construction and operation.
- A design that enables adaptation to a changing environment.

Not all green buildings are – and need to be – the same. The World Green Building Council supports its member Green Building Councils and their member companies in individual countries and across regions to pursue green buildings that are best suited to their own markets, climate conditions, social and economic priorities, cultures and traditions, and design heritage.

The BCA Green Mark by Singapore is one of many green building rating tools that exist around the world. The Leadership in Energy and Environmental Design (LEED) scheme launched by the US Green Building Council in 1998 is one of the most established. Its comprehensive evaluation framework, and the effort to keep requirements as concise and attainable as possible, makes it one of the most widely used green building rating systems in the world.

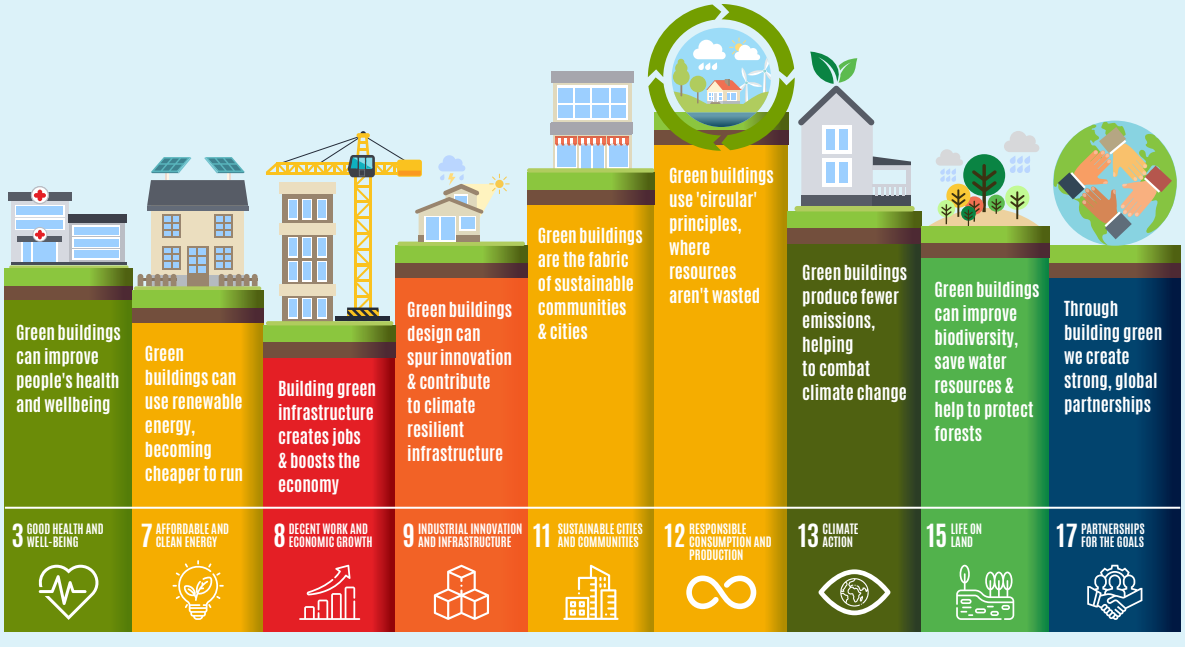
There is no single international yardstick for green buildings due to the varying geographical context, economic realities and national priorities across countries. However, the objectives of the over 70 Green Building Councils across the world are similar, and green buildings contribute directly to realising the United Nations Sustainable Development Goals. See box, "Delivering Global Goals".

Singapore in 2030

The green building plans and ambitions for Singapore are reviewed and recalibrated every five years to keep pace with technological advancements, industry progress and global developments. The Green Mark standard is then updated to reflect the current highest attainable goals for Singapore's green buildings. It is important to note that the Green Mark certification is based on actual building performance, not just the design or modelled performance of buildings.

The latest review, which concluded in early 2021 and forms part of the Singapore Green Plan 2030, resulted in the Singapore Green Building Masterplan. The masterplan aims to deliver three key targets of "80-80-80 in 2030". (See box, "Singapore Green Building Masterplan").

Delivering Global Goals



Source: World Green Building Council

Singapore Green Building Masterplan

The SGBMP aims to deliver 3 key outcomes: '80-80-80 in 2030'

VISION
"A leading green Built Environment sector mitigating climate change and providing a healthy, liveable and sustainable Built-Environment for all"

80% of buildings to be green by 2030:

- **Step up the pace** of greening our buildings
- **Raise the sustainability standards** of our buildings

80% of new developments to be SLE from 2030:

- **Mainstream Super Low Energy (SLE) performance of new buildings** so that from 2030, large majority of new development would be achieving today's SLE energy performance standards

80% EE improvement (from 2005 levels) by 2030:

- **Push boundaries in energy efficiency for best in class green buildings** through research, innovation and implementation

Benefits of green buildings

From the onset, green building standards have always aimed to be healthy buildings for people, in addition to safeguarding the environment for future generations. The benefits of green buildings can be grouped into environmental, economic and social.

First, green buildings can not only reduce or eliminate negative impacts on the environment by using less water, energy or natural resources. They can, in many cases, have a positive impact on the environment (at the building or city scales) by generating their own energy or increasing biodiversity.

Second, green buildings also offer several economic or financial benefits. These include cost savings on utility bills for tenants or households

(through energy and water efficiency); lower construction costs and higher property value for building developers; increased occupancy rates and lower operating costs for building owners; and job creation.

Finally, going beyond economics and the environment, green buildings have been shown

to bring positive social impact, many revolving around the health and well-being of people who work in green offices or live in green homes.

Green Mark buildings are often associated with energy savings and energy efficiency. A study commissioned by the BCA showed that Green Mark buildings reap net positive savings throughout their life cycle, with energy savings outweighing the upfront investment cost and the quantum of savings corresponding to the Green Mark rating.

Occupant well-being

What is less well known is that green buildings are optimised not just for energy efficiency, but also for the health and well-being of their occupants. One of the motivations for the development of LEED in the late 1990s was to address the effects that new buildings were having on occupants.

The rise in mechanised building systems and air-conditioning in the latter half of the century resulted in buildings sealed up with their own indoor climates and little connection to nature. This led to the phenomenon of "sick building syndrome", coined by the World Health Organization in 1986 after observing that 10 to 30 per cent of the newly-built office buildings in the West had indoor air problems.

Green building standards have stringent requirements for air quality and emphasise bringing fresh air into the building. The Green Mark assessment criteria include ventilation rate, air filtration and disinfection, air quality monitoring and source control of pollutants (e.g. through selection of building materials and products with low volatile organic compounds).

This is an area where SGBC, through its Singapore Green Building Product certification scheme, works closely with BCA, to identify a wide range of safe, toxin-free and environmentally-friendly building supplies and technologies.

With the air quality principles that green buildings have been designed in mind, green buildings have also fared better in tackling infectious disease transmission in the current Covid-19 pandemic. Most of the building systems and technologies installed as part of green building standards can be readily adapted for infection control.

In the words of Associate Professor Joseph G. Allen, Director of Harvard University's Healthy Buildings programme: "The person who designs and operates your building has a greater impact on your health than your doctor."

Green buildings, with the emphasis on energy efficiency and occupant well-being, also assign great importance to the harnessing and utilisation of natural lighting wherever possible. Relying on daylight not only helps to save energy, but it also helps to synchronise our bodies' inner circadian clocks, enabling us to feel alert during the day and sleep better at night. This makes for happier and more productive occupants.

Green buildings are a proven way to support climate action, and they are widely available in Singapore. Close to 43 per cent of Singapore's buildings, representing over 125 million square metres of floor space, have adopted green building standards to some degree. Organisations should do well to build to such standards to benefit both the planet and people or lease from buildings that meet these green standards. ■

Driving Environmental Stewardship through Executive Compensation

By **SHAI GANU**,
Global Leader - Executive Compensation & Board Advisory, Willis Towers Watson

As organisations acknowledge the need to transition to a net zero business model, investors not only expect the board to drive the adoption of a credible climate transition strategy, but also show that its execution has been embedded effectively across all key management processes, including human capital.

Climate change is among the most pressing issues facing the world. Drawing on the findings of more than 14,000 scientific studies, the Sixth Assessment report from the Intergovernmental Panel on Climate Change in August 2021 issued a stark warning. Unless the world sees a drastic reduction in greenhouse gas emissions well beyond the targets already adopted worldwide, average global temperatures are expected to surpass the 1.5 degrees Celsius threshold within the next 20 years, causing extreme and irreversible damage to people and the planet.

The report has sharply raised the pressure on nations to make far more ambitious commitments on climate transition.

Executive compensation as a change accelerant

Executive compensation – both as a carrot and a stick – is a critical lever for management to be held accountable for climate transition. Incentive plans are an effective tool to focus management's efforts on key priorities and drive desired outcomes. As the saying goes, "what gets rewarded gets measured, and in turn, gets done".

In 2019, the World Economic Forum unveiled the Principles for Effective Climate Governance for non-executive board directors. These principles set out how well-governed boards should incorporate a climate lens into all relevant aspects of their oversight functions. In particular, Principle 6 – Incentivisation, identifies executive compensation as one of the key mechanisms that drive the right

behaviours and enables the company to deliver on its climate transition strategy.

Indeed, board remuneration committees view climate and other environmental, social and governance (ESG) issues as top business priorities, and are incorporating these goals in performance management and executive incentive plans.

Willis Towers Watson's 2020 board of directors' global survey, *Aligning ESG and Executive Incentives*, found that nearly four in five respondents (78 per cent) are planning to change how they use ESG with their executive incentive plans over the next three years.

Directors listed environmental and climate issues as their number one priority, and 41 per cent plan to introduce ESG measures into their long-term incentive plans over the next three years, while 37 per cent plan to introduce ESG measures into their annual incentive plans.

Metrics that matter: Measuring carbon emissions

Depending on the industry, there could be several climate-related goals, such as greenhouse gas emissions, carbon intensity, water security, waste management, circular economy, biodiversity, renewable energy consumption, etc. The most pressing goal is related to greenhouse gas emission reductions.

A company's greenhouse gas emissions can be classified under three scopes, depending upon whether it is direct or indirect emissions, and for indirect, whether purchased electricity or in the company's value chain. The most common way of measuring carbon emissions is in tons of carbon dioxide equivalent (tCO2e). This metric accounts for all kinds of greenhouse gases through three scopes:

- Scope 1: Direct emissions from owned or controlled sources
- Scope 2: Indirect emissions from generation of purchased energy
- Scope 3: All indirect emissions, including company suppliers (upstream), customers and use of sold products (downstream).

To effect meaningful change, companies should set sufficiently stretched and long-term carbon reduction targets, for example, 50 per cent reduction by 2030 and net zero by 2050. In some industries, environmental impacts are at the core of their business strategies, and companies are transforming their portfolio/product mix accordingly. Not only do they need to focus on both climate impact measures such as carbon emission reductions, but also on climate transition priorities, for example, energy companies shifting towards renewable energy production.

Incorporating climate measures into incentive plans

There is a strong consensus among investors that companies must select climate metrics that are material to their businesses. Investors expect companies to demonstrate the appropriateness and extent of climate metrics through market-leading disclosure. They want the metrics to be material to the company and goals to be significant, measurable and transparent. If sustainability and environmental goals are front and center of its business strategy, it should consider linking relevant ESG measures to executive incentive plans.

There are a few design alternatives to do so, ranging from underpins, to modifiers, to short-term incentive (STI) plans, to key performance indicators (KPIs) within long-term incentive (LTI) plans, and a stand-alone hyper-long-term incentive plan.

More and more companies are beginning to incorporate climate change measures within their STI and LTI plans for senior executives, but there is still room for improvement. Willis Towers Watson's analysis of 2021 disclosures within top 500 companies in the US and top 350 companies in Europe shows that one in five companies have some environmental measure in their incentive plans.

Specifically, for climate measures, carbon emission reductions tend to be a longer-term transition for most companies – yet approximately 13 per cent of top European companies, and only 2 per cent of top US companies, have explicit targets in their incentive plans. We expect more companies to start incorporating ESG and climate measures in STI and particularly in LTI plans.

Indeed, most boards believe that climate goals should be measured over the medium- to long-term (three to five or more years), even if this means incentivising executives to make longer-term climate investments that often do not bear fruit during their tenures.

Effective governance of climate-related compensation plans

The continuum of effective compensation governance starts with the company's business imperatives. Indeed, the board plays a critical role in setting long-term vision, and defining short- and medium-term milestones. Boards need to prioritise which climate topics are most important to address, where they should be addressed (i.e., which committee or the full board), how often to address them, and how to provide effective oversight.

Following this, the remuneration committee and the board should pay attention to the selection of relevant performance measures. This should start with a broad funnel of metrics, and then refined based on key principles of alignment with strategy, materiality of outcomes, measurability and target-setting, comparability over time and across companies, and clarity and transparency. Metrics that are consistently measured and tested by management, reviewed and vetted by the board, and shown to be material to the business and of value to investors and stakeholders, should then be linked to incentive plans.

Next, companies should pay heed to disclosures to investors and the public. It is important for management and the board to be in sync about what gets disclosed and how it gets communicated. The board should review and discuss the programmes and achievements summarised in public statements. And finally, the remuneration committee and the board must monitor progress and direct management to expand, contract or reprioritise the range and depth of climate issues management is taking on. See box, "Step-by-Step Guide to Driving Climate Ambition through Executive Pay".

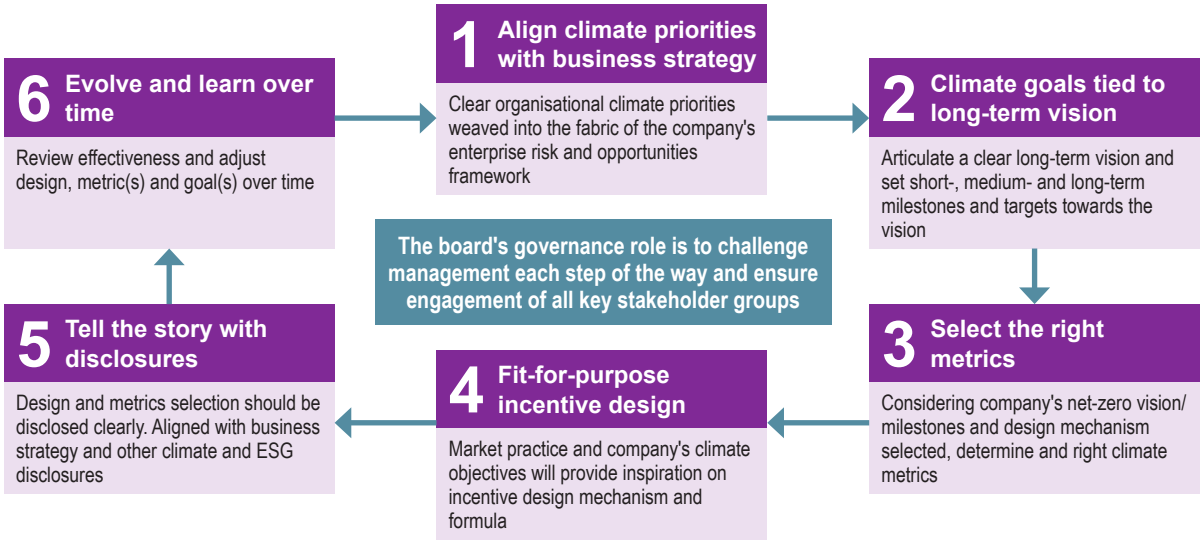
Call to action for companies

The merits of linking executive compensation and climate objectives are well established. Emissions reduction and renewable energy adoption are increasingly prevalent metrics in executive incentive plans, especially in Europe and the UK and in high-emitting industries such as oil and gas.

There remains much for the business community to learn about the implications of transition to net zero. Setting consistent and reliable goals and milestones will be challenging. But companies must resist the temptation to inaction, as climate risk is widely considered the single most significant risk to the planet, businesses and the stability of the global financial system.

Some best practices and pitfalls in aligning executive compensation with climate transition

Step-by-Step Guide to Driving Climate Ambition through Executive Pay



Tips for Boards

Do's	Don'ts
Continuously monitor and evolve measurement of climate goals	Add climate metric to incentive plans as a check-the-box exercise
Consider company-specific climate transition strategy and metrics	Blindly follow market practices and what leading companies do
Measure short-, medium- and long-term progress towards net zero	Set annual goals with no tie-in to the overall net zero vision
Metrics and goals should be science-based, clear, ambitious, transparent and consistent	Use judgement-based or ambiguous climate metrics or goals
Tell the story of how executive compensation drives climate transition with robust disclosures	Manage annual reports, executive compensation disclosures and ESG/climate reporting in silos

Source: *Executive Compensation Guidebook for Climate Transition* (Willis Towers Watson, 2021)

and climate risk mitigation is found in the box, "Tips for Boards".

As companies navigate through some of these complexities, they will benefit from drawing on the key executive compensation guiding principles of purpose, alignment, accountability and engagement. An appreciation of why the organisation exists, ensuring that management is aligned with the interests of all stakeholders, having clarity regarding pay and performance linkages, and understanding human behaviours, retention and engagement – these will help companies design more meaningful pay programmes and effect positive outcomes. ■

2020/2021 Singapore Corporate Awards

Celebrating the Exemplary in Corporate Governance

The annual Singapore Corporate Awards (SCA) was held on 17 November 2021 at the ParkRoyal Collection Marina Bay after a disruption in 2020. The guest-of-honour was Ms Indranee Rajah, Minister in the Prime Minister's Office and Second Minister for Finance and National Development. The award presentation was attended by 40 guests with a live stream with close to 200 registrants.

This year, a special edition of the SCA was presented: "The Corporate Excellence and Resilience Awards". This award is to recognise exemplary companies that have upheld best practices in corporate governance and shown leadership, innovation and resilience during the pandemic. Despite the challenging circumstances, these companies have delivered sustainable financial performance and established frameworks and policies to create long-term value for the organisation over the same period.

The event was co-organised by SID, the Institute of Singapore Chartered Accountants, and the Business Times. It is supported by the Accounting and Corporate Regulatory Authority and the Singapore Exchange.

Shortlisted companies were split into four groups. Each of them were evaluated by the award partners as well as a panel of judges within the group. Twenty-six companies were recognised for their efforts during this pandemic. These companies have shown that it is important for companies to be resilient, adaptable, and seize opportunities to emerge stronger and meet the challenges of the future economy despite the challenges of Covid-19.

The organisers hope that these winners will be an inspiration for companies to innovate and grow and, at the same time, maintain good corporate governance. ■

> **"The awards are a fitting tribute to the companies that clearly demonstrated that success in overcoming a crisis depended on the joint efforts and close involvement of board, management and all levels of employees."**
>
> **John Lim**, Chair, Judging Panel

> **"The winners that came through have shown what making the right investment decisions is about, focusing on long term goals through digital and sustainable transformation- they fix the roof even though the sun was still shining bright. And when crisis hits, they find themselves in a much better position than their peers to overcome challenges and seize new opportunities."**
>
> **Ng Siew Quan**, Partner-in-charge, PWC

Singapore Corporate Awards 2021 (Special Edition)

CORPORATE EXCELLENCE & RESILIENCE AWARD

Award for companies with market capitalisation of S$1 billion or more as at 31 December 2020

- ★ Ascendas REIT
- ★ CapitaLand Ltd
- ★ DBS Group Holdings Ltd
- ★ NetLink NBN Trust
- ★ Oversea-Chinese Banking Corporation Ltd
- ★ SATS Ltd
- ★ ST Engineering
- ★ United Overseas Bank Ltd
- ★ UOL Group Ltd
- ★ Wilmar International Ltd

Award for companies with market capitalisation of S$300 million to less than S$1 billion as at 31 December 2020

- ★ Boustead Singapore Ltd
- ★ Hong Leong Asia Ltd
- ★ iFAST Corporation Ltd
- ★ Micro-Mechanics (Holdings) Ltd
- ★ Sasseur REIT
- ★ SBS Transit Ltd
- ★ United Overseas Insurance Ltd

Award for companies with market capitalisation of less than $300 million as at 31 December 2020

- ★ Boustead Projects Ltd
- ★ InnoTek Ltd
- ★ LHN Limited
- ★ PropNex Ltd
- ★ Sing Investments & Finance Ltd
- ★ Singapore O&G Ltd
- ★ TeleChoice International Ltd
- ★ The Trendlines Group Ltd
- ★ ValueMax Group Ltd

Co-organised By

Supported By

Supporting Partner

Award Partners

Singapore Directorship Report 2021

The State of Directorship in Singapore

Key findings from the latest *Singapore Directorship Report* show an increasing trend of independence on listed company boards in Singapore. For the first time, companies with a majority of independent directors outnumbered those with less than half the board composed of independent directors.

The launch of the 2021 edition of the *Singapore Directorship Report* by SID was attended by more than 100 people, including regulators, corporate directors, academics and industry experts. The event was held online on 3 November 2021.

Ng Wai King, Chairman of the Singapore Directorship Report working committee at SID opened the session. The report indicates a positive development in upholding corporate governance standards and practices by many listed entities, he noted.

"Following the revisions to the Code of Corporate Governance in 2018, the 2021 Directorship Report shows a clear shift towards having greater independence on boards, with more independent directors being appointed, along with greater separation of CEO and Chairman roles," said Mr Ng.

Professor Ho Yew Kee (Associate Provost (SkillsFuture), Singapore Institute of Technology) and Associate Professor Victor Yeo (Associate Professor of Business Law, Nanyang Business School, Nanyang Technological University), joint report authors and members of the working committee, presented the highlights of the report. Director tenure and director independence were the focus, as were gender and age diversity among board members.

This was followed by a panel discussion moderated by SID Vice Chairman Adrian Chan.

The lively discussion produced interesting nuggets of information and board trivia, such as the largest board size (17), the ages of the oldest (98 years) and youngest (24 years) directors, as well as the longest-serving director (50 years).

The highly interactive session also drew insights from the panellists: Daryl Neo (Founding Director, Handshakes), June Sim (Head of Listing Compliance, SGX RegCo), Annabelle Yip (Joint Head of the Corporate Governance & Compliance Practice, WongPartnership), and Philip Yuen (CEO, Deloitte Southeast Asia).

The *Singapore Directorship Report 2021* is produced by the Singapore Institute of Directors, with the support of the Accounting and Corporate Regulatory Authority and Singapore Exchange, and in partnership with Deloitte, Handshakes, Nanyang Technological University and Singapore Institute of Technology. This is the fourth edition of the Report; the first was launched in 2014.

Highlights of the study

Researchers collected information from 695 listed entities, comprising 658 Companies (both on the Mainboard and Catalist), 24 Real Estate Investment Trusts (REITs) and 13 Business Trusts. The information was compiled primarily from the annual reports and other publicly available reports of listed entities with financial year-end in 2020.

More independent directors

The percentage of independent directors on boards has risen to 54.4 per cent from 50.7 per cent in 2018. When the study was first conducted in 2014, independent directors comprised just 47.5 per cent of boards. (See box, "Types of Directors, 2014-2021)"

Additionally, 84.0 per cent of firms have a majority of non-executive directors on their boards, up from 76.8 per cent in 2018.

There is also an increasing trend in the separation of CEO and Chairman positions, with 75.1 per cent of firms having different individuals serving as board Chairman and CEO, up from 67.1 per cent in 2014. This suggests a steady shift in mindset and recognition of the benefits of having a separate board Chairman and CEO.

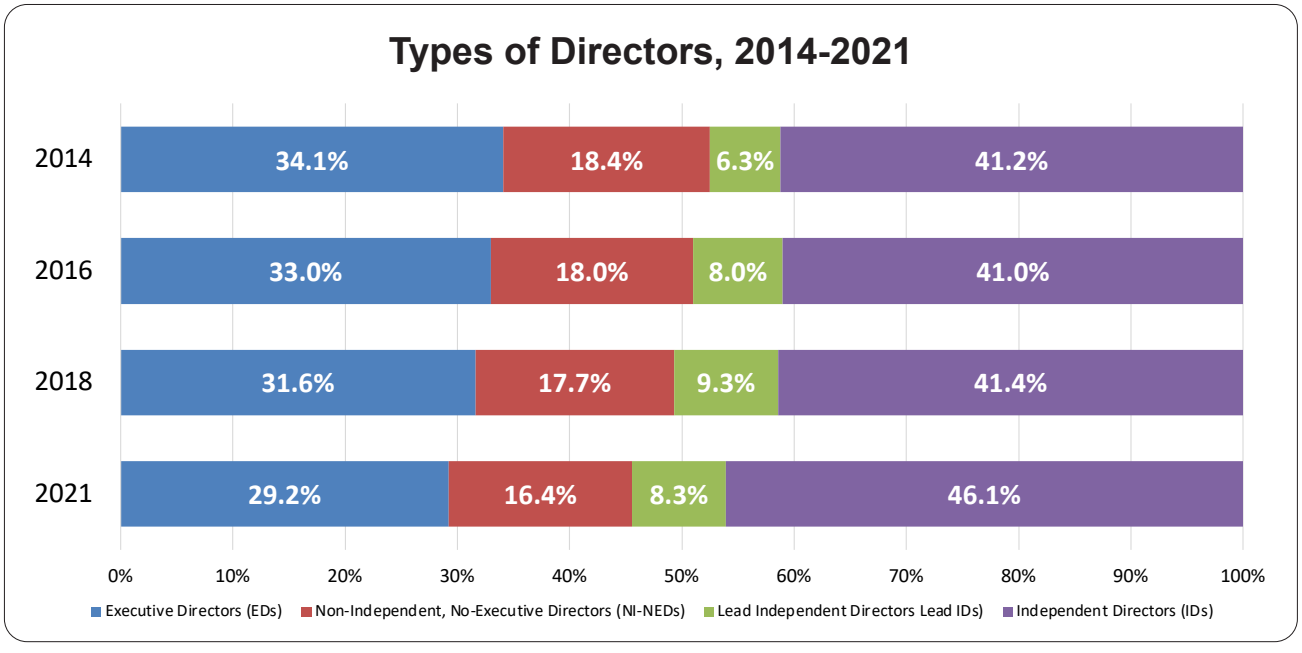
In addition, there is an upward trend of companies having half or more independent directors on their boards, especially among larger firms. Overall, 77.7 per cent of firms comply with this requirement, a 7.4 percentage increase compared to 2018.

Provisions 2.2 and 2.3 of the Code of Corporate Governance require that independent directors make up a majority of the board where the Chairman is not independent, and non-executive directors make up a majority of the board.

Shrinking board size

The most common board size has dropped to five, from six in previous studies. The percentage of firms having a five-member board has increased to 25.8 per cent in 2021, from 22.9 per cent in 2018. The largest board has 17 directors, and the smallest has one.

The data suggests that the shrinking board size may be an unintended effect of Provisions 2.2 and 2.3 of the 2018 Code, mentioned above. Firms appear to be taking steps to comply with these requirements by reducing the numbers of their executive directors as well as appointing more non-executive directors (either independent or non-independent).



Mixed report card on board diversity

Although the actual number and percentage of women directors on boards have been increasing gradually since 2014, gender diversity on boards remains a challenge. 12.7 per cent of all board seats are occupied by women, compared to 10.8 per cent in 2018.

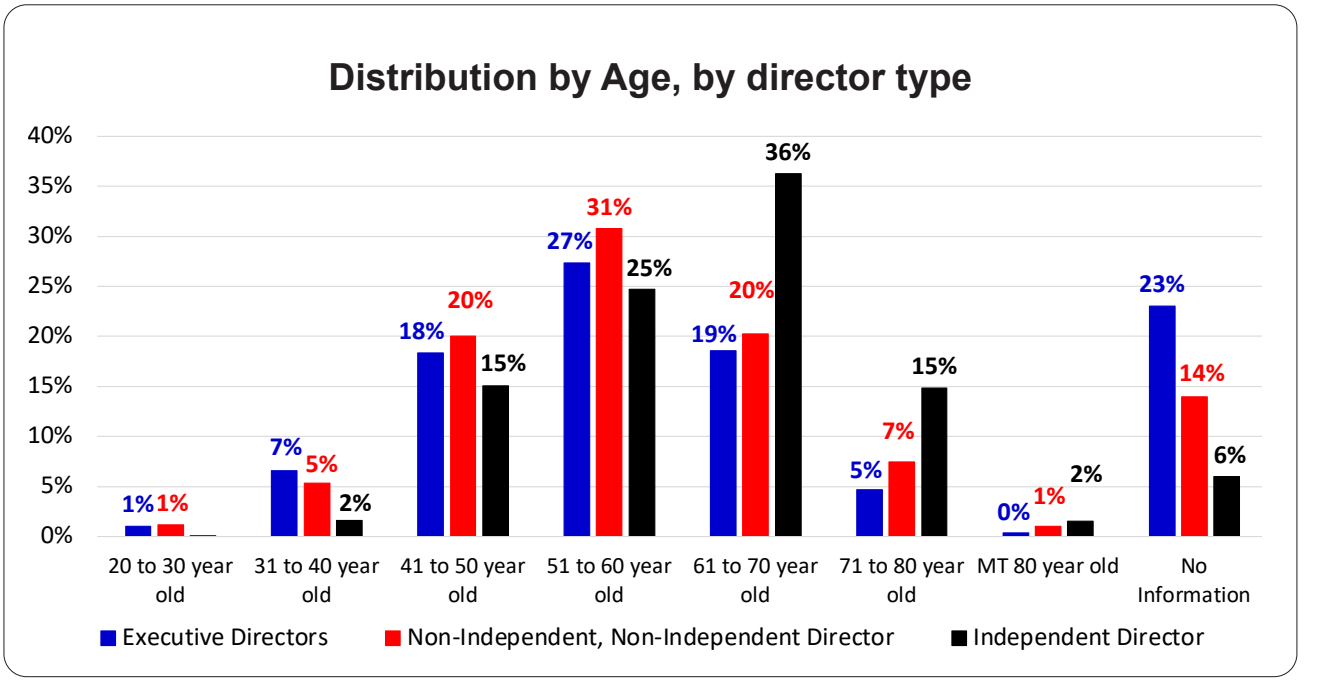
Of the 3,377 individual directors in the sample, 451 (13.4 per cent) are women. Among board Chairmen, only 6.5 per cent are women. Overall, there is a 35 per cent increase in the percentage of women directors compared with the situation in 2014.

Of the 931 new board appointments made in 2019 and 2020, 137 (14.7 per cent) were filled by women. Large-caps appear to be leading the way in taking active steps to increase the number of women on their boards. There was greater gender diversity in independent director appointments. Women held 283 out of the 2,322 seats allocated to independent directors, or 12.2 per cent, up from 9.4 per cent in 2018.

More than half of all boards (52.7 per cent) now have at least one woman director, up from 49.3 per cent in 2018; and 18.9 per cent have more than one woman director. The highest number of women directors on any board is five.

In another measure of board diversity, it is observed that the median age of the 3,377 individual directors is 58 years old. The majority of directors (51.1 per cent) are 57 years old or older ("Baby Boomers"), while 32.5 per cent are between 40 and 56 years old ("Generation X"), and just 4.2 per cent are below 40 years old ("Generation Y").

Independent directors tend to cluster around the 61 to 70 years age group, while executive directors and non-independent non-executive directors are generally younger, with the highest cluster of directors in the 51 to 60 years age group. (See box, "Distribution by Age, by director type").



Panel Discussion

"In terms of knowledge, thoughts and experience, an effective board would need diversity because of the need to discharge their fiduciary duties. Having a diversity policy is one thing, but what is the intent? In terms of outcomes, a recent survey by PwC showed that most Singapore companies actually disclose a formal diversity policy but lack substance and concrete plans as to how to substantiate their diversity policies. So, I would hope to see improvement on that front. It's important to remind listed companies that gender diversity is a key voting consideration for a lot of fund managers."

June Sim

"There is a systematic and encouraging progression in the independence of boards, and an obvious upward trend in independent directors on boards. For the first time, we are able to say that more than 50 per cent of companies listed on the Singapore Exchange have a majority of independent directors. More than 50 per cent of all directors are independent directors, and the proportion and number of independent chairs continue to climb."

Ho Yew Kee

"The figures are frankly, disappointing. We have talked about gender diversity for so long, and we're still at the low teens. The fact is that the pipeline is there. Whoever is making the decision to appoint new directors, they're not seeing the available pool that's there…. The introduction of the SGX policy on board diversity could make a big difference. If we are going to continue on this slow and steady kind of trend, we may have to look at stronger measures. We're just not moving fast enough."

Annabelle Yip

"Out of 534 independent directors, 70 per cent have gone through the two-tier vote, in preparation for the implementation of the nine-year rule that will come into effect on 1 January 2022, when all independent directors have to undergo a two-tier vote to seek shareholder approval to continue as independent directors or be redesignated."

Victor Yeo

"We should certainly build a sustainable pool of women leaders. Companies need to be very intentional in addressing the pipeline challenge that we face. A lot of board members are often recruited from the executive level, so clearly, we do need to develop women leaders in the C-Suite. Companies can make a difference by launching leadership initiatives that provide additional opportunities for advancement."

Philip Yuen

"In terms of measuring other aspects of diversity, such as skillsets and experience, there is an issue with getting more types of data. One thing we notice is the variance in how directors describe themselves in annual reports and director announcements. It would be unfair to profile directors based on what's disclosed because you wouldn't be getting a full sample set, and there is a disclosure disparity."

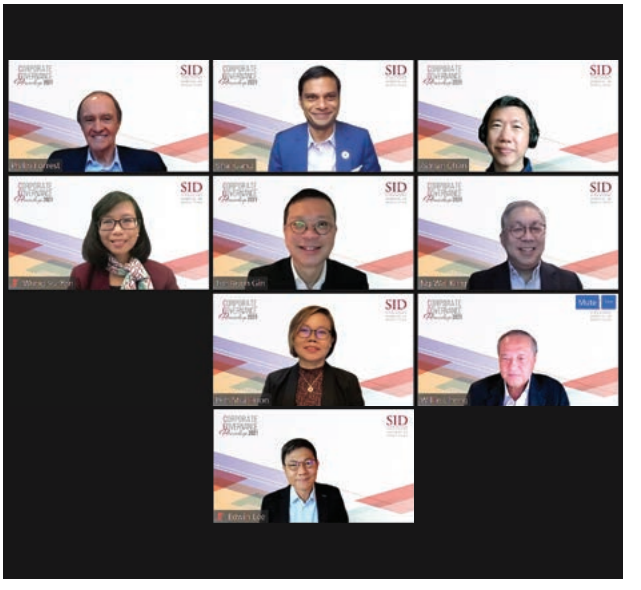
Daryl Neo ■

Corporate Governance Roundup 2021

The annual SID Corporate Governance Roundup was held on 18 November 2021, with around 250 participants attending the online event.

SID Chairman Wong Su-Yen opened the session and launched the newly-published *Ask Mr Sid* collection of essays on thorny directorship issues. Delivered in the form of a light-hearted exchange of letters, *Ask Mr Sid* has been a regular column in the *SID Directors Bulletin* since 2017. Ms Wong introduced and thanked former SID Chairman Willie Cheng, who authored the articles. All event registrants will receive a complimentary copy of the book.

A panel comprising seven SID governing council members offered their perspectives on developments in 2021. They also ventured to forecast the key trending issues likely to make the headlines in the coming months in key corporate governance and directorship matters.



The panel was moderated by Ms Wong, who fielded questions from the audience. Many questions focused on ESG reporting, regulatory changes, digital transformation, and the impact of Covid-19 on governance matters.

REGULATORY UPDATES

Tan Boon Gin

"The next round of AGMs will be significant because the nine-year rule for independent directors (IDs) will come into force… It is early days yet, but already 34 IDs have had their tenure extended using the two-tier vote. I urge all nominating committees to use the two-tier vote very judiciously and consider how they are going to set and achieve diversity targets if there is no renewal of directors."

Nine-year threshold for IDs (effective 1 Jan 2022)

- IDs are subject to a two-tier vote or may become a non-independent director – LR 210(5)(d)/CR 406(3)(d).
- Minimum one-third ID rule – LR 201(5)(c)/CR 406(3)(c).
- Majority of the board should be IDs if non-independent Chairman – CG Code Provision 2.2.

Public consultation: To mandate board diversity disclosures

- Issuers to disclose targets for achieving a diverse board, accompanying plans and timeline for achieving the targets.
- Disclose how the skills, talents, experience and diversity of the directors on the board serve the needs and plans of the issuer, including future strategy.
- Progress of meeting targets, i.e. milestone updates.

DIGITAL ROUNDUP

Poh Mui Hoon

"Digital business brings deep change, and involves creating new business designs by blurring the digital and physical worlds… True digital transformation is more than investing in modern technology, which is just part of the journey. Digital transformation should lead the change, and all aspects of the business, starting first with people, processes and then technology."

Digital to the core

- Every business is a digital business
- Digital transformation needs to be at the core
- Broad trend of a confluence of key technologies with new possibilities emerging
- Cyber security and data security remains challenging, but there are interesting solutions on the horizon

Zero trust security approach

- Zero Trust - "Never Trust, Always Verify"
- Concept of "Inside" vs "Outside" is obsolete
- Automation and orchestration important
- Visibility and analytics are necessary

FOCUS ON GOVERNANCE

Adrian Chan

"Consistent findings from the ASEAN Corporate Governance Scorecard and ACGA Corporate Governance Watch show that Singapore lags behind our peers in the region, and we lost points because of our poor corporate governance disclosures in our annual reports. We have to try to up our level of disclosures and improve our report card, moving forward."

ASEAN Scorecard

Good news

- Five Singapore companies ranked in ASEAN's Top 20
- Singapore's highest score to date: 88.3 points out of 130 points

Bad news

- Behind Thailand (96.6 points) and Malaysia (95.0 points)
- Malaysia took seven spots in the ASEAN Top 20 companies list
- Poor corporate governance disclosures in annual reports

ACGA Corporate Governance Watch

Good news

- Corporate notices, announcements beyond five years
- Detailed AGM circulars, voting results, shareholder Q&A
- Internal audit reports to AC
- Director attendance statistics
- Director training
- Individual director remuneration

Bad news

- Codes of conduct not publicly available
- Insufficient breakdown of operating costs and other expenses
- Limited information on shareholder engagement
- Brief committee reports
- Limited information on fees and remuneration
- Limited use of board skills matrices and no targets for improving board diversity

STARTING IN STARTUPS

Howie Lau

"Singapore is increasingly becoming the land of startups. At last count, 16 unicorns, or startups valued at S$1 billion or more, are based out of Singapore. It is a space that continues to buzz, and clearly, one of the reasons why – beyond location, infrastructure, access of capability – Singapore is home to 150 angel investors and venture capital funds. This abundance of liquidity in the market helps boost the local startup ecosystem."

Purpose of SID Startup Committee

- Foster good governance and ethics in corporate leadership in the startup community
- Advance levels of ethical values, governance and professional development of directors/advisers in the startup community

Growth startup connect programme

- A pilot complimentary programme by SID to match startups in the growth stage with experienced IDs who can help with key areas for further development.
- Startups could be offered advice on strategy development, market access, legal compliance, audit matters, strategic planning, talent management, leadership development, corporate governance

SINGAPORE DIRECTORSHIP REPORT

Ng Wai King

"We're pleased to see a positive trajectory, in response to three significant changes to the Code of Corporate Governance in 2018. In general, companies have responded well. There are more independent directors on the boards of listed entities, in number and percentage terms; there is clearly and upward trend in the number and percentage of women directors on boards; and there are also companies that have started to establish a separate sustainability board committee."

Key findings

- Continuing trend of smaller board size (Average Size - 2014: 6.7; 2021: 6.2)
- Upward trend in proportion of IDs on boards (2014: 47.5%; 2021: 54.4%)
- Increasing IDs on board (50% and above) (2014: 54.5%; 2021: 77.7%)
- Executive Chairs (44%) are the most common, followed by Independent Chairs (31%)
- Decline in the percentage of firms with individuals serving as board Chair and CEO (2014: 30.8%; 2021: 19.1%) [CG Code Provision 3.1]
- Stable percentage of firms that need Lead IDs (2018: 75.4%; 2021: 74.9%) [CG Code Provision 3.3]
- Smaller percentage of firms without independent Chairs (2018: 78.2%; 2021: 64.4%) [CG Code Provision 2.2]

INTERNATIONAL TRENDS IN CORPORATE GOVERNANCE

Philip Forrest

"Singapore business must look at ways to expand beyond our borders to scale up and venture into new markets or to reconfigure the operations by tapping the comparative advantages of our neighbouring countries. Taking a leaf from Minister Lawrence Wong at the SID Directors Conference in September 2021, SID is working closely with its ASEAN neighbours in Malaysia, Indonesia, Brunei, Thailand, Philippines, Vietnam, Cambodia and Myanmar to expand and strengthen the regional network of institutes of directors."

Governance in ASEAN

- Climate change
- Gender diversity
- Crisis management
- Strategy
- Professionalising board recruitment
- Independence
- Board evaluation
- Corruption, ethics, and conflicts of interest

SUSTAINABILITY

Shai Ganu

"There has been a heightened prominence on sustainability over the years, with the Business Roundtable in August 2019 redefining the 'Purpose of a Corporation'… it is the directors' responsibility to ensure sustainability and long-term success of the company and to safeguard the interests of all stakeholders – shareholders, customers, employees, supply-chain partners, environment, community, regulators. The focus of boards now is firmly on environmental, social and governance issues."

Environmental

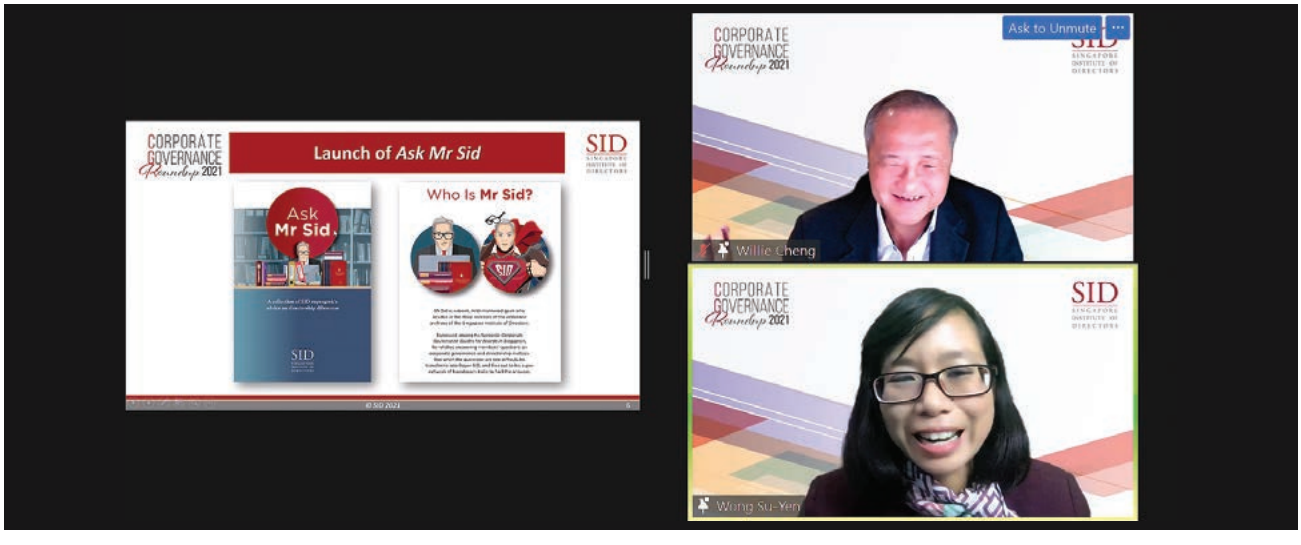
- Greenhouse gas emissions
- Energy consumption
- Water resources
- Waste generation

Social

- Diversity, equality and inclusion
- Employee health and safety
- Professional development
- Lifelong learning

Governance

- Board independence
- Women on board
- Ethics and anti-corruption
- Sustainability reporting



Annual General Meeting

New SID Governing Council Elected

The 23rd Annual General Meeting (AGM) of SID was held on 26 November 2021. The event was held online, in light of ongoing restrictions on large group meetings. Safe distancing measures due to Covid-19 have continued to impact many of SID events in the past calendar year, with the SID Directors Conference in September 2021 conducted in hybrid mode, where participants tuned in to proceedings that were held in small group settings.

This year, the AGM was held a week after the annual Corporate Governance Roundup (See page 96), to give participants more time to ask questions.

With the requisite quorum, Wong Su-Yen, Chairman of SID, called the meeting to order. In a brief presentation, Edwin Lee, Executive Director of SID, summarised the past year's activities and outlined key initiatives for 2022.

The AGM resolutions were then tabled and voted on via electric means provided by board portal Convene, with scrutineer services by Deloitte. Ms Wong acknowledged the *pro bono* contributions by Convene and Deloitte, which enabled members to ask questions and cast their votes in real-time.

Three members, who had previously been elected, were re-elected; another three members, who had previously been co-opted into the governing council, were elected, into the council (See page 101). A total of three members stepped down from the council.

Ms Wong thanked the retiring council members for their contributions.

The new SID governing council held its first meeting immediately after the AGM. ■

Governing Council Members

The following members were re-elected to the SID council at the 23rd AGM.


Junie Foo


Pauline Goh


Theresa Goh

The following members were elected to the SID council at the 23rd AGM.


Jaspal Singh


Joe Poon


Shai Ganu

The following SID council members retired at the 23rd AGM.


Ramlee Buang


Lee Suan Hiang


Ferdinand de Bakker

Masterclass for Directors

The Board in Strategy Formulation

On 1 September 2021, Dr Wilson Chew, Partner at PricewaterhouseCoopers Singapore, conducted a full-day seminar, "The Board in Strategy Formulation", at the Parkroyal Collection Marina Bay. The masterclass was attended by 18 participants, under strict safe management measures to ensure safety and well-being of attendees.

Dr Chew shared his insights on the board role in setting strategic direction and implementing its oversight. Seeking to deepen participants' understanding of business strategy and its processes, he dwelled on how risk management and crisis handling during the Covid-19 outbreak have brought home the message. The disruption to business operations and supply chains has sorely

tested business resilience and the preparedness of boards to adapt to the changing situation.

The structured process of prioritising key decisions to stay competitive for high performance is the essence of strategy. Getting the business model right plays a vanguard role in strengthening the organisation for better long-term performance. The presentation was accompanied by case studies and frameworks and tools for directors. ■

INSEAD Directors Forum

Governance in the Rise of Activism

Held on 22 October 2021, the virtual INSEAD Directors Forum on the theme "Governance in the Rise of Activism" saw more than 190 registered participants and celebrated the accomplishment of 161 new directors who received their INSEAD Certificate in Corporate Governance at the Certification Award Ceremony.

Delivering the keynote address was Professor Colin Mayer from Saïd Business School, University of Oxford. He highlighted the centrality of corporate purpose, for which boards have a critical role in shaping and bringing clarity by ensuring purpose intent is put into practice. Following this, the academic panel with INSEAD's Professor Henning Piezunka and Professor Ian Woodward illustrated the inevitability of conflicts and how boards need to develop stakeholder-centric communication strategies for effective engagement.

To glean insights from multiple perspectives, the Forum hosted two stimulating panel discussions with guest speakers representing investors, regulators, activists, and boards community. They discussed the shift in the activism landscape, the tactics activists use to stimulate change, leading governance practices in managing such risks and strategies to strengthen stakeholder engagement for long-term value creation. In closing, INSEAD Professor Jose-Luis Alvarez led a fireside chat with Proxy Advisor Loïc Dessaint to learn the changing role of proxies in the new governance paradigm. ■

Current Topic

Executive and Director Remuneration

To review the latest trends in local and global executive compensation, SID conducted a session on "Executive and Director Remuneration". The two-hour webinar on 14 September 2021 was presented online, with around 55 participants tuning in.

Led by speakers from Willis Towers Watson, Tan Yong Fei, Executive Compensation Practice Leader, South Asia, and Krissandi Lee, Associate Director, Executive Compensation, shared on the latest trends in non-executive director and CEO remuneration. The presentations looked at compensation analyses and trends, including how companies are dealing with executive and director compensation issues

during the pandemic and ESG-linked executive compensation.

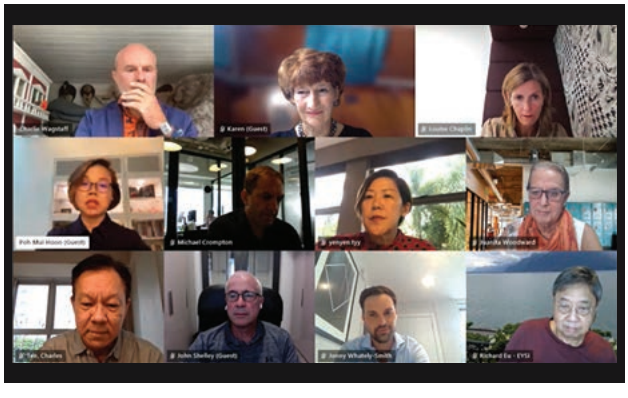
Exploring the forces impacting remuneration committees' decisions, the speakers gave an overview and update of innovative executive compensation design. This involves understanding the alignment between ESG measures and executive compensation, and being aware of the latest global and regional trends in executive compensation. ■

Global Virtual Roundtable

Innovation in the Boardroom

The final session of the virtual roundtable series by SID and Criticaleye this year took place on 30 September 2021. "Innovation in the Boardroom" featured Karen Fawcett, board member, LGT Foundation and Tan Yen-Yen, Independent Director, Oversea-Chinese Banking Corporation. The session was moderated by Michael Crompton, General Manager, Criticaleye Asia, and co-hosted by Poh Mui Hoon, SID Council Member and Mr Charlie Wagstaff, Managing Director and Co-Founder, Criticaleye.

Speakers explored how boards are taking advantage of the opportunities available to innovative companies. Key areas covered included the extent of digital technology needed for board members to be effective directors; how boards update their skills and knowledge; fostering an innovative boardroom culture; challenges of a hybrid workplace;



and board dynamics and board-management relationship.

A discussion on what a truly innovative board looks like produced insights into innovation governance, long-term vs short-term strategy, and board diversity. Ultimately, trust and innovation go hand-in-hand, and boards must create an open, transparent and challenging environment for debate to ensure an innovative culture. ■

ACRA Focus Group on Audit Adjustment Study

ACRA has conducted a second study on audit adjustments to gather insights into common audit adjustments and identify potential areas of improvement in the financial reporting value chain in Singapore. The updated study examines the correlation between audit adjustments and the effectiveness of the finance function as viewed by audit committee chairs and heads of finance teams. This follows the inaugural study in 2014, which saw S$34 billion worth of audit adjustments passed for about 250 listed companies in Singapore.

On 6 October 2021, ACRA held a virtual focus group session to garner views and insights on the preliminary findings of the 2021 study. Working with SID to reach out to its members, close to 30 audit committee chairs/members and heads of finance participated in the lively discussions on the findings.

The study will be presented at ACRA-SGX-SID Audit Committee Seminar on 12 January 2022. ■

AC Pit-Stop

Building an Intelligent Tax Function

Whether it's due to digital disruption or changing regulations, the business landscape is undergoing a seismic shift that makes it imperative for tax functions to transform how they operate. Tax departments have to go beyond providing compliance support to becoming a strategic business partner that drives enterprise value. In the SID AC Chapter Pit-Stop session on 21 October 2021, advisory experts Chia Seng Chye, Ong See Yew, Elaine Yeo and Abad Dahbache from Ernst and Young shared their insights on "Building an intelligent tax function".

As risk management and governance become more important, it is imperative to integrate tax-pertinent information into a firm's business processes. Companies should consider utilising a technology platform that can integrate the enterprise data with the tax database, and leverage this in areas like reporting and compliance. Companies should assess their enterprise-wide tax technology roadmap and determine how they can source the necessary elements, whether in-house, through external vendors or a hybrid approach. With such a roadmap, enterprises can then navigate the evolving tax and business landscape more confidently and transform the tax function into an invaluable business partner. ■

Fundamentals

Startup Director Fundamentals

Many startups tend to focus on technology and commercialisation but fail to give corporate governance the attention it needs. The SID Startup Director Fundamentals course, conducted on 16 September 2021, sought to provide startup founders and directors with an understanding of the startup ecosystem, and the practical and legal issues that may arise during the course of the startup journey. The roles and responsibilities of the startup board and best practices in the establishment and growth of the startup were explored.

Bernie Neo, Director, Infinitus Law Corporation, shared on the startup ecosystem and regulatory environment, covering types of business entities and the typical startup structure. Charting the startup journey from incorporation to funding, development, commercialisation and exit, he gave an overview of directors' roles and responsibilities in startup companies.

Wahab Yusoff, Director, Changi Airport Group, shared his experience in various startups, shedding light on areas of risk management and mitigation. He touched on issues en route to market for startups, and advised on leveraging channels to grow revenue.

A panel discussion, moderated by Samantha Ghiotti, Non-Executive Director, Bridgetown 3, gave the audience a chance to tap the speakers' expertise. Lim Soon Hock, Founder and Managing Director, Plan-B ICAG and Kevin Tan, Director, Blackbook Ventures, were the panellists. ■

A Spac-tacular Session

SID organised a half-day webinar on "Board Governance of SPACs" on 30 November 2021. A distinguished panel of speakers highlighted the audit and risk management issues of special purpose acquisition companies (SPACs) and the specific roles and responsibilities of directors appointed to the board of a SPAC. Speakers also gave an overview of the SGX regulatory framework on SPACs, and examined the historical context and international experience of the SPAC and de-SPAC process.

The session provided a useful background for directors and professionals supporting the board governance of SPACs. Among the presenters were: Gail Ong (Head, Equity Capital Markets Practice, WongPartnership); Ho Cheun Hon (Head, Equity Capital Markets for Southeast Asia,

Credit Suisse); Sharon Lau (Partner, Latham & Watkins); Ashish R. McLaren (Director, Valuation Advisory Services, Duff & Phelps Singapore); Jerry Koh Keen Chuan (Managing Partner, Allen & Gledhill); Jimmy Seet (Director, PwC Singapore Capital Markets); and Tham Tuck Seng (PwC Singapore Capital Markets Leader).

The two separate panel discussions were moderated by SID Vice-Chairman Adrian Chan and SID Council member Ng Wai King. ■

Conversation with Peter Ho

Public Sector Resilience

Over 50 participants from various statutory boards attended the Conversation with Peter Ho on 15 October 2021. Climate change, geopolitical shifts, rapid digital acceleration and growing stakeholder activism, underscore the importance of government-business relationships.

Statutory boards are a unique bridge between the two sectors. Peter Ho, who is Senior Advisor to the Centre for Strategic Futures, shared his insights on how statutory boards can remain resilient in the face of disruption and crises. He highlighted that whilst structures and processes are important, if not critical, to the smooth and efficient running of the system, they should not be so rigid as to create an obstacle to developing resilience and adaptability.

Crises and disruption are opportunities as well as risks. Mr Ho stressed that resilience should be part of Singapore's competitive advantage and that government agencies must think about resilience and how accelerating change can affect their mission and roles. Leaders should avoid groupthink and create a space for debate and enable people to challenge the status quo. ■

SID Mentorship Programme for Aspiring Board Directors

SID's Board Services and Mentorship Committee is launching a mentorship programme to support aspiring board directors among SID members. The pilot scheme seeks to provide counsel and sponsorship to aspiring directors to take on board appointments.

The programme will match 10 experienced board directors (mentors) with 10 aspiring board directors (proteges). It will run from January to December 2022. Participating proteges must commit to a minimum of six sessions with their assigned mentors over the year, lasting up to two hours each time.

A total of 190 applications were received from potential proteges. Proteges must be willing

to take an active learning approach, including establishing personal development goals, articulating objectives of participation and organising sessions with their mentors.

SID Council members, as well as highly experienced board directors, are among those who have stepped up as mentors. Feedback from the participating proteges and mentors will help identify opportunities to scale beyond this pilot and to develop other initiatives for SID members. ■

Networking Event

Directors & Officers Indemnity Policy

In an increasingly volatile and uncertain environment, businesses need to be prepared for the unexpected. A panel of experts offered practical advice in the webinar, "Directors & Officers (D&O) Indemnity Policy – what company secretaries need to know". The session on 16 November 2021 was organised by the SID Company Secretaries Network and attracted 38 participants.

Darryl Lee, Senior Manager, Financial Services & Professions Group of Aon Singapore, highlighted the importance of having a good and comprehensive D&O indemnity policy. This can support directors and give them the confidence to make appropriate decisions without fear of being held personally liable for adverse outcomes.

A spirited panel discussion moderated by DJ Goh, Associate General Counsel & Senior Director of APAC Legal at Juniper Networks, followed. Panellists were Rachel Eng, Managing Director of Eng and Co; Benjamin Ee, Managing Director of FTI Consulting; Linda Hoon, Chief Legal Officer of SingPost and Chairman of the SID Company Secretaries Network; and Darryl Lee. ■

Networking Event

Family Business Succession

SID organised a webinar on Family Business Succession on 17 November 2021, supported by the Young Presidents' Organization and Family Business Network Asia. Co-Chairs of the SID Family Business Special Interest Group Richard Eu, Chairman of Eu Yan Sang International and Marleen Dieleman, Associate Professor at NUS Business School, welcomed 85 participants to the event.

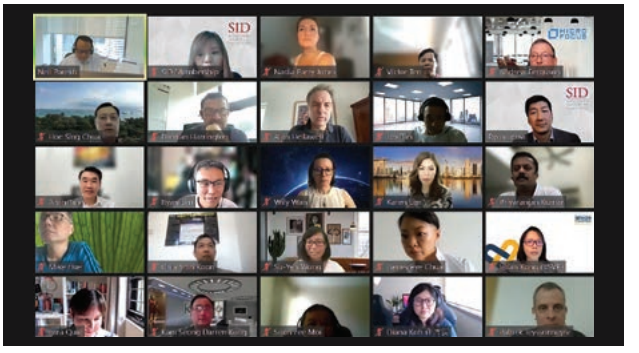
Family-run businesses comprise 60 per cent of companies listed on the Singapore Exchange and require dual governance processes: corporate governance and family governance. Hence, there is significant demand for directors familiar with the unique challenges faced by family businesses. Transparency is key in decision-making, and remuneration and succession issues are best tackled with the involvement of independent directors, to ensure best practices in corporate governance.

A spirited panel discussion reflected the perspectives of three types of directors: A founder chairman, an independent director and a next-generation successor as CEO. Ho Kwon Ping, Founder and Executive Chairman of Banyan Tree Holdings; Wong Su-Yen, SID Chairman and Founder and CEO of Bronze Phoenix; and Kuah Boon Wee, Group Chief Executive Officer of MTQ Corporation, completed the line-up. ■

Onboarding New Members

A virtual New Members Orientation was held on 29 September 2021 to welcome more than 65 members. SID Chairman Wong Su-Yen and SID Council members Neil Parekh, Philip Forrest and Ryan Lim were the hosts. The speakers expanded on the various programmes and resources available to SID members, including networking events among the directorship community, to enable meaningful connections and collaborations.

A key highlight is the SID Special Interest Groups to cater to the different interests and areas of specialisation, such as the Audit Committee Chapter, Company Secretaries Network, Family Business Group, Digital Network and Golf Network.

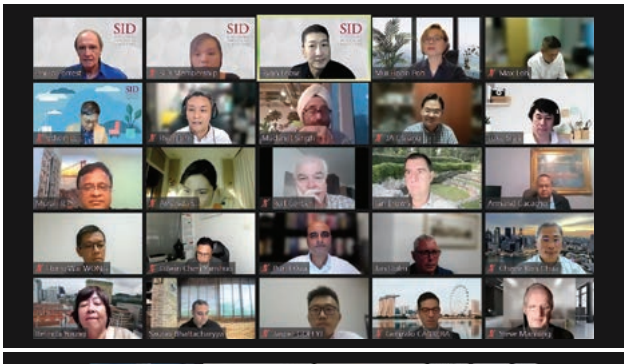


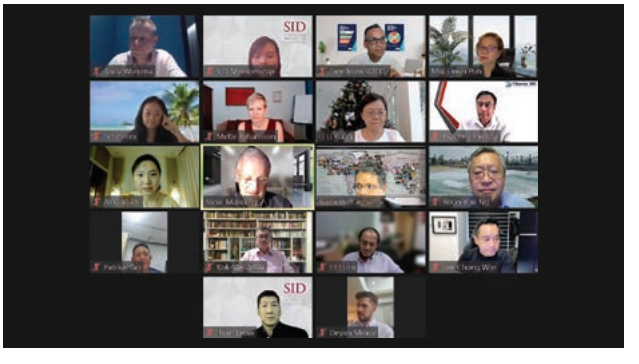
Members were then split into breakout rooms to introduce themselves and discuss topics like how Covid-19 has disrupted life, what the future is likely to hold as society learns to live with Covid, and what it takes to be a director. Despite it being a virtual session, many participants found the discussions engaging and interactive – a positive introduction to the SID community. ■

Networking Session

A virtual New Members networking session was held on 9 November 2021 with more than 110 members. Poh Mui Hoon, SID Council Member, welcomed the members and introduced her fellow Council members: Max Loh, Philip Forrest and Ryan Lim, as well as Committee member Madanjit Singh, who heads the Digital Network.

Members participated in an Ice Breaker where they were quizzed on general knowledge issues, including corporate governance and sustainability. The top five respondents who got the most answers correct received prizes. After which, participants were further split into breakout rooms to get to know each other.





The networking session gave participants the opportunity to exchange their views on the importance of sustainability, an emerging topic in the boardroom. Through facilitated discussion, participants shared their experiences on how their organisations have implemented sustainability initiatives. It was an engaging and lively networking session. ■

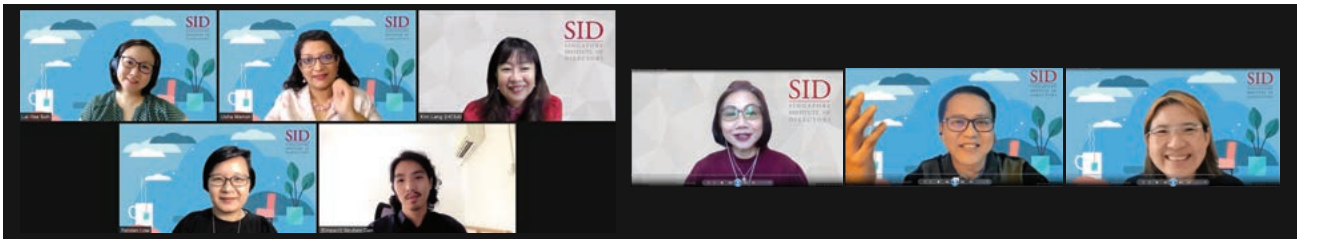
Director Appointments

SID members appointed as directors of listed companies during the period 1 September to 30 November 2021.

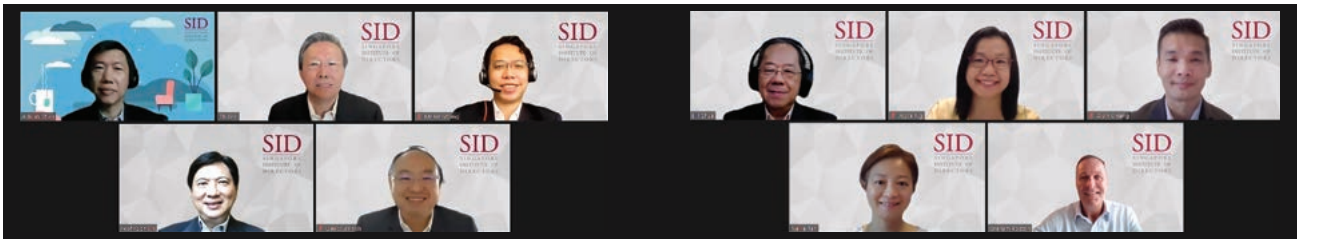
COMPANY	PERSON	DESIGNATION
AEM Holdings Ltd	Alice Lin	Independent Director
AnnAik Limited	John Lim Geok Peng	Independent Director
Axington Inc	Luke Furler	Independent Director
Chemical Industries (Far East) Ltd	Cecil Lim Yew Khang	Non-Executive Director
Darco Water Technologies Limited	Kong Chee Keong	Executive Director
Ecowise Holdings Limited	Lo Kim Seng	Independent Director
Forise International Limited	Joshua Siow Chee Keong	Independent Director
Fu Yu Corporation Limited	Christopher Huang Junli	Non-Executive Chairman
Fu Yu Corporation Limited	Daniel Poh Kai Ren	Independent Director
Gallant Venture Ltd	Lim Chee San	Independent Director
Haw Par Corporation Limited	Ong Sim Ho	Independent Director
HL Global Enterprises Limited	David Chew Heng Ching	Independent Director
Ho Bee Land Limited	Lim Swee Say	Independent Director
Keppel Corporation Limited	Till Bernhard Vestring	Independent Director
Kimly Limited	Lau Chin Huat	Non-Executive Chairman
Koda Ltd	Phua Boon Huat	Independent Director
Nera Telecommunications Ltd	Dr Lim Puay Koon	Independent Director
Olive Tree Estates Limited	Soh Gim Teik	Independent Director
Resources Global Development Limited	Cheong Hock Wee	Independent Director
Shanghai Turbo Enterprises Ltd	Zhang Wenjun	Non-Executive Director
Singapore Post Limited	Vincent Phang Heng Wee	Executive Director
Singapore Technologies Engineering Ltd	Kevin Kwok Khien	Independent Director
Tat Seng Packaging Group Ltd	Lim Swee Say	Independent Director
Venture Corporation Limited	Chua Kee Lock	Independent Director
Versalink Holdings Limited	Dato Dr Lee Chung Wah	Non-Executive Chairman
Versalink Holdings Limited	Eric Sho Kian Hin	Independent Director
Vibrant Group Limited	Albert Chew Khat Khiam	Independent Director
Wilton Resources Corporation Limited	Sebastian Tan Cher Liang	Independent Director
YHI International Limited	Hong Pian Tee	Independent Director

SID-SMU Directorship Programme Modules 4,5,6 • 9-10 September, 14-15 October, 18-19 November 2021

SGOOD Programme Modules 7,8 • 28 September, 26 October 2021



Listed Entity Director Programme 1,2,3,4 • 5-6, 7, 8, 12 October 2021



Listed Entity Director Programme 5,6,7,8 • 13, 14, 19, 22 October 2021

Listed Entity Director Programme Mandarin • 25-29 October 2021

Board and Director Fundamentals, Director Financial Reporting Fundamentals • 29-30 September, 11-12 November 2021

SID's Q4 2021 Events (Oct-Dec 2021)

DATE	TYPE	EVENT DETAILS
5-6 Oct 2021	PD	LED1: Listed Entity Director Essentials
6 Oct 2021	Event	Audit Adjustment Focus Group
7 Oct 2021	PD	LED2: Board Dynamics
8 Oct 2021	PD	LED3: Board Performance
12 Oct 2021	PD	LED4: Stakeholder Engagement
13 Oct 2021	PD	LED5: Audit Committee Essentials
14 Oct 2021	PD	LED6: Board Risk Committee Essentials
14-15 Oct 2021	PD	SDP5: Strategic CSR and Business Valuation
15 Oct 2021	Event	Conversation with Peter Ho: Public Sector Resilience in the Face of Disruption and Crisis
19 Oct 2021	PD	LED7: Remuneration Committee Essentials
21 Oct 2021	PD	ACP5: Tax Function of Tomorrow
22 Oct 2021	PD	LED8: Nominating Committee Essentials
22 Oct 2021	Event	INSEAD Directors Forum
25-29 Oct 2021	PD	LEDM: Listed Entity Director Programme (Mandarin) Core
26 Oct 2021	PD	SGD8: Social Trends
28 Oct 2021	Event	Climate Governance Singapore Launch
3 Nov 2021	Event	Singapore Directorship Report 2021 Launch
9 Nov 2021	Event	Members Networking
11-12 Nov 2021	PD	DFF: Director Financial Reporting Fundamentals
16 Nov 2021	Event	SIG: Company Secretaries Network – D&O Indemnity Policy
17 Nov 2021	Event	SIG: Family Business Succession – Boardroom Issues
18 Nov 2021	Event	Corporate Governance Roundup 2021
25-26 Nov 2021	PD	SDP6: Effective Succession Planning and Compensation Decisions
30 Nov 2021	PD	SPAC: Board Governance of SPACs
7 Dec 2021	Event	SGOOD Alumni Reunion
13-15 Dec 2021	PD	IDP3: Developing Directors and their Boards
16-18 Dec 2021	PD	IDP1: Board Fundamentals

Note: Most of the courses listed above were conducted online, due to the restrictions on public gatherings related to the Covid-19 containment measures.

Upcoming Events

Core Professional Development Programmes

PROGRAMME	DATE	TIME	VENUE
SDP1: The Role of Directors	5-7 Jan 2022	0900 to 1700	SMU Campus
SDP2: Assessing Strategic Performance	9-11 Feb 2022	0900 to 1700	SMU Campus
SYN: So, You Want to be a NonProfit Director	22 Feb 2022	0900 to 1230	ONLINE
SYD: So, You Want to be a Director	23 Feb 2022	1030 to 1230	BLENDED
IDP2: Board Dynamics, Efficiency and the Role of Committees	23-25 Feb 2022	0900 to 1730	INSEAD Campus
BDF: Board and Director Fundamentals	1-2 Mar 2022	0900 to 1145 0900 to 1300	ONLINE
DFF: Director Financial Reporting Fundamentals	3-4 Mar 2022	0900 to 1230 0900 to 1300	ONLINE
LED1: Listed Entity Director Essentials	8-9 Mar 2022	0900 to 1300	ONLINE
LED2: Board Dynamics	10 Mar 2022	0900 to 1300	ONLINE
LED3: Board Performance	11 Mar 2022	0900 to 1300	ONLINE
LED4: Stakeholder Engagement	15 Mar 2022	0900 to 1300	ONLINE
LED5: Audit Committee Essentials	16 Mar 2022	0900 to 1300	ONLINE
LED6: Board Risk Committee Essentials	17 Mar 2022	0900 to 1300	ONLINE
SGD1: Essentials of NonProfit Board Leadership	22 Mar 2022	0900 to 1300	ONLINE
LED7: Nominating Committee Essentials	23 Mar 2022	0900 to 1300	ONLINE
LED8: Remuneration Committee Essentials	24 Mar 2022	0900 to 1300	ONLINE
SDP3: Finance for Directors	14-16 Mar 2022	0900 to 1700	SMU Campus
IDP: INSEAD IDP Cocktail	5 Apr 2022	TBC	TBC
SGD2: Board Dynamics	19 Apr 2022	0900 to 1300	ONLINE
SDP1: The Role of Directors	11-13 May 2022	0900 to 1700	SMU Campus
SGD3: Board and Management Dynamics	17 May 2022	0900 to 1300	ONLINE
LED1: Listed Entity Director Essentials	18-19 May 2022	0900 to 1300	ONLINE
LED2: Board Dynamics	20 May 2022	0900 to 1300	ONLINE
LED3: Board Performance	24 May 2022	0900 to 1300	ONLINE
LED4: Stakeholder Engagement	25 May 2022	0900 to 1300	ONLINE
IDP1: Board Fundamentals	30 May-1 Jun 2022	0900 to 1730	INSEAD Campus
IDP1: Board Fundamentals	1-3 Jun 2022	0900 to 1730	INSEAD Campus
IDP3: Developing Directors and their Boards	16-18 Jun 2022	0900 to 1730	INSEAD Campus
SDP2: Assessing Strategic Performance	20-22 Jun 2022	0900 to 1700	SMU Campus
SGD4: Talent and Volunteer Management	21 Jun 2022	0900 to 1300	ONLINE
BDF: Board and Director Fundamentals	28 Jun 2022	TBC	TBC
DFF: Director Financial Reporting Fundamentals	30 Jun-1 Jul 2022	0900 to 1230 0900 to1300	ONLINE
LED1: Listed Entity Director Essentials	5-6 Jul 2022	0900 to 1300	ONLINE
LED2: Board Dynamics	7 Jul 2022	0900 to 1300	ONLINE
LED3: Board Performance	12 Jul 2022	0900 to 1300	ONLINE
LED4: Stakeholder Engagement	13 Jul 2022	0900 to 1300	ONLINE
LED5: Audit Committee Essentials	19 Jul 2022	0900 to 1300	ONLINE
LED6: Board Risk Committee Essentials	20 Jul 2022	0900 to 1300	ONLINE
LED7: Nominating Committee Essentials	21 Jul 2022	0900 to 1300	ONLINE
LED8: Remuneration Committee Essentials	22 Jul 2022	0900 to 1300	ONLINE
SGD5: Strategy and Board Performance	26 Jul 2022	0900 to 1300	ONLINE

Core Professional Development Programmes

PROGRAMME	DATE	TIME	VENUE
SDP3: Finance for Directors	27-29 Jul 2022	0900 to 1700	SMU Campus
SYD: So, You Want to be a Director	28 Jul 2022	1030 to 1230	BLENDED
SYN: So, You Want to be a NonProfit Director	16 Aug 2022	0900 to 1230	ONLINE
SDF: Startup Director Fundamentals	17 Aug 2022	0900 to 1200	ONLINE
SGD6: Financial Management and Accountability	23 Aug 2022	0900 to 1300	ONLINE
IDP2: Board Dynamics, Efficiency and the Role of Committees	29-31 Aug 2022	0900 to 1730	INSEAD Campus (Fontainebleau)
SDP4: Risk and Crisis Management	8-9 Sep 2022	0900 to 1700	SMU Campus
SGD7: Fundraising, Outreach and Advocacy	20 Sep 2022	0900 to 1300	ONLINE
BDF: Board and Director Fundamentals	27 Sep 2022	TBC	TBC
LED1: Listed Entity Director Essentials	4-5 Oct 2022	0900 to 1300	ONLINE
LED2: Board Dynamics	6 Oct 2022	0900 to 1300	ONLINE
LED3: Board Performance	7 Oct 2022	0900 to 1300	ONLINE
LED4: Stakeholder Engagement	11 Oct 2022	0900 to 1300	ONLINE
LED5: Audit Committee Essentials	12 Oct 2022	0900 to 1300	ONLINE
LED6: Board Risk Committee Essentials	13 Oct 2022	0900 to 1300	ONLINE
SDP5: Strategic CSR and Business Valuation	13-14 Oct 2022	0900 to 1700	SMU Campus
LEDM: Listed Entity Director Programme (Mandarin)	20-28 Oct 2022	0900 to 1230	ONLINE
LED7: Nominating Committee Essentials	14 Oct 2022	0900 to 1300	ONLINE
LED8: Remuneration Committee Essentials	18 Oct 2022	0900 to 1300	ONLINE
IDP2: Board Dynamics, Efficiency and the Role of Committees	26-28 Oct 2022	0900 to 1730	INSEAD Campus
SGD8: Social Trends	1 Nov 2022	0900 to 1300	ONLINE
DFF: Director Financial Reporting Fundamentals	10-11 Nov 2022	0900 to 1230 0900 to 1300	ONLINE
SDP6: Effective Succession Planning and Compensation Decisions	24-25 Nov 2022	0900 to 1700	SMU Campus
IDP3: Developing Directors and their Boards	12-14 Dec 2022	0900 to 1730	INSEAD Campus
IDP3: Developing Directors and their Boards	14-16 Dec 2022	0900 to 1730	INSEAD Campus

Other Professional Development Programmes

PROGRAMME	DATE	TIME	VENUE
ACP1: The End of Inter Bank Offered Rates	24 Feb 2022	0900 to 1100	ONLINE
CTP1: Global Virtual Roundtable	29 Mar 2022	1530 to 1700	ONLINE
BFS2: Cyber Security for Directors	7 Apr 2022	1400 to 1720	Kallang Place
ACP2: Valuation in Southeast Asia's Technology Industry	20 Apr 2022	0900 to 1100	ONLINE
CTP2: Steward Leadership	5 May 2022	0900 to 1100	ONLINE
ACP3: Finance Function of the Future	26 May 2022	0900 to 1100	ONLINE
ACP4: Maximising the Value of Internal Audit	29 Jun 2022	0900 to 1100	ONLINE
ACP5: Sustainability Reporting and Assurance	18 Aug 2022	0900 to 1100	ONLINE
CTP3: Global Virtual Roundtable	28 Sep 2022	1530 to 1700	ONLINE

Major Events

EVENT	DATE	TIME	VENUE
Audit Committee Seminar	12 Jan 2022	0930 to 1130	ONLINE
SID Annual Golf Tournament	10 Jun 2022	TBC	TBC
Singapore Governance and Transparency Forum	3 Aug 2022	TBC	TBC
SID Directors Conference	14-15 Sep 2022	TBC	TBC
Corporate Governance Roundup	17 Nov 2022	0930 to 1130	TBC

All the events listed above are subject to change, according to the ongoing guidelines regarding safe distancing measures related to Covid-19.
For the schedule of the Qualified Listed Entity Director Assessment, please refer to www.sid.org.sg for the latest updates.

Welcome to the Family

September 2021

Ai Sze Yin
Srinath Ananthan
Ang Jun Hung
Ang Keng Been
Mohd Rais Azhar
Armand R Cacacho
Cheong Hock Wee
Tiago Carneiro Da Costa
Prakash Ambelal Desai
Carlos Nicholas Fernandes
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The **Listed Entity Director (LED) Programme** by SID is supported by the Singapore Exchange. It is a pre-requisite course for first-time appointees on boards of listed companies, to equip them with the skills and knowledge to execute their duties as directors effectively. The programme comprises four core modules and four elective modules on the range of regulatory compliance and corporate governance matters of listed companies in Singapore.

Core	LED1: Listed Entity Director Essentials. LED2: Board Dynamics. LED3: Board Performance. LED4: Stakeholder Engagement.
Elective	LED5: Audit Committee Essentials. LED6: Board Risk Committee Essentials. LED7: Nominating Committee Essentials. LED8: Remuneration Committee Essentials.

The **Governance for Outstanding Organisation Directors (SGOOD) Programme** is specifically designed around the learning needs of board members of nonprofit organisations (NPOs). The programme is developed in collaboration with the Social Service Institute, a division of the National Council of Social Service.

The eight modules in the SGOOD series cover different governance challenges and considerations of being an NPO director. The programme seeks to help directors understand their duties on the NPO board.

- SGD1: Essentials of NonProfit Board Leadership.
- SGD2: Board Dynamics.
- SGD3: Board and Management Dynamics.
- SGD4: Talent and Volunteer Management.
- SGD5: Strategy and Board Performance.
- SGD6: Financial Management and Accountability.
- SGD7: Fundraising, Outreach and Advocacy.
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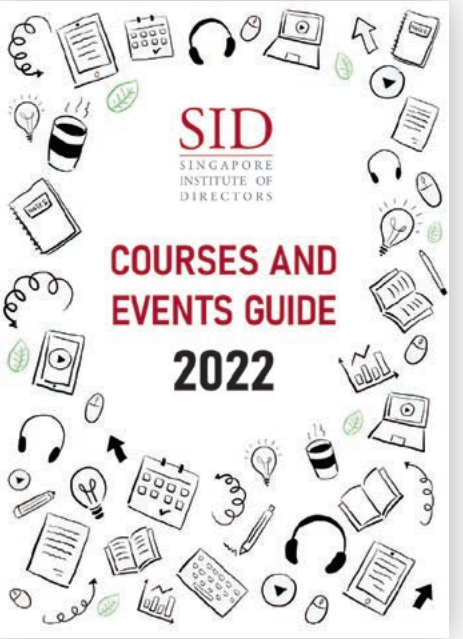

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SID PUBLICATIONS AND RESOURCES

SID has a range of publications and resources to support directors in fulfilling their duties as board members. Access topical and relevant tools and information on a range of corporate governance and directorship issues. Expert research, knowledge and insights on boardroom matters and practical tips are updated to reflect trending issues and new developments. We welcome feedback and contribution of content. Please write to: publications@sid.org.sg.

Some of our publications include:

- **Ask Mr Sid (2021)** – A collection of advice on directorship dilemmas
- **Singapore Directorship Report (2021)** – A snapshot on the state of directorship in Singapore listed companies
- **Board of Directors Survey (2019) –** Insights into board structures and board practices in Singapore listed companies
- **Boardroom Matters (2016-2021)** – A series of essays on good corporate governance and directorship
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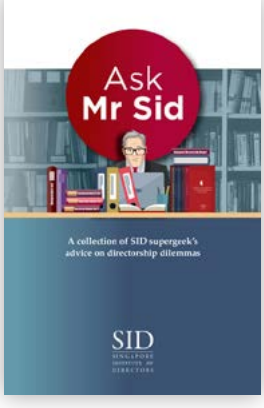

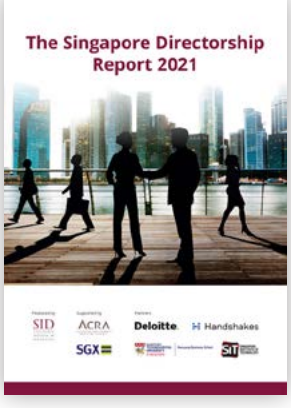

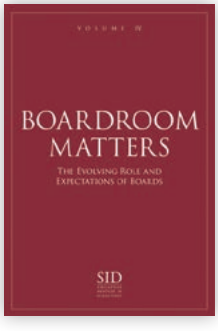

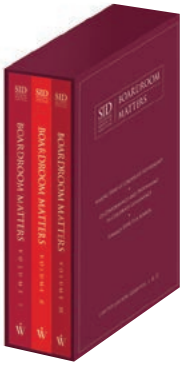

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