ESG Reporting White Paper – 2022

A joint research paper by CPA Australia, Xiamen National Accounting Institute and the Institute of Chartered Accountants of India on ESG reporting in Australia, New Zealand, Mainland China, Hong Kong, Singapore and India

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Table of contents

About The White Paper

The White Paper provides a survey of ESG developments across six Asian-Pacific economies: Australia, New Zealand, Singapore, Hong Kong, Mainland China and India. It seeks to provide insights on each economy's journey towards deeper embedding of ESG disclosure within mainstream corporate practices.

The White Paper also surveys each economy's ESG-related regulatory settings and GHG emission reduction measures under the "Paris Agreement".

The White Paper addresses a number of key definitions in the ESG and sustainability vocabulary along with identifying a number of the most significant international instruments, frameworks and standards which are the foundation of the transformations which are well and truly underway.

About CPA Australia

CPA Australia was established in 1886 and is one of the world's largest professional accounting bodies, with more than 168,000 members in over 100 countries and regions. We have more than 47,000 members working across the international markets and our core services include education, training, technical support, and advocacy.

CPA Australia provides thought leadership on local, national, and international issues affecting the accounting profession and public interest. We engage with governments, regulators, and industries to advocate policies that stimulate sustainable economic growth and have positive business and public outcomes. Find out more at **cpaaustralia.com.au**.

About Xiamen National Accounting Institute

Xiamen National Accounting Institute (XNAI) was founded in 2002 with the approval of State Council and is directly under the Ministry of Finance. XNAI focuses on high-level training in accounting, auditing, taxation, and economic management, such as National Accounting Leading Talents Training Project, CFO Training for Large and Medium-sized Organisations etc.

XNAI has four research centres and four research institutes: The Research Centre for the Belt & Road Financial and Economic Development, China Financial Fraud Research Centre; Government Comprehensive Financial Reporting Research Centre; ESG Research Centre; Institute of Financial Accounting and Auditing, Institute of Management Accounting and Financial Management, Institute of Public Finance and Taxation, and Institute of Economics and Management. Find out more at **en.xnai.edu.cn**.

About The Institute of Chartered Accountants of India

The Institute of Chartered Accountants of India (ICAI) is a statutory body established by an Act of Parliament, viz. The Chartered Accountants Act, 1949 on 1st July 1949 for regulating the profession of Chartered Accountancy in the country. The Institute, functions under the administrative control of the Ministry of Corporate Affairs, Government of India.

The ICAI is one of the largest professional bodies of Chartered Accountants in the world, with a strong tradition of service to the Indian economy in public interest.

Currently around 750,000 students are pursuing the CA course and the total membership count of the ICAI is about 350,000. A significant number of members occupy eminent positions in Government and various organisations. Find out more at **icai.org**.

Message from Xiamen National Accounting Institute And CPA Australia

Climate risks, carbon emission and sustainable development have become essential components for business strategies. It is important for business leaders today to identify, assess and manage the risks and opportunities arising from ESG factors and determine the impacts they have on businesses, financial markets and people around the world.

As one of the world's largest professional accounting bodies, CPA Australia acknowledges the importance of climate change and the urgency of promoting ESG across the business community.

Pursuing the same vision, Xiamen National Accounting Institute – one of the most recognised professional accounting institutes in Mainland China, has also been driving and communicating the importance of sustainable reporting and green transition across different industries in Mainland China in the past few years.

Being at the forefront of the industry and assembling best practices from Australia, New Zealand, Singapore, Mainland China and Hong Kong, CPA Australia and XNAI have jointly conducted this White Paper to enable the business community to move forward towards the path of embedding ESG disclosures and considerations into their business models.

In recent years, we have seen the implementation of several major government policies and incentive schemes to support green development in the Asia- Pacific region. These policies and incentive schemes will increase the pace of businesses moving onwards to ESG-friendly models.

The White Paper is particularly valuable as we have highlighted the key points of the ESG-related regulatory settings and GHG emission reduction measures under the "Paris Agreement" across the five different markets with varying economic characteristics. The report has also incorporated a number of recommendations for businesses too.

We hope the White Paper will be constructive to the business community in developing a long-term ESG strategy and reporting standard.

Finally, we would like to extend our gratitude to our subject matter experts for contributing to the success of this White Paper. We look forward to developing more professional development resources for the accounting profession to drive greener and more sustainable growth.

This report has been updated for 2022 and now includes India in the analysis. Our thanks to ICAI for their contribution and input to this revised edition.

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Introduction

The objective of this White Paper is to provide a survey of ESG developments across six Asian-Pacific economies: Australia, New Zealand, Singapore, Hong Kong, Mainland China and India. It seeks to provide insights on each's journey towards deeper embedding of ESG disclosure within mainstream corporate practices. Each also demonstrates widely different economic characteristics.

Nevertheless, it can be stated that each is heading in the broadly same direction, though via different paths and at different speeds. That these developments have commenced in 2020 and through 2021 to both converge and rapidly quicken can in some large measure be attributed separately, and relatedly, to regulatory attention and the global response to climate change.

As such this White Paper also surveys each economy's ESG-related regulatory settings and GHG emission reduction measures under the "Paris Agreement". As part of context setting, the White Paper addresses a number of key definitions in the ESG and sustainability vocabulary along with identifying a number of the most significant international instruments, frameworks and standards which are the foundation of the transformations which are well and truly underway.

Related developments and terminology on the path to ESG reporting in 2021

Corporate Social Responsibility (CSR)

Not to be confused with corporate philanthropy, CSR is the evolving understanding of corporations' social responsibility. It addresses debates, both practical and theoretical/philosophical, centred around corporate and economic purposes beyond profit maximisation and the centrality of owner interests (shareholder primacy).

Significant also in these deliberations are questions as to the ethical dimensions of business, particularly in circumstances where ownership is separated from management, with the company treated as a legal person in its own right. These longstanding deliberations have contemporary relevance to the current developments in ESG:

Directors' legal obligations are neither static nor at a disconnect from wider economic contexts and societal expectations. Thus, the idea that there is no strict legal impediment to the consideration of wider interests and the adoption of a longer-term view, translates readily to identification of positive obligations in relation to addressing for the company the financial risks posed by climate change. Including, of course, related disclosure obligations.

The much-cited statement by the economist Milton Freidman that the "sole purpose of business is to generate profits for its shareholders", while not totally rejected, has been replaced by more nuanced ideas such as 'inclusive capitalism' within which markets and corporations are viewed as embedded in the imperatives of economic, environmental and social transformation. Similarly, these more enlightened perspectives have prompted extension of the idea of a 'social licence to operate' complementary to the formal legal licence to operate created upon incorporation.

Sustainability

The concept of sustainability, and relatedly sustainable development, is encapsulated by the UN World Commission on the Environment and Development Our Common Future (Brundtland Report, 1987) as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs." Both the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) discussed below adopt as their conceptual starting point this intergenerational notion of sustainability, though applying different approaches to such key areas as target audience and choice of disclosure topic (materiality).

The 'Triple-bottom Line' (TBL)

First articulated in 1994 by John Elkington, TBL can be regarded as one of a number of important management theories arising out of recognition that double-entry bookkeeping, entrusted to we accountants some 500 years ago by Luca Paccioli, in generating a single financial bottom line, failed to capture the full economic, environmental and social dimensions of a business. Aside from adding dimensions of 'social' and 'environment', the idea of a TBL is elsewhere encapsulated as 'People, Planet, Prosperity' and has provided important conceptual thinking underlying developments such as the Environmental Profit & Loss and Social Return on Investment, in addition to its relevance to the development of the GRI.

Why is ESG reporting important?

General purpose financial reporting has evolved to meet the information needs of existing and potential investors along with that of other financial stakeholders such as creditors.

Financial reporting provides financial information concerning matters such as assessment of expected returns, timing, and uncertainty of future cashflows, and the stewardship of management over the entity's economic resources.

ESG and sustainability reporting have also emerged to meet information needs in recognition that sound financial decisions are based on data and analysis wider than that provided alone by financial information. It also recognises that there is a constituency of interest wider than the providers of financial resources.

ESG International institutional developments and drivers

Financial Stability Board (FSB) Taskforce on Climate-related Financial Disclosures (TCFD)

The Swiss-based Financial Stability Board (FSB) was established in 2009. It coordinates at the international level the work of national financial authorities (central banks in the main) and international standard setting bodies. The purpose is to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies in the interest of financial stability. The FSB monitors and assesses vulnerabilities affecting the global financial system and proposes actions needed to redress them. In addition, it monitors and advises on market and systemic developments, and their implications for regulatory policy.

The Taskforce on Climate-related Financial Disclosures (TCFD) was established in December 2015 to develop a set of voluntary, consistent disclosure recommendations for use by companies in providing information to investors, lenders and insurance underwriters about their climate-related financial risks. The rationale for the FSB embarking on this endeavour is outlined in the Executive Summary to the TCFD June 2017 ***Final Report***. It is emphasised that one of the essential functions of financial markets is to price risk to support informed, and thus, efficient capital allocation decisions. Accurate and timely disclosures of current and past operating and financial results are fundamental to this function. One of the most significant, and perhaps most misunderstood, risks that organisations face today, and into the future, is climate change.

The TCFD's eleven recommendations are organised under four pillars; Governance, Strategy, Risk Management and Metrics and Targets, and should be presented as part of the organisation's mainstream (i.e., public) annual financial filings.

World Economic Forum (WEF)

Based on existing standards developed primarily by the GRI, TCFD and SASB, the WEF has published in ***Measuring Stakeholder Capitalism*** a set of common metrics (21 core and 34 expanded distinguishable on the based relative ease of data capture and organisational boundary considerations) grouped under four pillars; Principles of Governance, Planet, People and Prosperity. The WEF is also highly influential in its annual publication of ***The Global Risk Report***, an analysis by its expert reference group of 30 risks under five categories (Economic, Environmental, Geopolitical, Societal and Technological) assesses for scale of impact and likelihood over time horizons and in terms of connectivity.

UN Sustainable Development Goals (UNSDGs)

The United Nations' 2030 Agenda for Sustainable Development gave rise to the 17 Sustainable development Goals (SDGs) which collectively represent a vision and a roadmap for a better, more sustainable world. These goals, and the numerous targets therein, collectively offer an overarching framework for businesses to plan and enact sustainability strategies with the SDGs in mind.

The 'Group of Five': now 'Four'

These are the prominent sustainability frameworks developers and standards setters that cover the broad spectrum of ESG subject matter both used by preparers and which have a high degree of recognition amongst investors and regulators.

Global Reporting Initiative (GRI)

The GRI Standards seek to create a common language for organisations and stakeholders, with which the economic, environmental, and social impacts of organisations can be communicated and understood. Structure around universal and topic-specific standards, use of the GRI is intended to enhance the global comparability and quality of information on impacts enabling greater transparency and accountability by organisations.[1]

Climate Disclosure Standards Board (CDSB)

Operating at a more conceptual level, the CDSB's principal guidance is in the form of a framework for reporting environmental and climate-related information. Its overarching purpose is to drive environmental information to the same level of rigor as financial information. The CDSB framework is developed in recognition that many businesses are driving their environmental information capabilities in response to a range of factors including legal requirements, recognition of natural capital dependencies and as part of better reporting practices. The CDSB framework provides a structure for rational organisation and presentation of such information.

Carbon Disclosure Project (CDP)

Founded in 2002 as a non-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their impact in three focus areas: climate change, water security and forests.[2]

Sustainability Accounting Standards Board (SASB)

The SASB is an independent USA-based non-profit organisation that sets standards to guide the disclosure of financially material sustainability information by companies for their investors. Organised around 26 ESG sustainability-related issues across five dimensions (Environmental, Social capital, Human capital, Business model & Innovation and Leadership & Governance), the SASB standards address 77 industries within eleven discrete sectors. Each SASB industry standard has an average of six topics and thirteen metrics.

International Integrated Reporting Council (IIRC)

Based on the concept of integrated thinking, the International <IR> Framework is in essence a methodology of business model reporting which focuses on value creation, preservation and erosion over time. As such, Integrated Reporting is conceptually a report on the 'stock and flow' of six interconnected capitals (Financial, Manufactured, Intellectual, Human, Social and relationship, and Natural).

Effective June 2021, the SASB and IIRC merged to form the Value Reporting Foundation. The two bodies can be viewed as complementary insomuch as the SASB offers the 'What' of standards and metrics, while the <IR> Frameworks provides the principles-based 'How' of preparation and presentation. The motivation for the merger is underpinned by response to the demands for report rationalisation, the need for simplification of the reporting landscape and the practicalities of resource combination between the two bodies.

IFRS Foundation

The International Financial Reporting Standards Foundation, or IFRS Foundation, is a non-profit accounting organisation operating under guidance of its Trustees. Its main objectives include the development and promotion of the International Financial Reporting Standards through the International Accounting Standards Board (IASB), which it oversees. The IFRS Foundation is overseen by the Monitoring Board who are public authorities primarily drawn from representative of securities regulators and central banks. Around 120 nations and reporting jurisdictions adopt IFRS accounting standards with around 90 of them in full conformity.

And a further critical development to end 2021

Amongst the range of outcomes from the recently concluded COP 26 UN Climate Change Conference, the most significant, and indeed profound, for the accounting and finance profession is the IFRS Foundation's ***announcement*** of the formation of the International Sustainability Standard Board (ISSB), the consolidating within this of the Climate Disclosure Standards Board (CDSB) and the Value Reporting Foundation (VRF), along with the publication of two prototype disclosure standards.

[1] Adapted from **GRI 101: Foundation 2016** Introduction page 3.
[2] Adapted from IOSCO June 2021 Report on **Sustainability-related Issuer Disclosures**.

The ISSB will sit alongside and work in close cooperation with the IASB, ensuring connectivity and compatibility between IFRS Accounting Standards and ISSB's IFRS Sustainability Disclosure Standard.

The ISSB and the IASB will be independent, and their standards will complement each other to provide comprehensive information to investors and other providers of capital. The technical expertise, content, staff, and other resources of the CDSB and VRF will be consolidated with other resources of the IFRS Foundation to provide the operating structure of the ISSB.

To give the proposed board a running start, the IFRS Foundation in March 2021 created a Technical Readiness Working Group (TRWG)[3] whose intent has been to "integrate and build on the work of relevant initiatives focused on meeting investors' information needs, with the purpose of providing technical recommendations for consideration by the ISSB (once established and operational)."

The primary outputs from the TRWG as released at COP 26 are:

- ***General Requirements for Disclosure-related Financial Information Prototype***
- ***Climate-related Disclosure Prototype***

International Organization of Securities Commissions (IOSCO)

IOSCO brings together 42 of the world's securities regulators and is the major forum for advancing the regulation of companies and global capital markets.

IOSCO's support for sustainable finance and the movement towards global sustainability standards is pivotal and will play the key role in driving acceptance and regulatory support amongst its represented jurisdictions for sustainability-related reporting standards as they are developed.

In 2020, it published ***Sustainability and the Role of Securities Regulators and IOSCO***, in which it identified a number of information-based challenges that currently face markets in their efforts to protect investors. More recently in June 2021 IOSCO released ***Report on Sustainability-related Issuer Disclosures*** in which it sets out in detail its vision for the ISSB under the IFRS Foundation.

Further, consistent with IOSCO's emphasis on investor protection, it has commenced consultation on ***Sustainability-Related Practices, Policies, Procedures and Disclosures in Asset Management***.

Network for Greening the Financial System (NGFS)

The NGFS is a group of Central Banks and Supervisors who on a voluntary basis share best practices and contribute to the development of environmental and climate-related risk management in the finance sector.

The network seeks to mobilise mainstream finance to support the transition to a sustainable economy. Each of the Australian Prudential Regulation Authority and Reserve Bank of Australia are members, so too is the Reserve Bank of New Zealand, the Monetary Authority of Singapore and the Hong Kong Monetary Authority.

NGFS reports such as ***Climate Scenarios for central banks and supervisors*** (June 2021) and ***Climate Change and Monetary Policy*** (June 2020) are important catalysts for capacity building within nationally regulated entities in the banking, asset owner/ asset manager and insurance sectors.

The nature of ESG and sustainability is such that developments in the financial sectors, driven by concerns about market resilience and the pricing of risk, have direct implications for entities in the real economy in terms of both provisions of (and pricing) of investment capital and the expectations that they themselves manage and disclose these risks.

[3]Participants of the TRWG were IASB, CDSB, the FSB's Task Force on Climate-related Financial Disclosures (TCFD), the VRF and World Economic Forum (WEF), with IOSCO and IPSASB as observers.

Insights from the global ESG journey

Insights from the ESG journey in Australia

The journey of ESG reporting in Australia has been decades long and, in some ways, can be traced back to two seemingly unrelated occurrences.

The first concerns the formation of the GRI in 1997 which can be regarded as pivotal in signifying the ‘first-to-market’ effective endeavour to meet the latent needs for sustainability information across both broad ranges of prepared and users. The GRI, having evolved over five major updates, is now adopted by more than 10,000 reporters in over 100 counties. In Australia, as elsewhere, it is regarded as the default framework and suite of standards for sustainability metrics.

Closer to home in Australia, the second occurrence concerns the 2004 ***Jackson QC Report into the Medical Research and Compensations Foundations***. Space does not allow any detailed discussion of the long and controversial history of the restructure of James Hardie Industries and the legacy of under-funded compensation claims relating to the manufacture and sale of asbestos products. What the Jackson QC Report did, however, do was bring into sharp focus the ethical dimensions of commercial enterprise. The circumstances of James Hardie Industries were the stimulus leading to two key government inquiries into corporate social responsibility (Parliamentary Joint Committee on Corporations and Financial Services June 2006 and Corporation and Markets Advisory Committee December 2006). Both inquires, in a manner perhaps foreshadowing of the current impetus around corporate climate change response, emphasised the degree of flexibility with the corporate law to compel directors to have regard of shifting societal expectations around the impact of their companies’ commercial activities, and that within this, the positive functions served through evolving corporate reporting.

CPA Australia has had a long association with the GRI both as a reporter (2007 – 2016, after which a fully integrated approach was adopted using the <IR> Framework) and as a funder of an outreach network. Further, in 2013 CPA Australia in collaboration with the GRI, commissioned from the University of Sydney ***Sustainability Reporting: Practices, performance and potential***. This report provides the following important insights up until that time, though many of which endure today:

- Larger, multi-national firms show higher levels of sustainability disclosures, with highest disclosures in governance and environment
- Companies in the materials and energy industry produce more information than other sectors
- Australian companies, led by the resources sector, disclose most on the environment compared to, for example, British companies
- Specific industry membership is an important influencer of sustainability reporting behaviour, particularly where, within some sectors, there is requirement to report on certain areas of activity
- Profitability and cash flow return are strongly correlated with ‘GRI scores’, including analyst projections of future return on capital.

Pursuing further the theme of the financial characteristics of early adopters of sustainability disclosures, CPA Australia in 2017 commissioned further research from the University of Sydney, this time examining the relationship between sustainability information and cost of capital amongst a pool of companies drawn from the Australian, London and Hong Kong stock exchanges. The ***report*** show lower sustainability scores (comprising the aggregate of all environmental, social and governance scores scores) are statistically associated with higher cost of capital, this after controlling for size (market capitalisation), leverage, annual investment returns, a distress risk metric, free cash flow and ROE. Regression results run on cost of capital where the main independent variable is the total environmental rating, document a negative and statistically significant relationship between total environmental rating and cost of capital. This implies that companies with higher (or better) environmental ratings enjoy lower cost of capital (and vice versa).

The above would clearly lead to a conclusion that sustainability disclosure provides distinct benefits and that uptake would be both steady and diversified across sectors, size of firm and subject matter addressed. So where do matters currently sit?

One of the most widely referenced non-academic longitudinal studies of ESG reporting trends is that conducted annually by the Australian Council for Superannuation Investors (ACSI) for the ASX200. Benchmarked into level of reporting ratings of No reporting, Basic, Moderate, Detailed and Leading, ASCI's ***thirteenth report*** for the reporting period to 31 March 2020 shows continued improvement with 109 of the ASX200 companies ranked as 'Detailed' or 'Leading' compared to only 39 at the commencement of the studies back in 2008. Nevertheless, the 'Leading' rating declines progressively moving from ASX20 to 21-50, 51-100 and 101-200, with corresponding increased amongst the ratings of 'Moderate' and 'Basic'. As to sectoral attributes, the most strongly represented in ratings of 'Detailed' and 'Leading' are amongst Transportation, Telecommunications Services, Materials, Real Estate and Banks.

The wide spread of quality and depth of reporting across the ASX200 is also highlighted in a 2020 PwC analysis ***ESG reporting – are we keeping pace?*** There, the significant observation is also made that ESG reporting falls short of the standard of financial reporting and correspondingly treated as less important.

One of the explanations given by PwC for this relates to:

- the multitude of ESG reporting frameworks that exist today creating a challenge for investors and other stakeholders as they result in a lack of comparability and consistency in ESG reporting, both locally and globally.

A similar theme is apparent in a further 2020 study commission by CPA Australia from Monash University and Deakin University titled ***Future of environmental, social and governance reporting***, key finding from which are:

- The use of multiple frameworks and increased requests for data have led to significant complexity
- The TCFD is now a major driver of reporting
- While <IR> is seen as complex and difficult to implement, it offers opportunity for integration with other frameworks and for driving integrated thinking
- The major factors influencing organisations adopting of, or dropping, frameworks include driven by the Board or C-suite (top-down approach); driven by sustainability people (bottom-up approach), pressure from external stakeholders; and peer pressure.
- The major challenges include: the 'cacophony' for frameworks and the lack of integration; a compliance mentality; resourcing; and translating frameworks for internal stakeholders.

These trends along with the regulator measures outlined below, are necessary for the deeper embedded of ESG disclosure into the fabric of corporate reporting, however, seem insufficient to achieve the goal of true comparability with financial disclosure.

Insights from the ESG journey in New Zealand

New Zealand sustainability reporters and their motivation to be early adopters

New Zealand was one of the first 30 countries that established a regional business council called The New Zealand Business Council for Sustainable Development (NZBCSD) in 1999, under the World Business Council for Sustainable Development (WBCSD). The Council's establishment resulted from the Rio Earth Summit in 1992, which brought the world's attention to the Earth's environmental problems and the need for global businesses to be aware of their role and business practices. The Resource Management Act (1991) was the most significant legislation in the New Zealand context to promote the sustainable management of natural and physical resources in New Zealand, including land, air and water, by addressing environmental issues through a framework model.

A 2011 KPMG ***international survey*** identified the 100 largest companies in 34 countries, including New Zealand, that use corporate responsibility reports. According to the report, 27 per cent of New Zealand companies from critical industries acknowledged as voluntarily reporting, while only 19 per cent of those 100 New Zealand companies conduct assurance activities.

A master's degree ***research*** completed by the University of Canterbury delved into the KPMG international survey data conducted in recent years of the 100 New Zealand organisations included in the survey and found some interesting insights. While the 100 New Zealand organisations were never publicly identified, a significant number are New Zealand-based subsidiaries of international parent companies which rely on the parent report. With rigorous data and content analysis, the research looked at the best seven reporters that disclose a total of 20 to 25 GRI G4 indicators, including Sanford, The Warehouse, Fonterra, Contact, Z Energy, Kathmandu, and Auckland International Airport, even though their reporting were generally patchy.However, early adopters like Watercare Services, which won several awards between 1995-2000, held a leadership position in influencing the best practice reporters.

At the same time, Landcare Research was perceived as a promoter of sustainability reporting, which resulted in winning awards for their report. The Warehouse's increased focus on stakeholder engagement was also recognised. The motivations for organisations' social and environmental reporting varies in complexity. While social responsibility or accountability is a critical motivator for sustainability reporting, other general perceptions are also considered motivators for reporting. These perceptions include brand recognition and the competitive advantage of disclosing information. The alignment of strategic objectives as a response to pressures, expectations, or social change, or maintaining a 'license to operate', results in a 'win-win' for both business and stakeholders and has a positive correlation between sustainable leadership and business returns.

According to the ***NZX & Wright Communications ESG Reporting Uptake in S&P/NZX 50 Index and Investor Perspective 2019 report*** (NZX & Wright Communications 2019 report), New Zealand is still behind, and lagging compared to its Europe, North America, and Australia peers in sustainable reporting. With a few companies doing their best to disclose by using basic reporting metrics, particularly its carbon emissions approach, they are still slow in reporting their carbon and waste contributions altogether. However, with the emerging trends and pressures in having a sustainable business, NZX-listed companies are now required to report on non-financial information. Therefore, increasingly adapting sustainability into their reporting is critical. The NZX & Wright Communications 2019 report shows that 28 out of the S&P/NZX 50 Index companies said that they are reporting on climate change risks. Of these reports, various disclosure levels, standards, frameworks and approaches to sustainability reporting have been used with no dominant approach or framework. The level and relevance of reporting disclosures are yet to improve, especially that internal and external pressures for useful reporting information is evident. The increasing need for more clarity and simplicity of reporting frameworks have made New Zealand organisations self-select the 'best' framework that suits their needs.[4] A one size fits all approach is not suitable across all sectors, mainly if there is a greater focus on the impact of Sustainable Development Goals (SDGs) that form much of the ESG reporting.

[4]https://assets.kpmg/content/dam/kpmg/nz/pdf/2020/12/the-time-has-come-nz.pdf

The 2020 ***KPMG New Zealand's Survey of Sustainability Reporting*** (KPMG 2020 Survey) reported a slight increase of New Zealand organisations' improvement in the quality of sustainability information on ESG matters from 69 per cent in 2017 to 74 per cent in 2020. However, the quality of ESG reporting needs to be enhance. Based on the report, many New Zealand owned businesses are less likely to use the quantitative frameworks of the Global Reporting Initiative (GRI). They are less likely to have committed to carbon reduction and science-based targets. This information is evident in the survey result where 11 per cent of New Zealand organisations reported and selected using the <IR> framework while 34 per cent of New Zealand offshore owned organisations have been using the GRI Standards to suit their needs best.

Shifts in the frameworks and sustainability reporting standards in New Zealand

There was a sector shift from 'transaction' to 'impact' when it comes to reporting in New Zealand which requires credible and assured information, according to the KPMG 2020 Survey.

New Zealand organisations are trailing their international peers in reporting on climate-related financial risks and opportunities. It is one of the early adopters using the TCFD framework, with 23 per cent of New Zealand organisations report in line with the structure compared with the global average of 18 per cent, according to the KPMG 2020 Survey. However, acknowledging climate-related financial risks in annual or integrated reports are lower in New Zealand, with 39 per cent compared to its other key trading partners - 69 per cent in the UK, 60 per cent in Australia, and 54 per cent in the US, according to the KPMG 2020 Survey.

The Aotearoa Circle, a voluntary initiative partnership of public and private sector leaders, is jointly committed to reverse the decline of our natural resources. It was collectively formed to promote transformational change in New Zealand and founded the Sustainable Finance Forum (SFF) in January 2019. The SFF has developed the Roadmap for Action report, outlining critical steps to transform the New Zealand financial system by 2030.
In October 2019, the SFF presented its ***Interim Report*** anchored in Te Ao Māori, and later issued its final report in November 2020, which consists of three core areas and practical recommendations to shift New Zealand to a sustainable financial system:

- **Changing mindsets** – targeted at educating and creating action through leadership.
- **Transforming the finance system** – structural changes to embed environmental and social outcomes.
- **Financing the transformation** – targeted at accelerating capital towards sustainable investments.

In October 2019, Climate Change Minister James Shaw released a consultation document proposing mandatory climate-related financial risk disclosure. This document was consistent with the Task Force on Climate-related Financial Disclosures (TCFD) by climate reporting entities (CREs), including listed issuers, large registered banks and other deposit takers, large licensed issuers, and large managers of managed investment schemes. And in April 2021, the Financial Sector (Climate-related Disclosure and Other Matters) Amendment Bill (Climate Bill) was introduced, which passed the third reading on 21 October 2021.

The External Reporting Board (XRB) is developing the Climate Standard and adopting the TCFD's eleven recommended disclosures for New Zealand using the 'Group of Five's' prototype standard as a basis for the Standards. Furthermore, XRB reported that some New Zealand entities are already reporting on climate change. The proposed Climate Standards will contain transitional provisions and Guidance to assist other and new entities in their climate change reporting. The formal exposure draft of the standards will be available to release in July 2022 with a 3-month consultation period.

ESG and sustainability themes feature most prominently from preparers

The NZX & Wright Communications 2019 report identified several ESG topics within the reviewed reports of the S&P/NZX 50-listed companies. According to the report, more than 40 of the top 50 companies reported on various social issues, including gender diversity, pay equality, and modern slavery. Some of the case studies reviewed have different perspectives, sustainability themes, and varying stages of their ESG investment in the business and communities they operate.

For example, New Zealand power company Z Energy discloses their non-financial performance, particularly the G of ESG reporting, with their executive remuneration disclosure. As investors and the New Zealand Shareholders Association pressure them for more transparency in non-financial reporting, Z Energy reports their salary and incentive payments in their Annual Report. New Zealand's largest listed property company Kiwi Property reports on several critical environmental metrics as well. They report on energy consumption, waste, water use, and carbon emissions while also paying attention to their social metrics such as lost-time injuries, gender and employees' ethnic diversity. Dairy producer Synlait attributes its sustainability issues directly linked to a social license to operate. The company is increasingly pressured by their next generation of consumers (18 years old) that business purpose is more important than profit.

Sustainability reporting can associate misleading information and false disclosures that concerns the Ministry of Business, Innovation and Employment (MBIE). In their ***International Developments Sustainability Reporting Occasional paper*** published in June 2021, MBIE identified three main challenges associated with sustainability reporting:

- Compliance costs
- Greenwashing
- The proliferation of standards and frameworks.

Although New Zealand does not have a government mandated ESG sustainability reporting framework or standard, in the last decade, voluntary sustainability reporting has increased, and many New Zealand organisations have deepened their understanding of the associated environmental and social risks that impact their corporate governance.[5]

New Zealand prominent sectors and groups and their ESG related information

New Zealand's financial services sector is ahead of the climate change reporting curve compared to other New Zealand sectors reported in the KPMG 2020 Survey. However, these New Zealand entities rely on their Australian parents to lift their sector's performance average. When it comes to ESG information, Australian entities report 100 per cent vs 60 per cent for New Zealand counterparts, and while 43 per cent of Australian parent entities have their ESG independently assured, New Zealand entities have 0 per cent, according to the KPMG 2020 Survey.

The agri-food sector is embracing and leading Integrated Reporting <IR>. The KPMG 2020 Survey shows that New Zealand businesses are still behind their global peers regarding standard-setting, the integrity of their products, reliability of the information, assurance, and impact on the value chain are critical to demonstrate their commitment to climate change. It also reported limited uptake of assurance amongst agri-food organisations, with 14 per cent in New Zealand vs 23 per cent globally. Although 32 per cent of New Zealand entities acknowledge the risk from climate change, 0 per cent have adopted the recommendations of the TCFD vs 9 per cent globally.

The Living Standards Framework (LSF) is not fully utilised by the public sector, lagging the performance of the private sector when it comes to climate change issues. However, according to the KPMG 2020 Survey, government entities like the Ministry for the Environment use their reporting to demonstrate their intentions to report climate-related risks and opportunities. This reporting is aligned to the Climate Change Commission recommendations in 2021 and Treasury's Wellbeing Report due in late 2022 to provide insights and an impact-orientated approach to New Zealand's wellbeing, including the sustainability and associated risks with wellbeing.

Many Māori businesses and iwi trusts voluntarily report on broader ESG outcomes using the Māori cultural intelligence frameworks.[6] Many iwi trusts are leading sustainably by managing their environmental resources, creating value for the communities, looking after the land, and regenerating ecosystem services. Adopting standardised systems and reporting relevant to Māori perspectives, including the impact of climate change on and of the business, has implications on biodiversity, and social and cultural effects should be led, informed, and guided by Māori.[7] New Zealand's energy, telecommunication and infrastructure utilities or the 'lifeline utilities' sector still lag behind their global counterparts on ESG reporting.

However, sustainability is viewed as a key strategic focus. Climate change will be prominent on the agenda, with significant growth of New Zealand organisations expected to continually report their sustainability performance in their next reporting cycle.

[5]https://www.mbie.govt.nz/dmsdocument/15110-international-developments-in-sustainability-reporting-pdf
[6]https://www.mbie.govt.nz/dmsdocument/15110-international-developments-in-sustainability-reporting-pdf
[7]https://assets.kpmg/content/dam/kpmg/nz/pdf/2020/12/the-time-has-come-nz.pdf

Furthermore, the sector's growing adoption of the TCFD framework gives them a solid position to leverage its climate reporting for future requirements. 63 per cent of New Zealand entities are more mature than their global peers (53 per cent) in acknowledging the risk from climate change, according to the KPMG 2020 Survey.

New Zealand's consumer goods and retail organisations are well behind most reporting metrics compared to their global peers regarding climate change risks reporting. Currently, the sector has no regulatory obligations to report on its climate change and sustainability activities. However, The Warehouse have been voluntarily reporting and disclosing their ESG information using their brand story to educate consumers, investors, and stakeholders. The KPMG 2020 Survey revealed a low uptake of assurance in the consumer and retail sector with only half (18 per cent) that of 36 per cent globally.

Insights from the ESG journey in Singapore

The Singapore Green Plan

Singapore, as a small island state with limited natural resources, has always been cognisant of sustainability issues. Its care for the environment and sustainability can be seen through how it has achieved water security through desalination innovations (such as NEWater), decades of greening Singapore and its strong management of waste.

In 2020, the Singapore Government launched the ***Singapore Green Plan 2030***, or the Green Plan, a whole-of-nation movement to advance Singapore's national agenda on sustainable development. The Green Plan 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 our long-term net zero emissions aspiration as soon as viable. Climate change is a global challenge, and Singapore is taking firm actions to do its part to build a sustainable future.

The Singapore Green Plan spans themes such as City in Nature, Energy Reset, Sustainable Living, Green Economy and Resilient Future. Off the back of these themes, Singapore has set specific targets which include but are not limited to:

- Plant ***1 million more trees***.
- Increase ***solar deployment*** to 1.5 giga-watt peak (GWp) by 2025, and at least 2 GWp by 2030.
- Expand cycling network to 1,320km by 2030.
- Increase rail network to 360km by early 2030s.
- ***Reduce waste*** sent to our landfill per capita per day by 20 per cent by 2026, with the goal of reaching 30 per cent by 2030.
- Increase share of trips taken on ***mass public transport*** to 75 per cent by 2030.
- At least 20 per cent of ***schools*** to be carbon neutral by 2030.
- Promote ***sustainable fuels*** for international trade and travel.
- Phase out ***refrigeration and air-conditioning equipment that use high global warming potential (GWP) refrigerants*** from 4th quarter 2022.
- Use 15 per cent ***less energy in HDB towns*** by 2030.
- Produce ***30 per cent*** of our nutritional needs by 2030 locally (30-by-30 target).
- Introduce an ***Enterprise Sustainability Programme***, to help enterprises, especially SMEs, embrace sustainability and develop capabilities in this area.
- Create new and diverse job opportunities in sectors such as green finance, sustainability consultancy, verification, credits trading and risk management.
- Be a leading centre for ***Green Finance*** in Asia and globally, by building up the financial sector's resilience to environmental risks, developing green financial solutions, build knowledge and capabilities, and leveraging innovation and technology.

- Promote homegrown innovation under the ***Research and Innovation & Enterprise Plan 2025***, and attract companies to anchor their R&D activities in Singapore to develop new sustainability solutions.
- Green 80 per cent of buildings by Gross Floor Area by 2030.
- Add over 130 ha of new parks and enhance around 170 ha of existing parks with more lush vegetation and natural landscapes by end-2026.
- "80 per cent of new buildings to be Super Low Energy buildings from 2030, and 80 per cent improvement in energy efficiency over 2005 baseline for best-in-class green buildings by 2030.
- New registrations of diesel cars and taxis to cease from 2025.
- 8 EV-Ready Towns with chargers at all HDB carparks by 2025.
- All new car and taxi registrations to be of cleaner-energy models from 2030.
- 60,000 charging points nationwide, including 40,000 in public carparks and 20,000 in private premises by 2030.

Singapore Exchange requirements

In January 2016, the Singapore Exchange (SGX) issued a consultation paper on proposed changes to the SGX's sustainability reporting requirements to strengthen ESG disclosure requirements for the benefit of listed companies and investors. This came at a time where expectations over sustainability reporting rose globally and the benefits from it were increasingly seen as an opportunity to positively impact society and the environment, to innovate, to access new markets, and to safeguard a company's license to operate. By actively addressing sustainability issues, companies would be in a better position to manage the risks they were facing and drive growth in the long term.

Following the consultation period, SGX issued the Sustainability Reporting listing rules and the Sustainability Reporting Guide ("the Guide") in June 2016, requiring SGX listed entities to prepare an annual sustainability report with effect for any financial year ending on or after 31 December 2017 on a "comply or explain" basis.

Also in 2016, and with the aim to help new or early stage adopters in their sustainability reporting journey, Singapore's national accountancy body, the Institute of Singapore Chartered Accountants (ISCA), formed two groups to work on a ***Sustainability Reporting Implementation Roadmap***:

1. The Corporate Reporting Committee (CRC) - composed of Sustainability Reporting subject matter experts, CRC's objective is to promote quality Sustainability Reporting in Singapore. To do so, the CRC has formed two working groups to support the execution, the Sustainability Reporting Awareness Working Group and the Sustainability Reporting Quality Working Group.

2. ***The Corporate Reporting & Ethics Division (CoRE)*** – in order to:

   a. provide technical support in areas of financial reporting, sustainability reporting, ethics and specialised industries such as capital markets, banking and finance, insurance and insolvency;

   b. communicate insights and views amongst members and the profession;

   c. hear issues from the ground and conceive initiatives to promote and enhance quality, consistency and best practices to uphold technical excellence.

Establishment of global reporting standards hubs

Recognising the need for high quality ESG disclosure in the Association of Southeast Asian Nations (ASEAN) region, the Global Reporting Initiative (GRI), with the support of its partner organisations and the Singaporean government, launched its GRI Regional Hub on 3 September 2019. The Hub works with ten ASEAN countries and supports ASEAN companies in their sustainability journey through providing relevant services and training, as well as helping them identify, manage and report their most material ESG impacts.

Tim Mohin, GRI Chief Executive said "Our ASEAN Hub has a crucial role working with companies in Southeast Asia to unlock the benefits of sustainability reporting. GRI's experience around the world shows disclosure helps businesses improve performance, build relationships with global buyers and increase their reputation as responsible global citizens. As the ASEAN economies develop rapidly, they increasingly face sustainability impacts that can slow growth and decrease quality of life. To help meet these challenges, market regulators in the region, including the Singapore Exchange (SGX), have recognized the value of corporate transparency and require companies to disclose ESG data."

Academic studies

In a ***study*** issued by SGX and the Centre for Governance and Sustainability (CGS) at the National University of Singapore (NUS) Business School in May 2021, an overall improvement was seen in the sustainability reporting quality and disclosures of listed issuers as previously noted in a review two years earlier. The depth and understanding of sustainability reporting, as well as management of sustainability as a whole, has increased overall amongst Singapore-listed issuers, despite a difficult context heavily impacted by the COVID-19 pandemic, greater concerns around climate change and significant sustainability-linked financing seen in the marketplace.

According to the study, issuers conformed more closely to the regulatory standards and reported quality was more even. Across the board improvements were seen and drove the average overall score to 71.7 points compared to 60.6 points in 2019. Amongst other findings, the study also concluded that issuers were embedding sustainability more deeply into their corporate structures and strategies.

"That issuers have become generally better in terms of their sustainability reporting in just a few years is heartening to see. Nevertheless, the call globally for efforts on the climate change and sustainable development fronts has grown exponentially and with a new urgency. Singapore too has stepped up measures in these areas and SGX is similarly committed. In response to these needs, we will consult the market in due course on proposals to place greater emphasis on climate-related disclosures, assurance and structured formats for reporting," said Tan Boon Gin, CEO of SGX RegCo.

Associate Professor Lawrence Loh, Director of CGS at NUS Business School, said, "Better sustainability reporting can help companies attract environmentally-conscious customers, obtain lower-cost financing and gain better access to capital. This improves resilience in the face of future challenges. We hope that this review aids companies in prioritizing and pursuing these potential benefits."

SGX Consultation Paper on climate and diversity

In light of the continuous push towards more disclosure in sustainability reports to satisfy stakeholder requests, the Singapore Exchange issued a paper in August 2021 to consult the public on the following topics:

1. A phased approach to mandatory climate reporting in issuers' sustainability reports, based on TCFD recommendations, and whether sustainability report assurance should become mandatory and a potential requirement for one-time sustainability training for all directors.
2. A requirement for issuers to have a board diversity policy and provide disclosures on related targets, plans and timelines in their annual reporting.

The commentary period ended on 27 September 2021 after which the SGX unveiled a roadmap for issuers to provide climate-related disclosures based on recommendations of the TCFD in December 2021. As Grace Fu, Minister for Sustainability and the Environment rightfully stated "Sustainability is a journey, not the destination. Our work to achieve sustainable development is never done."

Insights from the ESG journey in Hong Kong

Hong Kong has a number of recognised leaders in sustainability reporting including such companies CLP Holdings Ltd, Cathy Pacific Airways Limited and MTR Corporation Limited. Their motivations as earlier adopters span a range of key factors including:

- Market recognition – enhanced bonding with local authorities and communities where they operate by promoting transparency of how they manage environmental and social impacts
- Risk management – improved management and control on environmental and social risks, thereby reducing losses caused by such risks
- Cost of capital – Lower cost of capital as they would be more preferred by investors
- Operating cost – Lower operating cost due to reduced resource consumption, and
- Customer preference – with more and more customers preferring ESG sensitive products and services.

Across the last couple of decades in the evolution of sustainability reporting, there can be observed the following evolution in the frameworks and standards referred to by preparers and the market more broadly:

- In 2000's, reporting frameworks were more basic, focusing mainly on qualitative descriptions of policies and initiatives against ESG aspects, with limited quantitative guidance
- In 2010's, reporting frameworks started to expand the scope of reporting to cover more and more ESG aspects, concerning urgent ESG issues such as climate change, and
- In 2020's, reporting frameworks are expected to further develop; quantification and integration with financial information would be the major trend.

One of the more significant sources of rationalisation is the White Paper ***Measuring Stakeholder Capitalism*** developed by the World Economic Forum in collaboration with big 4 accounting firms, namely Deloitte, EY, KPMG and PwC, to create Common Metrics and Consistent Reporting of Sustainable Value Creation.

Significantly, this is perceived to promote closer alignment with the IFRS standards, which in turn enhances comparability of reports across nations.

ESG and sustainability themes featuring most prominently in Hong Kong reports include:

- Innovation in environmental technology
- Climate risk management
- Community engagement
- Green products and services.

More recently, the global responses to climate change are having an enormous with regulators of leading capital markets are driving the effort in support of sustainability reporting and green finance. There were new consultations and updates regarding sustainability reporting every year or two in leading markets. In light of this, companies are putting more emphasis on sustainability reporting and are becoming more willing to invest more resources to serve that purpose, in a hope to catch up with the market expectation.

In Hong Kong, financial market participants are the primary users of ESG information as financial market regulators are actively driving such trend of green finance. Market regulators have introduced requirements on ESG disclosure by financial market participants with reference to such initiatives as the EU's "Sustainable Finance Disclosure Regulation" and "Taxonomy for Sustainable Activities". Rating agencies likewise are also proactive in driving green business practices. More and more investment decisions are made with consideration of ESG factors. Many fund managers have already included ESG factors as investment selection criteria. Meanwhile, during M&A process, ESG due diligence has become more common.

As the Hong Kong capital market has become more aware of the needs to develop green finance, the market, including the limited partnerships, are exerting its influence along the investment value chain. Because of its nature facing a large number of stakeholders, institutional investors and pension funds are indeed one of the key drivers of green finance in order to meet stakeholders' expectation. Moreover, the regulators are targeting them, for example, Hong Kong's Securities and Futures Commission (SFC) issued a consultation paper on management and disclosure of climate-related risks by fund managers in October 2020.

Amongst Hong Kong preparers, sustainability reporting responsibility mainly lies with account and finance, company secretary or corporate communication functions. This is mainly due to the fact that many companies' ESG report is actually embedded in its annual report. In recent years, there has been seen more and more companies establishing cross functional sustainability reporting taskforce to deal with the increasing data demand. Accountants are usually the one who assist in data collection and compilation, given the fact that they have access to accounting records which contains some ESG data, such as resource consumption. Going forward, the introduction of common metrics and consistent reporting framework that are aligned with IFRS standards will increase the involvement of accounting expertise in the ESG reporting process.

Concerning assurance, many Hong Kong companies are still adopting a wait-and-see attitude on independent assurance as they cannot see explicit benefits from obtaining independent assurance, while it involves additional cost to do so. As it remains voluntary, companies are not willing at the present time to invest in it. Nevertheless, many accounting firms are offering independent ESG data assurance services. Other service providers include also testing, inspection and certification companies.

One of the areas of consideration across the development of sustainability/ ESG practices and reporting is the extent to which SMEs are engaged or impacted. The tendency for these to be primarily 'big end of town' considerations is shifting in Hong Kong. Two to three years' ago, prior to the HKEX's consultation to enhance ESG Reporting Guide in 2019 (discussed below), this certainly was the case.

However, after the Chinese central government's announcement of carbon neutral targets, supported by regulators' action in promoting green finance in the capital market, growing numbers of listed companies are paying close attention to sustainability reporting and would like to improve on that, regardless of size. Many companies no longer merely treat it as compliance issue, but a chance to capture opportunities in the capital market.

With the blooming of sustainability in the past few years, many reporting frameworks and standards have been developed, creating a scattered landscape which may actually result in reports that are not comparable to each other. As such, we foresee the global institutes will develop an aligned framework, by referencing or even consolidating the existing frameworks, for adoption all over the world. One of the most widely adopted framework in the world is TCFD at the moment. The players will indeed be regulators of capital market who have the power to devise policies which are mandatory for market participants to follow. And given such fact, effectiveness is in no doubt as compliance is always the most important thing for the financial institutions.

The Hong Kong Exchanges and Clearing Limited (HKEX) first introduced the ESG Reporting Guide in 2012 as "Recommended Practice" for the voluntary disclosure of ESG information. Following a market consultation, the Guide was revised in 2016 and was organised to address 11 "environmental" and "social" aspects. Each aspect requires general disclosures of policies, and in some cases, compliance with relevant laws and regulations. The general disclosures of the 11 aspects were upgraded from "Recommended Practice" to "comply or explain". From 2017, the "comply or explain" requirements were extended to cover the Key Performance Indicators (KPIs) under the "environmental" aspects. Following market consultations in 2019 and 2021, the HKEX adopted further enhancements to the ESG Reporting Guide.

Insights from the ESG journey in Mainland China

ESG disclosure in Mainland China has been primarily a top-down approach. Directives are issued by the government to be eventually disseminated amongst businesses and ultimately to the public to reinforce the latter's understanding of ESG. Although some non-government organisations publish their own investment guidelines and ESG rating, the government plays a dominant and critical role in the development of an ESG disclosure mechanism in Mainland China.

At present, ESG-related regulatory documents issued by the Chinese Central Government and the environmental protection bureau mainly concern disclosure of information on environmental protection.

Since 1979, the Chinese government has promulgated relevant laws and regulations including: "Environmental Protection Law of the People's Republic of China", "Water Pollution Prevention and Control Law of the People's Republic of China" and "Atmospheric Pollution Prevention and Control Law of the People's Republic of China".

The first regulation in China on disclosure of environmental information by corporations is the "Measures for the Disclosure of Environmental Information by Enterprises and Public Institutions" issued by the former State Environmental Protection Administration in September 2003. Under the Measures, corporations listed by the environmental protection bureau in respective provinces, autonomous regions and municipalities which discharged pollutants in excess of prescribed standards or total limit would be required to publish five types of environmental information. This includes their environmental protection policies, total volume of pollutants discharged, their environmental-pollution governance measures, compliance with environmental protection requirements and environmental management. Corporations which were not listed were also encouraged to make voluntary disclosure of environmental information.

The former State Environmental Protection Administration also published the "Notice on the Inspection and Verification of Environmental Protection of Corporations Applying for Listing and Listed Corporations Applying for Refinancing" and the "Notice on Reinforcing Environmental Protection Inspection Work of Corporations Operating in Serious Pollution Industries Applying for Listing or Refinancing" in 2003 and 2007 respectively. These notices set out specific requirements for compulsory disclosure of environmental information by listed companies.

The "Environmental Protection Law of the People's Republic of China" was revised in April 2014 to confer citizens, legal entities and other organisations the right to access environmental information and participate in, as well as supervise, environmental protection work. The revised law also contains specific provisions on information on corporations, government-related entities and other production operations with respect to their violation of environmental protection regulations, and publication by environmental protection authorities and regulatory bodies of environmental protection regulatory information.

The State Council proposed the establishment of a green financial system in September 2015 with the publication of the "Integrated Reform Plan for Promoting Ecological Progress".

The "Guiding Opinions on Building a Modern Environmental Governance System" issued by the General Office of the CPC Central Committee and the General Office of the State Council in March 2020 further requested that environmental governance and credit system be improved, with a compulsory disclosure system for listed companies and bond-issuing corporations with respect to environmental governance information.

In May 2021, the Ministry of Ecology and Environment published its "Reform Proposal for System for Due Disclosure of Environmental Information". Under the proposal, major pollutant discharging entities, listed companies on which compulsory audit of cleaner production is enforced and bond issuers are required to disclose environmental information in relevant reports such as annual reports. In addition, listed companies and bond-issuing corporations which have been prosecuted for criminal liability or are subject to major administrative penalties for violations of environmental protection regulations are required to disclose their environmental information within a specified duration.

The promulgation of the above regulations shows a sustained effort to reinforce environmental protection awareness by local manufacturers and the government's efforts to guide corporations into a "green" and "sustainable" development path.

To implement the reform proposal above, the Ministry of Ecology and Environment issued new rules on the disclosure of environmental information by domestic enterprises in December 2021. Under the rules, domestic entities, including listed companies and bond issuers, are required to disclose a range of environmental information on an annual basis by 15 March of each year, effective 8 February 2022.

The information disclosure regulations published by the financial regulators in Mainland China are mainly with respect to the disclosure of events and actions of corporations in relation to ESG. The aim is to regulate and guide corporations to focus on the environment and fulfil their social responsibilities while pursuing economic benefits so that their corporate responsibilities can be consistent with their social values.

Published by the Shenzhen Stock Exchange in September 2006, the "Shenzhen Stock Exchange Social Responsibility Instructions to Listed Companies" requires listed companies to actively fulfil their social responsibility, regularly assess their performance of corporate social responsibilities and voluntarily disclose corporate social responsibilities reports. In the "Notice on Strengthening Corporate Social Responsibility Work by Listed Companies and Issuance of 'Shanghai Stock Exchange Directive on Disclosure of Environmental Information'" issued by the Shanghai Stock Exchange in May 2008, listed companies are required to undertake corporate social responsibility. They are also encouraged to promptly disclose their actions and unique achievements in a timely manner, and issue annual corporate social responsibility reports along with their annual financial reports.

Furthermore, where listed companies are involved in major environmental protection events, they must disclose such events within two days of their occurrence, stating any impact that such events may have had on their operations and stakeholders. With this, it is apparent that attention in Mainland China has gradually shifted from listed companies' financial performance to other factors, such as their performance with respect to environmental protection and social responsibility.

In the "Notice on 2008 Annual Report by Listed Companies" issued in December 2008, the Shanghai Stock Exchange required component companies in "Shanghai Stock Exchange Corporate Governance" segment, companies listed overseas and financial institutions to issue corporate social responsibility reports. The Shanghai Stock Exchange also encouraged other eligible corporations to voluntarily disclose corporate social responsibility reports and the value of their social contribution on a per share basis.

To enhance the transparency and operability of disclosure of environmental information by corporations, the Ministry of Ecology and Environment released the draft for public comment of the "Environmental Information Disclosure Guidelines for Listed Companies" in September 2010.

The Guidelines require for the first time, listed companies which are involved in environmental-related incidents to issue interim environmental reports and disclose details of such incidents, their violations and rectification measures as well as the progress of such measures. The Guidelines also required companies in 16 industries susceptible to heavy pollution such as thermal power generation, steel, cement and electrolytic aluminium to release an annual environmental report. They are also required to periodically disclose the state of discharge of pollutants, compliance with environmental regulations and environmental management.

In July 2012, the China Banking Regulatory Commission issued the "Notice on Issuing Green Credit Guidelines". Under the Guidelines, banks and financial institutions are to strengthen their support of green, low carbon-emission and circular economy, prevent environmental and social risks and improve their environmental and social performance. Banks and financial institutions are to make public their green loan strategies and policies, give full disclosure of the state of development of green loans, and with respect to credit loans involving major environmental and social risk, disclose relevant information in compliance with laws and regulations.

In August 2016, seven Ministries and Commissions including the People's Bank of China, Ministry of Finance, and the National Development and Reform Commission jointly issued the "Guidelines for Establishing the Green Financial System". The Guidelines stressed the primary objective of a green financial system and the need to establish a compulsory environment information disclosure system for listed companies and bond-issuing corporations. A "three-step" approach was laid out and all listed companies had to make compulsory environmental information disclosure by 2020.

The revised version of "Code of Corporate Governance for Listed Companies" was issued by the China Securities Regulatory Commission in September 2018. The Code reinforced the basic requirements of listed companies in respect of stakeholders, environmental protection and social responsibility as well as information disclosure and transparency. Listed companies are also required to disclose information about the environment, corporate social responsibilities, such as poverty-relief, and corporate governance. It also sets out, for the first time, a basic framework for disclosure of ESG information.

In November 2018, the Asset Management Association of China announced its "(Trial) Green Investment Guidelines", setting out the meaning of green investments as well as the targets, principles and basic manner of green investments. Fund managers who engage in green investments and fund products were directed to be more market-oriented, regulated and professional with the aim of cultivating an investment approach that was of long-term value.

The announcement of the Guidelines heralded a new chapter in China's ESG investment practice, and it played an important role in enabling funds to assume their social responsibility and serve green development.

In March 2019, the Shanghai Stock Exchange issued the "Rules Governing the Review of Offering and Listing of Stocks on the Science and Technology Innovation Board", setting out its requirements for listed companies. Listed companies are required to actively assume their social responsibilities, uphold social and public interests and disclose their fulfilment of social responsibilities. Listed companies should disclose their fulfilment of social responsibilities in their annual reports and, depending on the situation, prepare and disclose documents such as social responsibility reports, sustainable development reports and environmental responsibility reports.

Since 2020, several regulations on disclosure of ESG information have been announced by the financial regulatory bodies in Mainland China. They include "Guideline No. 2 on the Application of Self-Regulation Rules for Listed Companies on SSE STAR Market – Voluntary Information Disclosure", "Green Bond Endorsed Project Catalogue", and "Revised Guidelines on Format of Annual and Half-Year Reports for Listed Companies".

In this regard, significant steps have been taken to complete ESG information disclosure by listed companies. (See Table 1 below)

Table 1. Summary of steps taken on ESG information disclosure by listed companies in Mainland China

2020.07	China Securities Regulatory Commission	Measures for the Administration of Information Disclosure by Listed Companies (Revised) (Draft for public comment)	Implementation of the new "Securities Law" which came into effect on 1 March 2020, with continuous reinforcement of regulatory supervision of information disclosure
2020.09	Shanghai Stock Exchange	Guideline No. 2 on the Application of Self-Regulation Rules for Listed Companies on SSE STAR Market – Voluntary Information Disclosure	Include ESG amongst items to be voluntarily disclosed by listed companies.
2020.09	Shenzhen Stock Exchange	Measures for Assessment of Listed Companies' Information Disclosure (Revised)	Assessment of listed companies' disclosure with respect to their fulfilment of social responsibility with the inclusion of Article 16 ("disclosure of fulfilment of social responsibility"). ESG disclosure was also mentioned for the first time. The new assessment measures stipulated that insofar as listed companies released CSR reports and ESG reports with full and complete contents and disclose their active participation in matters that conform to the State's major strategic policies, additional score will be assigned to their disclosure work.
2021.02	China Securities Regulatory Commission	Guidelines on Investor Relationship Management by Listed Companies (Draft for public comment)	ESG information was included for the first time in the Guidelines on Investor Relationship Management, with the Guidelines providing for implementation of new development concepts. Pursuant to the newly revised "Code of Corporate Governance" (CSRC Notice [2018] No. 29), information on ESG is to be included in listed companies' communications.
2021.06	China Securities Regulatory Commission	Revised Guidelines on Format of Annual and Half-Year Reports for Listed Companies	Contents relating to ESG are to be consolidated in Section 5 of "Environmental and Social Responsibility", with additional disclosure of administrative penalty during the reporting period over environmental issues. Its revision indicates a strong trend of compulsory disclosure of ESG information.

Insights from the ESG journey in India

More details to be published in our forthcoming report.

Regulators: How they are driving ESG reporting

ESG Reporting in Australia

Measures under corporate law

The Corporations Act 2001 (Cth) in section 299(1)(f) in setting out general information about operations and activities to be included in an annual directors' report, specifies that "The directors' report for a financial year must - - - if the entity's operations are subject to any particular and significant environmental regulation under a law of the Commonwealth or a State or Territory – give details of the entity's performance in relation to environmental regulation." The reference to narrow matters of legal obligation in confirmed in the Australian Securities & Investments Commission's (ASIC) ***Regulatory Guide 68 New financial reporting and procedural requirements***: "Prima facie, the requirement would normally apply where an entity is licensed or otherwise subject to conditions for the purposes of environmental legislation or regulation." (68.74(a))

Part 7.9 of the Corporations Act deals with product disclosure in relation to the issue, sale and purchase of financial products. Section 1013D therein sets out extensive requirements as to the content of product disclosure statements. Section 1013D(1)(l) states "- - - if the product has an investment component – the extent to which labour standards or environmental, social or ethical considerations are taken into account in the selection, retention or realisation of the investment." Section 1013D(2A) goes on to specify for the section's purposes, a wide range of products including superannuation products, managed investments and investment life insurance products.

Section 1013DA states that ASIC may develop guidelines as to information about ethical considerations, the consequential RG 65 Section 1013DA disclosure guidelines stating "clients wishing to purchase investment products on the basis of the issuer's considerations of labour standards, or environmental, social or ethical considerations should be able to easily determine the extent of the focus on these matters. An impression should not be created that there is a greater focus that exists in reality." (RG65.62)

Section 299A of the Corporations Act sets out requirements in the annual directors' report additional general information for listed entities. These focus on information that a member of the listed entity would reasonably require to make informed assessments of the entity's operations, financial position, and business strategies, and prospects for future years. An update of ASIC's relevant regulatory guide ***RG 247 Effective disclosure in an operating and financial review*** (OFR) was released in August 2019 to include, amongst other matters, in relation to directors' discussion of prospects for future financial years, reference to climate change as a systemic risk having potential material impact on an entities financial position, performance and prospects, and that "directors may also consider - - - it worthwhile to disclose additional information that would be relevant under integrated reporting, sustainability reporting or the recommendations of the TCFD, where that information is not already required for the OFR." (RG247.66)

In conjunction with the above, ASIC updated ***RG 228 Prospectuses: Effective disclosures for retail investors*** with the Table 7 list of risks an issuer may need to include in a prospectus (including business model references) mentioning both transitional and physical climate change risks.

Securities exchange initiatives

Australian listed entities are required under listing rule 4.10.3 to include in their annual report a corporate governance statement, and in doing so are also required to disclose on an 'if not, why not' basis the extent to which the statement follows the recommendations of the ASX Corporate Governance Council. The 4th edition of the Corporate Governance Principles and Recommendations was released in February 2019. It includes, amongst other matters, a strengthened Recommendation 7.4 dealing with disclosure as to exposure and response to material environmental and social risk. Major differences in the accompanying Commentary include reference to optional publication of a sustainability report or integrated report (specific mention given of the International <IR> Framework). Specific elaboration is also given to climate change-related risks with Council giving encouragement for entities to assess their exposure with reference to the TCFD. Noteworthy also is a new Recommendation 4.3 requiring disclosures of processes to verify the integrity periodic reports – which is defined to include integrated and sustainability reports – released to the market that is not audited or reviewed by an external auditor.

ESG reporting in New Zealand

New Zealand Government actors and players and their effectiveness in driving change

With the growing interest in expanding sustainability reporting in New Zealand, several government agencies and Independent Crown Entities are involved or consulted with the government. These key lead agencies and government actors help drive the ESG/ sustainability reporting journey further:[8]

- **The External Reporting Board (XRB)** focuses on developing financial reporting for New Zealand, preparing and issuing accounting standards and assurance for practitioners, and liaising with national and international organisations with similar standard mandates. The XRB is mandated to develop climate-related disclosure standards and issue non-binding guidance on reporting of non-financial matters.

- **The Ministry for the Environment (MfE)** has a strong interest in Sustainable Finance policy work, notably how the financial sector can support positive environmental outcomes, including co-leading the creation of Climate-Related Disclosures.

- **The Ministry of Business, Innovation and Employment (MBIE)** plays a market-shaping role in delivering standards, programmes, and regulations relating to employment, business support, economic and regional development, including investment and consumer policies. It has a substantial interest in effectively transitioning the economy and minimising disruption through change for businesses and workers.

- **The Treasury** advises on economic policy and uses the Living Standards Framework to support sustainable public finances that consider the Four Capitals.

- **The Financial Markets Authority (FMA)** is responsible for regulating financial market participants, exchanges and setting and enforcing financial regulation. It supports New Zealand's transition to an integrated financial system.

Significance of global responses to climate change in changing attitudes to governance practices and corporate reporting

The global response to climate change is rapidly developing. COP 26 in November 2021 in Glasgow is another significant milestone for climate disclosures with the launch of the ISSB.

New Zealand is observing the International Platform on Sustainable Finance's Taxonomy working group. The international working group aims to align and provide clarity around environmental and sustainable economic activities to address green and social washing concerns.[9]

In 2020, the government announced the Carbon Neutral Government Programme, which requires public sector entities to set credible gross emission reduction targets and plans for 2025 and 2030, making the government carbon neutral by 2025.[10]

[8]https://www.mbie.govt.nz/dmsdocument/15110-international-developments-in-sustainability-reporting-pdf
[9]https://www.mbie.govt.nz/dmsdocument/15110-international-developments-in-sustainability-reporting-pdf
[10]https://www.beehive.govt.nz/release/public-sector-be-carbon-neutral-2025

While New Zealand does not have a government ESG sustainable reporting framework in place yet, the existing practices from a range of voluntary and mandated corporate reporting related to climate and sustainability support the potential establishment of a mandated sustainability reporting regime.[11] The NZX Corporate Governance Code adopts a comply or explain authority. However, the Economic Development, Science and Innovation Committee recommended the Financial Sector (Climate-related Disclosure and Other Matters), Amendment Bill, to remove the 'Disclose-or-Explain' provisions during the second reading at the House of the Representatives in August 2021.

Subsequently, it issued the NZX ESG Guidance Note, which provides a resource to NZX issuers to understand the benefits of ESG reporting, global frameworks, and support in effectively communicating ESG opportunities and risks to investors and other stakeholders. However, only 45 per cent of listed issuers reported sustainability factors under the Code.[12]

In addition, the 2019 NZX & Wright Communications Report described how global behaviours had changed significantly over the past two decades when it comes to ESG and indexation. One of the significant changes was the amount of ESG benchmarks shaping the sustainable investing landscape, including data and rating methodology development.

MBIE summarises how the selected countries used and demonstrated their sustainability reporting through a Climate First Approach:

Table 2. Climate First Approach, MBIE, 2021

Country	TCFD Climate-Related Disclosures	Environmental Disclosures	Social Disclosures	Governance Disclosures
New Zealand	√√	X	X	X
Australia	X	X	√	X
Canada	√	X	X	X
China	X	√	√	√
European Union	√√	√√	√√	√√
United Kingdom	√√√	X	X	√
United States	X	X	X	√

√ Disclosures required in very limited circumstances.
√√ Disclosures required in some circumstances.
√√√ Disclosures required in most or all circumstances.

[11] https://www.mbie.govt.nz/dmsdocument/15110-international-developments-in-sustainability-reporting-pdf
[12] https://proxima.global/towards_transparency2020.pdf

ESG reporting in Singapore

Singapore Exchange initiatives

Since 2017 and for financial years ending on or after 31 December 2017, companies listed on the Singapore Exchange (SGX) are required to prepare an annual Sustainability Report on a "comply or explain" basis and as a complement to their annual financial reporting. Per SGX requirements, this report needs to describe the organisation's sustainability practices regarding ESG matters.

The production of an annual sustainability report is a requirement. The sustainability report should include the primary components as set out in Listing Rule 711B and "The SGX Guide" on a "comply or explain" basis. Where the issuer cannot report on any primary component, the issuer must state so and explain what it does instead and the reasons for doing so.

The primary components are:

1. Material ESG factors
2. Policies, practices and performance
3. Targets
4. Sustainability reporting framework
5. Board statement

"The SGX Guide" not only provides guidance on the expected contents but also the structure and preparation of the Sustainability Report.

SGX has not prescribed any specific reporting framework. However, issuers should give priority to globally-recognised frameworks and disclosure practices such as GRI or SASB standards (***Value Reporting Foundation***) to guide their reporting. The increasingly borderless markets for funds and for goods and services mean that corporate reporting standards tend to gravitate toward global best practice. Added to this is the international character of SGX ST both in terms of listed issuers as well as investors.

As mentioned above in the "Insights from the ESG journey in Singapore" section, the SGX ***announced*** a roadmap towards mandatory climate-related disclosures in December 2021. All issuers must provide climate reporting on a "comply or explain" basis in their sustainability reports from the financial year (FY) commencing 2022.

Climate reporting will subsequently be mandatory for issuers in the (i) financial, (ii) agriculture, food and forest products, and (iii) energy industries from FY 2023. The (iv) materials and buildings, and (v) transportation industries must do the same from FY 2024.

Measures under corporate law

Singapore Accounting Standards follow IFRS. The IFRS Foundation's consultation on the need for global sustainability standards confirmed an urgent need for global sustainability reporting standards and for the Foundation to play a role in their development.

The Accounting Standards Council (ASC) is closely monitoring recent developments in regard to Sustainability Reporting and climate change disclosures. Changes to local reporting standards are expected to come in the near future and as the International Sustainability Standards Board (ISSB) sets IFRS sustainability standards.

Other initiatives

In addition to the SGX requirements presented above, industry or topic-specific requirements apply for selected companies as outlined in the following:

MAS Guidelines on Environmental Risk Management

In December 2020, the Monetary Authority of Singapore (MAS) issued guidelines on environmental risk management for all banks, merchant banks and finance companies to enhance the banking sector's resilience to, and management of, environmental risk through setting out sound risk management practices.

The guidelines cover:

- Governance and strategy
- Risk management
- Disclosure of environmental risk information.

These guidelines are closely aligned to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations set up by the Financial Stability Board (FSB).

Carbon Pricing Act (CPA)

On 1 January 2019, the Carbon Pricing Act (CPA) and its accompanying Regulations came into effect as part of Singapore's efforts to address climate change.

Under the Act, industrial facilities that emit direct greenhouse gas (GHG) emissions equal to or above 2,000 tCO2e annually need to register as a reportable facility and submit an Emissions Report on an annual basis. Facilities whose GHG emissions exceed 25,000 tCO2e per year, are not only required to register as a taxable facility and report their reckonable GHG emissions, they also need to pay a carbon tax from 2019 to 2023.

At a $5 per tonne of GHG emissions, "Singapore is an outlier amongst countries that have introduced a carbon price, and carbon taxes in Singapore will have to go up in order to help the Republic meet its climate commitments", said Singapore's central bank chief. The Government will therefore review the trajectory and level of the carbon tax, post-2023, in consultation with industry and expert groups.

Extended Producer Responsibility (EPR) System for E-waste Management System

By 2025, Singapore companies will have to take responsibility for the packaging and electronic waste (e-waste) they produce. Extended producer responsibility (EPR) laws are expected to be in place by that timeframe to help reduce waste and create a market for disposed plastic, paper and metal.

As a first step, Singapore companies will be required to report the amount and type of packaging they use by 2021. The data collected will then lay the foundation for the EPR system to come into effect in 2025.

For producers of covered electrical and electronic equipment this means they will have to engage Producer Responsibility Organisations (PROs) to meet their obligations for the collection and proper treatment of e-waste. The NEA will set collection targets which producers will have to fulfil and report on and ensure that the end-of-life electronic equipment collected are channelled for proper recycling and disposal. NEA will review the targets periodically before introducing a penalty framework.

ESG reporting in Hong Kong

Hong Kong Exchange initiatives:

Appendix 27 is the ***ESG Reporting Guide*** published by the HKEX in the Listing Rules and Guidance. From 1 July 2020 onwards, the Guide consists of two levels of disclosure obligations: mandatory disclosure requirements and "comply or explain" provisions. The mandatory disclosure requirements include:

- a board statement setting out the board's consideration of ESG matters, including disclosing its oversight of ESG issues, its ESG management approach and strategy, and how it reviews the progress made against ESG-related goals and targets
- description of, or an explanation on, the application of Reporting Principles "materiality", "quantitative" and "consistency"
- a narrative explaining the reporting boundaries and the process used to identify which entities or operations are included in the ESG report.

The updated "comply or explain" provisions regime includes a new "climate change" aspect under "environmental" which requires disclosure of significant climate-related issues which have impacted and may impact the issuer. In addition, the "comply or explain" provisions regime now covers the General Disclosures and KPIs of all 12 "environmental" and "social" aspects.

Other key changes to ESG reporting requirements effective from 1 July 2020 include amending the environmental KPIs to require disclosure of relevant targets.

Following the publication of the ***conclusions*** to a 2021 consultation on enhancing listed companies' corporate governance practices and reporting, issuers must publish their ESG reports at the same time as their annual reports from 1 January 2022. In November 2021, the HKEX published a ***guide*** to provide tips and guidance to assist listed issuers in preparing TCFD-aligned climate change reporting.

Going forward, the HKEX will review its ESG reporting framework to further align with TCFD recommendations, and will collaborate with other regulators to work on a roadmap to evaluate and potentially adopt the proposed disclosure standards developed by the ISSB.[13]

[13]https://www.hkex.com.hk/News/Regulatory-Announcements/2021/211105news?sc_lang=en

Measures under corporate law

Under the ***Companies ordinance*** (Cap 622. Schedule 5. Section 2), all incorporated Hong Kong companies, unless exempted, are required in their business review section of a directors' report to include a discussion on the company's environmental policies and performance, compliance with relevant laws and regulations that have a significant impact on the company, and an account of the company's key relationships with its employees, customers and suppliers and others that have a significant impact on the company and on which the company's success depends.

This requirement is included in ***paragraph 28(2)(d) of Appendix 16*** of the Main Board Listing Rules and ***Rule 18.07A(2)(d)*** of the Growth Enterprise market Listing Rules.

Other initiatives

Securities and Futures Commission

In September 2018, the Securities and Futures Commission (SFC) published the ***Strategic Framework for Green Finance*** which sets, as a priority for the SFC, enhanced environmental information reporting for listed companies with an emphasis on climate-related disclosure, and aiming to align with the recommendations of the TCFD.

In June 2021, the SFC issued a ***circular*** which provides guidelines on enhance disclosures including periodic assessment and reporting for ESG funds, and further guidance for funds with a climate-related focus.

In another ***circular*** published in August 2021, the SFC will amend the Fund Manager Code of Conduct to require Fund Managers managing collective investment schemes to take climate-related risks into consideration in their investment and risk management processes, and make appropriate disclosures.

In August 2022, the SFC published an ***Agenda for Green and Sustainable Finance*** setting out further steps to support Hong Kong's role as a regional green finance centre.

The main areas of focus are:

- enhancing corporate disclosures
- monitoring the implementation of and enhancing existing measures relating to ESG funds and expectations for fund managers
- identifying an appropriate regulatory framework for any proposed carbon markets.

HKMA

The Hong Kong Monetary Authority (HKMA) has adopted a three-phased approach to promote green and sustainable banking:

- ***Phase I*** – developing a common framework to assess the "Greenness Baseline" of individual banks. The framework was developed in May 2020 and assesses an institution's readiness and preparedness in addressing climate and environment-related risks.

- ***Phase II*** – engaging the industry and other relevant stakeholders in a consultation on the supervisory expectation or requirement on Green and Sustainable Banking, with a view to setting tangible deliverables for promoting the green and sustainable developments of the Hong Kong banking industry. In June 2020, a ***White Paper on Green and Sustainable Banking*** was published outlining HKMA's initial thinking of its supervisory approach to addressing climate-related issues, and to a lesser extent, broader sustainability issues.

- ***Phase III*** – after setting the targets, implement, monitor and evaluate banks' progress in this regard.

Insurance Authority

According to ***the Guideline on Enterprise Risk Management*** published by the Insurance Authority (IA), the Enterprise Risk Management framework should require authorised insurers to routinely identify foreseeable and relevant material risks that may include climate risk.

Mandatory Provident Fund Authority

In a ***circular*** issued in November 2018, the Mandatory Provident Fund Authority (MPFA) has encouraged Mandatory Provident Fund trustees and their investment managers to consider taking into account ESG standards in their decision-making process and disclosing their investment approach to scheme members.

Cross-agency

In May 2020, the HKMA and the SFC initiated the establishment of the Green and Sustainable Finance Cross-Agency Steering Group (CASG), with members comprising the Environment Bureau, the Financial Services and the Treasury Bureau, the HKEX, the IA and the MPFA.

In December 2020, the CASG announced its ***green and sustainable finance strategy*** for Hong Kong and agreed to take five near-term action points which include:

- making climate-related disclosures aligned with the TCFD recommendations mandatory across relevant sectors no later than 2025
- aiming to adopt the Common Ground Taxonomy which is being developed by the International Platform on Sustainable Finance
- promoting climate-focused scenario analysis
- establishing a platform to act as a focal point for financial regulators, Government agencies, industry stakeholders and the academia to coordinate cross-sectoral capacity building and thought leadership
- supporting the IFRS Foundation's proposal to establish a new International Sustainability Standards Board to develop a new standard.

In relation to the fifth action point, the SFC and the HKEX will collaborate with the Financial Reporting Council and the Hong Kong Institute of Certified Public Accountants to publish a roadmap to evaluate and possibly adopt the new standard.[14]

ESG Reporting in Mainland China

The disclosure of ESG information in Mainland China possesses four characteristics. First, it evolved from voluntary disclosure to compulsory reporting. Corporations involved in serious pollution or major environmental incidents were required to report environmental data pertaining to the pollutants discharged along with detailed information of the incident. Listed companies were required to voluntarily disclose ESG information according to the "Guidelines for Environmental Information Disclosure of Listed Companies" before 2020. By the end of 2020, it was a compulsory requirement for all listed companies to make disclosure of ESG information.

Secondly, reporting requirements have evolved. In Mainland China, the regulations on information disclosure were initially focused on the environment, with disclosure of ESG information being included only in recent years. For example, in the "Code of Corporate Governance for Listed Companies" announced by China Securities Regulatory Commission in 2018, a comprehensive basic framework for disclosure of ESG information was included, giving equal importance to social and governance as factors to be included in the quality assessment system for listed companies' disclosure.

Thirdly, disclosure has been expanded to a far wider scope. ESG disclosure regulations in Mainland China now cover the Shanghai Stock Exchange Science and Technology Innovation Board, with ESG information being included in voluntary information disclosure by listed companies.

The China Securities Regulatory Commission has also included ESG factors in the initial public offer of securities, requiring issuers to disclose specific details in their production operation which involve environmental pollution along with the name and volume of main pollutants discharged, their treatment facilities and treatment capacity, and any other potential environmental issue, and whether the funds raised during IPO will be utilised to control the problem.

[14]https://www.legco.gov.hk/yr20-21/english/panels/fa/papers/fa20210906cb1-1267-2-e.pdf

Lastly, the practice in Mainland China is beginning to be in line with international practice. Policy makers of ESG information disclosure policy have spared no effort in reducing the gap between local and international standards and enhancing comparability. For example, the "Revised Guidelines on Format of Annual and Half-Year Reports for Listed Companies" announced by the China Securities Regulatory Commission have required that ESG-related contents be consolidated in Section 5 under "Environment and Social Responsibility", in keeping with international practice for disclosure of non-financial information.

Further, the China Enterprise Reform and Development Society, a state-backed think tank, released the "Guidance for Enterprise ESG Disclosure" for all Chinese companies and industries to report ESG metrics in June 2022.

ESG Reporting in India

Annual reporting

The most recent and significant development in the regulatory drivers of ESG reporting in India is the ***announcement***, from the Securities and Exchange Board of India (SEBI) Meeting of 25 March 2021, of the replacement of existing Business Responsibility Reporting (BRR) with a more comprehensive and far-reaching scheme of sustainability disclosure under Business Responsibility and Sustainability Reporting (BRSR).

The authority for making rules in relation to ESG/sustainability disclosures can be found in the ***SEBI (Listing and Disclosure Requirements) Regulations 2015 [as amended]***, Chapter IV, which sets out Obligations of a Listed Entity which Lists its Specific Securities. Clause 34 details the required content of an Annual Report. Among other matters specified, Clause 34(f) states that "with effect from the financial year 2022–23, the top one thousand listed entities based on market capitalization shall submit a business responsibility and sustainability report in the format as specified by the Board from time to time." As part of a 'phasing in' process, entities are able to adopt BRSR on a voluntary basis for financial year 2021-22.

Relevant also on a broader basis is Part D (Role of Committees other than the Audit Committee) of Schedule II (Corporate Governance) dealing with matters to be addressed by the Risk Management Committee. Specific mention is made of the formulation of a detailed risk management policy:

A framework for identification of internal and external risks specifically faced by the listed entity, in particular including financial, operational, sectoral, sustainability (particularly, ESG related risks), information, cyber security risks or any other risk as may be determined by the Committee (emphasis added).

The SEBI announcement explains the objective of the reform as being to "bring in greater transparency through disclosure of material-related information to enable market participants to identify and assess sustainability-related risks and opportunities". The reform has seen the progressive widening of sustainability disclosures from the top 100 (BRR in 2012) to the top 500 (BRR in 2015) and now the top 1000 Indian companies by market capitalisation. Another noteworthy reference is that "entities which prepare sustainability reports based on internationally accepted frameworks (such as the GRI, SASB, TCFD, Integrated Reporting) can cross-reference the disclosures sought under the BRSR to the disclosures made under such frameworks".

The BRSR reporting format is contained in a template (***Annexure 1***) which is organised into three sections: general disclosures, management and process disclosures, and principle wise performance disclosures. The last of these three types of disclosures mirror the nine principles contained in the ***National Guidelines for Responsible Business Conduct*** (NGRBC) issued by the Ministry of Corporate Affairs (MCA) in 2018. An 'integrated' approach is nevertheless taken in the structure of the BRSR. For example, under VII of the General Disclosures (Transparency and Disclosure Compliance), information is required on complaints/grievances made under each of the nine Principles in terms of specific stakeholder groups and whether or not a redressal mechanism has been applied.

Similarly, the section on management and process disclosures is structured to draw out discussion of governance, leadership and oversight practices promoting the pursuit and embedding of the Principles into business practices.

Of note is the requirement for disclosure of compliance with statutory requirements relevant to the Principles and actions taken to rectify vany non-compliance.

The nine principles are:

- **PRINCIPLE 1** Businesses should conduct and govern themselves with integrity, and in a manner that is Ethical, Transparent and Accountable.
- **PRINCIPLE 2** Businesses should provide goods and services in a manner that is sustainable and safe.
- **PRINCIPLE 3** Businesses should respect and promote the well-being of all employees, including those in their value chain.
- **PRINCIPLE 4** Businesses should respect the interests of and be responsive to all its stakeholders.
- **PRINCIPLE 5** Businesses should respect and promote human rights.
- **PRINCIPLE 6** Businesses should respect and make efforts to protect and restore the environment.
- **PRINCIPLE 7** Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent.
- **PRINCIPLE 8** Businesses should promote inclusive growth and equitable development.
- **PRINCIPLE 9** Businesses should engage with and provide value to their consumers in a responsible manner.

Separate to the nine detailed Principle disclosures (Section C), each of NGRBC Principles is addressed in key parts of the BRSR Management and Process Disclosures (Section B).

Each of the Principles seek disclosures on matters such as the existence or otherwise of specific management processes, performance reviews against related policies including reporting on organisational responsibility, frequency of reviews and the applying of independent third-party assessment, as well as the opportunity to disclosure if (and why) a particular Principle is deemed not material to the entity's business. For example, for Principle 6 dealing with environmental matters the NGRBC provides a division between Brief Description and Core Elements.

The Brief Description lays out the rationale for the disclosures, in this case "environmental responsibility [being] a prerequisite for sustainable economic growth and for the well-being of society".

Emphasis is also given to the interconnected character of environmental issues at local, regional and global levels and the imperative for action from businesses. Climate change is specifically referenced in terms of the combined responses of mitigation, adaptation and resilience. 'Boundary' considerations are addressed in terms of the need to minimise or eliminate impacts across operation and value chains. Further, cross-referencing is given to alignment with UN SDGs – in this instance 11 Sustainable cities and communities, 13 Climate action, 14 Life below sea and 15 Life on land.

The Core Elements identify several elements considered to be essential for achieving the objectives laid out in the Brief Description. These include the adoption of governance structures and business strategies, each considered widely to address such matters as life cycle impacts, eco-sensitive natural environments and stakeholder expectations beyond those of shareholders. The need to define measurable performance indicators and targets to monitor performance across a wide dimension of environmental aspects is also required, along with emphasis on the pursuit of innovative technology-based solutions and the learning opportunities presented by industry best practice.

Of particular significance is reference given to key climate change policy instruments, stating specifically:

> Businesses should focus on addressing climate change through development of both mitigation and adaptation measures, and build climate resilience and in line with India's Nationally Determined Contributions to the Paris Climate Change Agreement and the National/State Action Plans on Climate Change. (See further discussion of India's Nationally Determined Contribution (NDC) in Part 12 of this White Paper.)

In terms of the corresponding treatment of Principle 6 in the BRSR, the format, as with each of the principles, is structured between Essential Indicators and Leadership Indicators.

Essential Indicators are mandatory and Leadership Indicators are voluntary. The breadth of subject matter covered and the range of both metrics and accompanying narrative are extensive.

Essential Indicators include:

- Energy consumption
- Water withdrawal and consumption
- Air emissions (other than GHG emissions)
- Greenhouse gas emissions (Scope 1[15] and Scope 2[16])
- Waste management

Leadership Indicators include:

- Energy consumption from renewable and non-renewable sources
- Water discharge by destination and level of treatment
- Water withdrawal, consumption and discharge in areas of water stress
- Scope 3 emissions[17]

A number of brief observations are made. First, for each of the energy consumption, water consumption and GHG emission Essential Indicators, a per rupee of turnover intensity measure is required. Allowance is also made for the entity to select further relevant intensity measures. Second, the apparent depth of required and voluntary water-related disclosures is potentially complementary to what can be expected as a future priority of the recently established International Sustainability Standards Board (ISSB)[18].

Third, the further likely priority for formal development of sustainability/ESG reporting is in the realm of biodiversity.

As such, the BRSR biodiversity and ecosystem-related disclosures, which are comparatively narrow when compared to water management and water resources, could be expected to evolve further over time.

For each Indicator disclosure with a quantitative measurement, the preparer is asked to identify whether the disclosure has been subject to independent external assurance and, if so, to identify the provider.

Concerning the timeframes of disclosed metrics, these are limited to current and prior financial years. This differs in some way with the trend in frameworks such as the TCFD which are structured towards future oriented disclosures. Nevertheless, the opportunity for such wider approach to disclosures is afforded to preparers in Section B, where it is specifically stated for each of the Principles that there be a description of "specific commitments, goals and targets set by the entity with defined timelines, if any".

Returning to the NGRBC, the core elements (Chapter 2) built around the nine Principles are supplemented by annexures, which provide important insights into rationale and expectations. Annexure 1 (Guidance on Adoption of NGRBC) commences by setting out key enablers for the successful integration of sustainability principles into a business' core processes: Leadership commitment, Employee engagement, Stakeholder engagement and Disclosure and reporting.

Annexure 1 references Annexure 5 (Business Case Matrix), which provides a mapping tool highlighting some of the significant entity-related benefits that may accrue from integrating the Principles into business practices. It is emphasised that the identified benefits are not an exhaustive list and each entity should undertake a critical self-analysis.

Again, using Principle 6 as an example, the following is presented in Annexure 5:

Revenue growth and market access	Business partner of choice, especially for sustainability-oriented buyers
Cost savings and productivity	Lower operating costs in the long term; less danger of "externalities" emerging as liabilities
Access to capital	Lower risk perception is attractive to investors, banks, financial markets
Risk management/ license to operate	Positively seen by communities, NGOs, governments, regulators; Lower risk of non-compliance
Human capital	Attract and retain quality employees
Brand value/ reputation	Positively seen by customers, regulators, media

[15]Per the GHG Protocol developed by the WBCSD and WRI, direct emissions from owned and controlled sources.
[16]Indirect GHG emission generated from the consumption of purchased electricity, steam, heating and cooling by the company
[17]Other indirect GHG emissions not covered in Scope 2 that occur in the value chain of the company, including both upstream and downstream emissions.
[18]The ISSB was formed in November 2021 through amended of the IFRS Foundation Constitution and is currently consulting on two draft sustainability disclosure standards; IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures.

Annexure 1 also suggests a process of adoption built around prioritising core elements, reviewing and developing policies, determining ambition and setting targets.

In terms of setting targets, reference is made to Annexure 3 (Business Responsibility Reporting Framework). Annexure 3 can be viewed as a precursor to the more recent BRSR but is significant insomuch as it reflects the importance of ambition in the setting of targets within three to five-year timeframes.

A further noteworthy aspect of Annexure 1 is its reference to the need for mapping and understanding value chain implications, particularly at a Tier 1 upstream and downstream level. As such, it introduces – through Annexure 2 – related guidance for micro, small and medium enterprises.

Continuous disclosure

India, as with many other jurisdictions, operates a continuous disclosure regime as an important adjunct to annual reporting. It acts as a key component for informing market participants of material events and circumstances that may affect the pricing of securities. Contained within SEBI Listing Obligations and Disclosure Requirements (LODR) Regulations, Schedule III, Part A (Disclosure of Events or Information), at B.6, is the reference to:

> Disruption of operations of any one or more units or division of the listed entity due to natural calamity (earthquake, flood, fire etc.), force majeure or events such as strikes, lockouts etc.

Such wording seems readily sufficient to embrace the disclosure of the financial consequences arising out of the physical impacts of climate change, both chronic and catastrophic.

Share issuing and fundraising

Of relevance is the SEBI (Issue of Capital and Disclosure Requirements) Regulations, 2018. Clause 11, dealing with Financial Statements as part of the offer documents under C (Management's Discussion and Analysis of Financial Position and Results of operations as Reflected in Ind AS CFS) requires – at (iv)c – analysis of "known trends or uncertainties that have had, or are expected to have, a material adverse impact on sales, revenue or income from continuing operations".

The existential threat posed by climate change will likely be a matter of serious consideration for disclosure within this framework of obligations.

Related aspects of directors' duties

Features of India's corporate law can be viewed as coherent and moreover conducive to both the uptake of sustainability/ESG disclosures by listed entities and the underlying environmental and societal transformations sought by the Indian Government.

The MCA, in describing the mandate and rationale for updating the earlier 2011 National Voluntary Guidelines on the Social, Environmental and Economic Responsibilities of Business, cites one of the key drivers as being section 135 of the Companies Act 2013.

In this section, wording includes "requir[ing] companies to undertake CSR initiatives in communities, and has since, provided additional rules and guidance on the areas and target groups of such interventions in consistency with national social-economic priorities". Consistent with this aim and the broader thrust of the NGRBC, Annexure 7 presents a table of more than 30 Indian statutes cross-referenced to the Principles.

With respect to directors' duties, section 166(2) codifies the common law duty to act in good faith and best interest of the corporation and states:

> "A director of a company shall act in good faith in order to promote the objects of the company for the benefit of its members as a whole, and in the best interests of the company, its employees, the shareholders, the community and for the protection of the environment."

A recent ***report*** from the Climate Governance Initiative (CGI) and Commonwealth Climate and Law Initiative (CCLI), in its jurisdictional overview for India, notes that in the discharge of this duty a balanced approach is required across the stakeholder interests ("a pluralistic corporate governance paradigm") and that adoption of a long-term perspective should form the basis of reconciling.

Also, CGI/CCLI cites the outcome of consideration given by the Supreme Court to the meaning of the term 'environment' under section 166(2). It was concluded that there is no hierarchy between the duties owed to the company and other stakeholders, meaning that there exists a positive obligation on Indian company directors to consider climate risk and other aspects of environmental protection.

Consideration is also given by CGI/CCLI to the corresponding duty in section 166(3), whereby directors shall exercise their "duties with due and reasonable care, skill and diligence and shall exercise independent judgment". The evident positive obligation to be informed and act in response to climate and related risks, leads CGI/CCLI to conclude that "prudent engagement will likely involve integrated risk frameworks, comprehensive disclosures and considered responses from boards" – all of which can be deduced in the initiatives from SEBI and the MCA.

Related initiatives from the Reserve Bank of India (RBI)

In a September 2021 ***keynote address*** by RBI Deputy Governor Shri. M. Rajeshwar Rao, India's stance in relation to the growing global consensus around climate change as a financial risk and thus a matter of critical concern for central banks in relation to market stability and transparency, was confirmed . In April 2021, the RBI joined the Network of Central Banks and Supervisors for Greening the Financial System (***NGFS***) as part of endeavours to drive the orderly development of green finance. India has joined the International Platform for Sustainable Finance (***IPSF***), an initiative of the European Union directed at scaling up the mobilisation of private capital towards environmentally sustainable investments.

The RBI Deputy Governor's keynote address referred to India occupying the second spot (after China) in the cumulative emerging market Green Bond Issuance, the majority of which is corporate-sourced.

In terms of its regulatory and market oversight response, the RBI has established a Sustainability Finance Group (SFG) whose contemplated initiatives include:

- Integrating climate-related risks into financial stability monitoring
- Building in-house capacity on assessment and monitoring of climate risk and generating awareness of climate-related risks among regulated entities
- Coordinating with other financial regulations to better understand the climate-related risks to the financial system and those related to a transition to a low carbon economy
- Advising regulated entities to have a strategy to address climate change risks and appropriate governance structures to effectively manage them from a micro-prudential perspective
- Exploring forward looking tools like climate scenario analysis and stress testing for assessing climate-related risks.

In August 2022, the RBI issued a Discussion Paper on Climate Risk and Sustainable Finance aimed at preparing a strategy based on global best practices on mitigating the adverse impacts of climate change, learning from participation in standard-setting bodies and other international fora.

Carbon neutral goals: strategies and policies

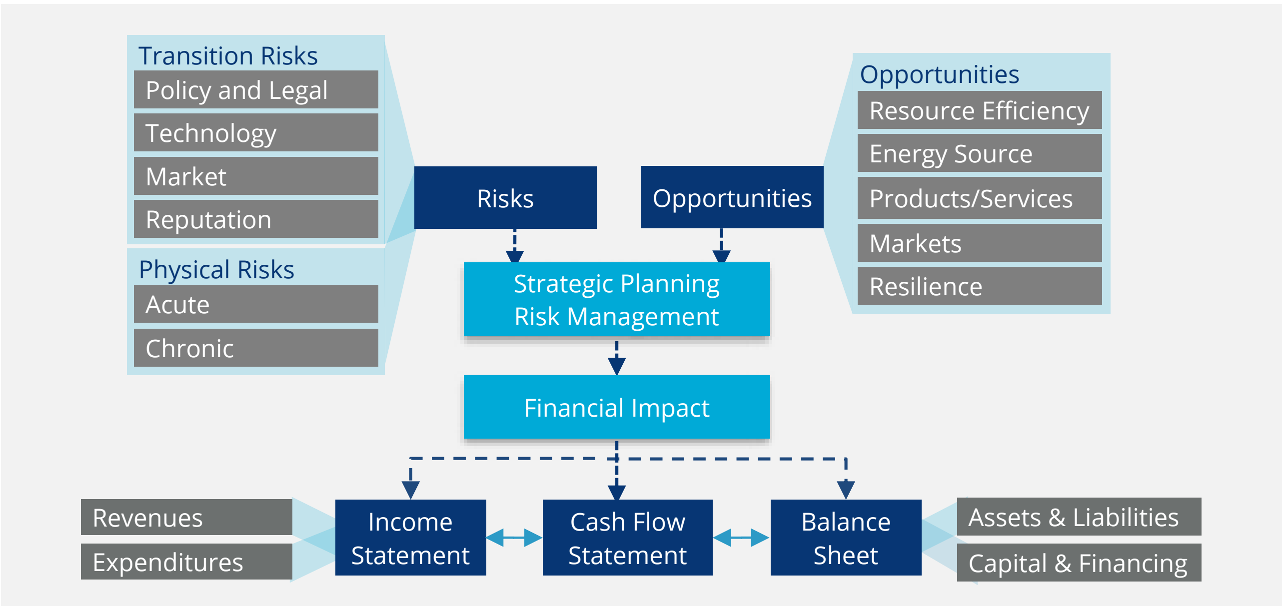
Introduction - Climate change as a Financial and Systemic Risk

According to the 2017 recommendations of the ***Task Force on Climate-related Financial Disclosures (TCFD)***, climate change is one of the most significant and complex risks facing organisations.

Since its inception, the TCFD has become one of the most influential forces in driving consensus among business, financial and regulatory communities of the necessity for embedding the multi-faceted impacts of climate change into corporate financial risk management and disclosure, along with complementary responses from regulators.

The immediacy with which climate change translates into impacts on the fundamental financial viability of companies is encapsulated in Figure 1 from the 2017 TCFD recommendations:

Figure 1. Climate-related risks, opportunities and financial impact



More broadly, the pervasive nature of climate change poses market and financial system-wide risks of instability and even collapse.
The radical uncertainty of climate change spans both physical and transition risks, potentially leading to jurisdictional and global-level financial crises. This led to the formation of the ***Network for Greening the Financial System (NGFS)*** in 2017, an initiative now involving 116 central banks, aimed at driving capacity in areas such as stress testing (scenario analysis) and the development of proactive supervisory engagement at financial market-wide and regulated entity levels.

The NGFS Guide for Supervisors: Integrating climate-related and environmental risk into prudential supervision (2020 p. 13) encapsulates the interconnection of both physical and transition risk with financial stability in the following terms:

Figure 1. From physical risk to financial stability risks

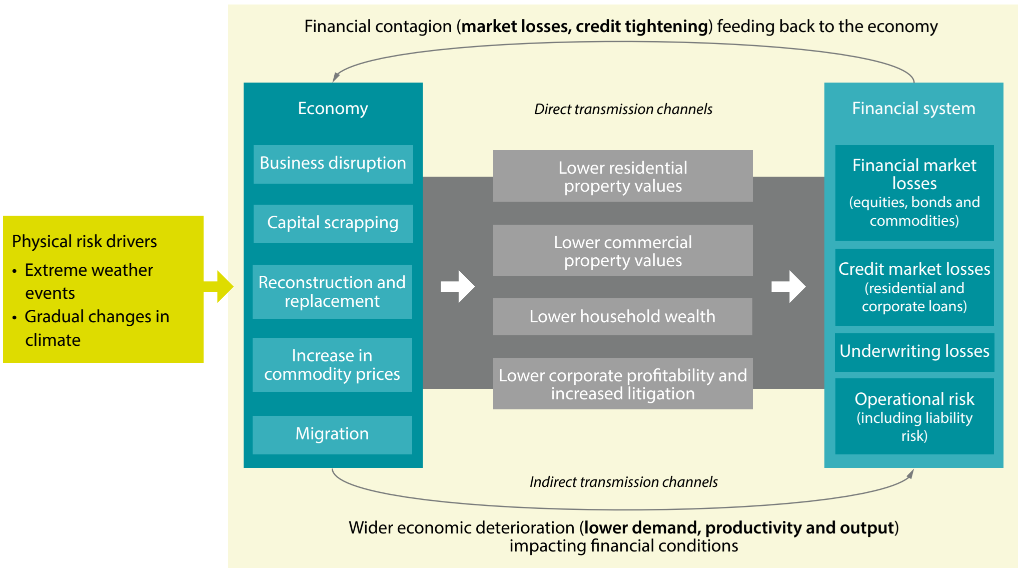
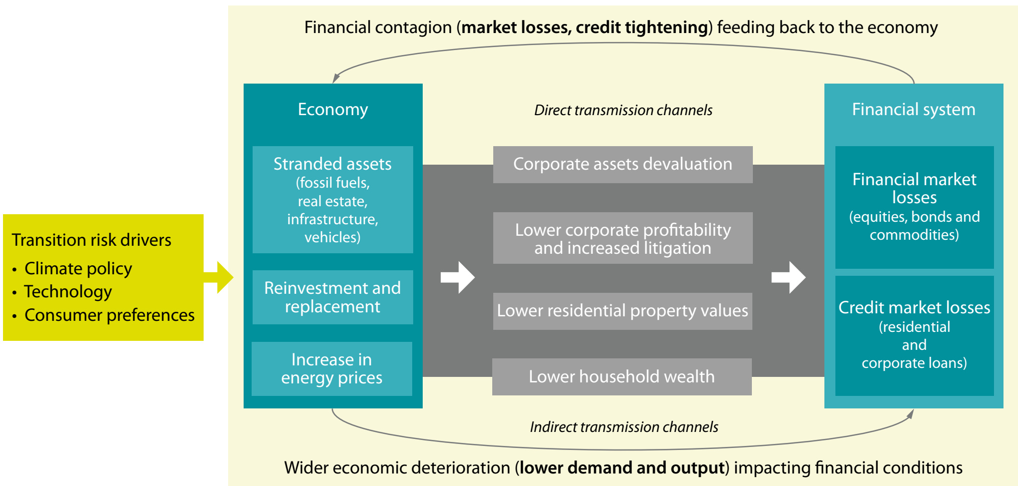


Figure 2. From transition risk to financial stability risks



Climate change Impacts and risks – the latest Intergovernmental Panel on Climate Change assessments

The most authoritative assessments of the extent, trajectory and impacts of global warming are those of the ***Intergovernmental Panel on Climate Change (IPCC)***. Their most recent cycle of reporting (Sixth Assessment Report – AR6) is alarming. Two tranches of AR6 were released respectively in August 2021 and April February 2022 – Working Group I's The Physical Science Base and Working Group II's Impacts, Adaptation and Vulnerability.

These assessments are highly detailed and extensive and are accompanied by a Summary for Policymakers. A limited number of 'headline' conclusions from the respective Summaries are extracted below to illustrate the scale and immediacy of the challenges ahead.

Firstly, from WG I the following conclusions were reached in relation to the current state of the climate:

- It is unequivocal that human influence has warmed the atmosphere, oceans and land. Widespread and rapid changes in the atmosphere, oceans, cryosphere[19] and biosphere have occurred.
- Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones and, in particular, their attribution to human influence, has strengthened since AR5.[20]

In one part of the Summary for Policymakers the IPCC make several observations concerning the manner in which climate change is already affecting every inhabited region across the globe. They note, in relation to observed changes in heat extremes since the 1950s, that these are almost global in extent, though particularly apparent in South Asia, East Asia, South-East Asia, Northern Australia, Central Australia, Eastern Australia, Sothern Australia and New Zealand. Corresponding observations regarding increased heavy precipitation are evident in South Asia, East Asia, South-East Asia and Northern Australia.

With respect to possible climate future scenarios the WG I Summary for Policymakers predicts that:

- Global surface temperatures will continue to increase until at least mid-century under all emissions scenarios considered.
- Global warming of 1.5°C and 2°C will be exceeded during the 21st Century unless deep reductions in CO2 and other greenhouse gas emissions occur in the coming decades.
- Many changes in the climate system will become larger in direct relation to increased global warming. They include increases in the frequency and intensity of heat extremes, marine heatwaves, heavy precipitation and, in some regions, agricultural and ecological droughts, an increase in the proportion of intense tropical cyclones and reductions in Arctic Sea ice, snow cover and permafrost.

Clearly illustrating the amplifying impacts of additional increments of global warming, WG I projects the frequency and increases in intensity of extreme temperature events that occurred on average one in 10 years in a climate without human influence (1850-1900) are now likely to occur 2.8 times in 10 years at current global warming of 1°C. This rises to 4.1 times, 5.6 times and 9.4 times at respective future global warming of 1.5°C, 2°C and 4°C.

Turning to WG II, the following key conclusions are presented in the Summary for Policymakers, at all levels of global warming, and of at least high confidence:

- The vulnerability of ecosystems and people to climate change differs substantially among and within regions, driven by patterns of intersecting socioeconomic development, unsustainable ocean and land use, inequality, marginalisation and historical and ongoing patterns of inequality such as colonialism and governance failures.
- Approximately 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change.
- A high proportion of and number of species are vulnerable to climate change.
- Human and ecosystem vulnerability are interdependent. Current unsustainable development patterns are increasing the exposure of ecosystems and people to climate hazards.

[19]Frozen water part of the Earth system.
[20]Fifth Assessment Report completed in 2014.

Recognising the widely differing impacts of climate change across regions, WG II has produced short fact sheets, including ones covering Asia and Australasia. Common to each is reference to the multiple and interconnected impacts of climate change.

For Asia:

> Rising temperatures increase the likelihood of the threat of heat waves across Asia, droughts in arid and semiarid areas of West, Central and South Asia, floods in monsoon regions in South, Southeast and East Asia and glacier melting in the Hindu Kush Himalaya region.

And for Australasia:

> Extreme events such as heatwaves, drought, floods, storms and fires have caused deaths and injuries, and affected many households, communities and businesses via impacts on ecosystems, critical infrastructure, essential services food production, the national economy, valued places and employment.

Concerning projected vulnerabilities, those for Asia tend more toward adverse impact on water security, health, energy and stresses within the urban environment. Vulnerabilities projected for Australasia aggregated around losses in the natural environment compounded by associated weaknesses in governance systems, with particular mention made of loss of natural and human systems in low-lying coastal areas due to sea-level rise.

Outcomes of COP26

In November 2021, the 197 parties to the ***Paris Agreement*** met in Glasgow at the 26th Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC). COP26 culminated with the parties reaffirming their commitment to the goals of the Agreement, in particular resolving to pursue efforts to limit global temperature rise to 1.5°C above pre-industrial levels in the Glasgow Climate Pact. Key outcomes[21] included:

- Agreement on fundamental norms for operationalisation of carbon markets to support achievement of Nationally Determined Contributions (NDCs)[22]
- Establishment of the Global Financial Alliance for Net Zero (GFANZ) whose members manage over US$130 trillion in assets as part of driving the funding of sustainable investments.
- 141 countries that account for 91 per cent of the world's forests pledged to end deforestation.
- 104 countries pledged to a 30 per cent cut in methane emissions by 2030, this GHG accounting for an estimated 30 per cent of historical global warming.
- 46 countries pledged to transition from coal to clean power by 2040, though the final wording of the Pact referred to "phasedown of unabated coal power" rather than 'phase-out'.

What the latest World Economic Forum's Global Risks Report tells us

The World Economic Forum's 2022 report on global risks found that "environment risks are perceived to be the five most critical long-term threats to the world", with climate action failure perceived to be a critical threat within two to five years. The top three most severe risks were 'extreme weather', 'climate action failure' and 'biodiversity loss'.

[21]Source: WEF The Global Risks Report 2022 17th ed. Chapter 1 Box 1.1
[22]Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of its long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

The ***Global Risk Report*** devotes a full chapter (Chapter 2 Disorderly Climate Transition) to the consequences arising from the slow and divergent pace of decarbonisation of national economies including the impact on unskilled workers unable to transition their skill sets and the potential adverse outcomes of untested geoengineering[23] technologies. Significantly, Chapter 2 introduces a summary (Figure 2.1) based on the latest 2021 UN Environmental Report Emissions Gap Report in which an assessment is made that current NDCs as presented at COP26 fall short of the 1.5°C goal. The "current trajectory expected [is] to steer the world towards 2.4°C warming, with only the most optimistic of scenarios holding it to 1.8°C".

Global 2100 temperature scenarios form the background to the following summary assessments of national commitments and associated policies for each of the countries covered in this White Paper.

Carbon Action Tracker assessments

This analysis is based on detailed reports prepared by ***Climate Action Tracker*** (CAT), which is a consortium of non-profit climate science and policy institutes. It provides one of the most reputable synthesises linking scientific and policy analysis spanning global and national climate change policy challenges. Five rating categories are applied by CAT across the range of national measures being implemented under the umbrella of the Paris Agreement – Critically insufficient, Highly insufficient, Insufficient, Almost sufficient and 1.5°C Paris Agreement compatible. There is an overall comprehensiveness rating. Each rating is based on updated NDCs presented at COP26 except for Australia, which is based on targets implemented by the recently elected Australian Government.

Country	Net Zero Target	Comprehensiveness rating	Policies & action	Domestic target	2030 Fair share target[24]	Climate finance[25]
Australia	2050	Poor	Insufficient	Almost sufficient	Insufficient	Critically insufficient
New Zealand	2050	Poor	Highly insufficient	Insufficient	Critically insufficient	Highly insufficient
Singapore	2060	Assessment in progress	Highly insufficient	Critically insufficient	Critically insufficient	Not assessed
China	Before 2060	Poor	Insufficient	Insufficient	Highly insufficient	Not assessed
India	2070	Not rated due to current incomplete information	Almost sufficient	Highly insufficient (assessed as alternative internationally supported target)	Highly insufficient	Not applicable

[23]Deliberate large-scale intervention in the Earth's climate system.
[24]CAT state in relation to this assessment that although there are no agreed guidelines on what would constitute a fair level of contribution to the global effort, beyond the general understanding of reflecting the "common but differentiated responsibilities and respective capabilities, in the light of different national circumstances" (Paris Agreement, Article 4.3), governments are expected to provide some justification of their proposed efforts.
[25]This assessment is derived from those parts of the Paris Agreement (Article 9) recognise the vulnerability of developing countries and the need therefore for developed countries to provide financial resources to assist in both mitigation and adaptation measures.

How businesses can prepare for the future

To conclude, we can draw out a number of lessons as to how businesses can prepare for an ESG driven future. There has never been a period of greater expectation placed on business to contribute to environmental and social transformation. This does not in any way mean the surrendering of profit optimisation goals. Rather there is a reorientation towards value creation and understanding its erosion and strategies for preservation. As such, businesses must drive a deeper understanding of their business models, the external environment in which they operate, who their stakeholders are and how they are impacted. Key to this is understanding business in terms of an interdependence and interaction of different forms of capital - not just financial and physical. In the 'new economy' equally important will be intellectual, human, and social and relationship forms of capital, accompanied by a deepening awareness of impact and dependency on the natural environment and its resources.

All this may seem remote and distant from the day-to-day challenges of running a business. Nevertheless, it is those businesses that develop a deep awareness of their supply and value chains outside of transitional organisation boundaries who will be the ones that prosper.

Likewise, the emergence of ESG as a fundamental component of business and wider economic behaviour compels adoption of a long-term perspectives. Similarly, ESG related behaviour need to be adopted throughout the business – across organisation boundaries and from the top of the organisation where ultimate responsibility for risk management, transparency and ethical conduct ultimately resides. These challenges and opportunities will span organisations of a wide variety of size and span virtually all sectors of an economy.

Key to the ESG future is data – both internal and external. Business metrics will increasingly involve a combination of financial and non-financial factors and their interdependence. To this end, greater emphasis will be placed on capacity to assimilated information from a variety of sources and apply to it critical judgement. Looking outwards, the transformation in ESG reporting will continue to gather pace and become more-and-more the subject of investor and regulatory expectation. Navigating through this complexity will rely on effective materiality assessments, early planning, choice of framework, systems development and measures to ensure accuracy – all tasks the accounting profession is well positioned to contribute to.