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CLIMATE CHANGE AND FINANCIAL REPORTING

Guide to climate change assumptions
and disclosures in financial statements



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Executive Summary

Climate change presents financial risks and opportunities across mainstream valuation and investment horizons.

There has been a stark evolution in the relationship between climate change and business – from a ‘non-financial, environmental’ issue to one that presents material financial risks and opportunities over mainstream planning, valuation and investment horizons. This has sharpened the focus of accountants on the relevance and materiality of climate-related issues in the preparation and assurance of financial reports.

Accounting professionals must rapidly build capacity on climate change to guard against the potential for material misstatement.

With specific guidance from the AASB, AUASB, ASIC and IFRS on the need to consider material climate-related financial assumptions in the report preparation, assurance and audit process, and specific pressure on both issuers and auditors being brought to bear by institutional investors, it is now essential for accounting professionals to develop a core level of understanding of the relevant issues in order to duly discharge their obligations. Report preparers, oversight committees and auditors need to consider whether material climate change-related issues have been appropriately reflected in audited financial statements to guard against the risk of material misstatement. However, many industry professionals have a limited understanding of the nature of climate change as a financial issue, and how relevant assumptions may materially impact on balance sheet line items.

This primer provides a general overview of climate-related issues on which accounting professionals can begin to build appropriate expertise.

It is intended as an introductory resource for report preparers and reviewers as they begin to consider the impact of climate change-related assumptions in the preparation or review of financial statements. It does not provide a comprehensive ‘checklist’ of relevant issues or process requirements – in general or in respect of any given industry sector. However, it provides a helpful resource to assist professionals in building capacity in this area, and as a catalyst for the promotion of independent judgment by report preparers, having regard to the entity’s circumstances.

References are to Australian corporate law and accounting/auditing standards. Similar requirement will exist in other jurisdictions given the universal characters financial reporting. Likewise, climate change is a global phenomenon.

Introduction and Scope

The swift evolution and unique nature of climate change as a financial issue mean that report preparers and reviewers are required to learn the new language and knowledge of climate risk and integrate this into existing processes to reflect the financial position and performance of the entity. This is no easy task. This guide is here to help.

This Guide together with the CPA Australia sister guide on *Climate Risk and Audit of Financial Statements* are here to help.



[CPA Australia Guide on Climate Risk and Audit of Financial Statements](#)

This is a high-level guide on the identification, materiality assessment and integration of climate-related financial risks into an entity's financial statements. It is divided into three main parts:

Part A

What is 'climate change', and what are the relevant financial risks and opportunities?

An overview of the nature of the financial risks associated with climate change that may materially impact on accounting estimates and notes.

Part B


Regulatory framework

Commentary on the frameworks within which relevant issues should be identified and assessed, drawing on guidance from the TCFD, the AASB /AUASB and SASB, as well as relevant accounting standards.

Part C

Practical guidance

With introductory questions, directions to further resources and practical examples drawn from published financial statements.



The guide draws upon four key areas of expertise of the lawyers, risk professionals and accountants in CPA Australia and MinterEllison’s Climate Risk Governance team: climate-related financial risk assessment and disclosure; legal frameworks applicable to financial reporting; industry-specific risk expertise; and assurance.

The guide is general in nature and is not intended to be comprehensive. Rather, it provides a catalyst for the promotion of independent judgment by report preparers, having regard to an entity’s circumstances. It is not industry-specific and is subject to specific advice in the context of any accounting or audit engagement.

The primary audience for this guide is CPA Australia members who are preparers and reviewers of financial statements, such as in-house finance functions of reporting entities and reviewers in accounting and audit firms.

This primer is limited in its scope as an introductory resource on the relevance of climate-related issues to the preparation and review of financial statements.

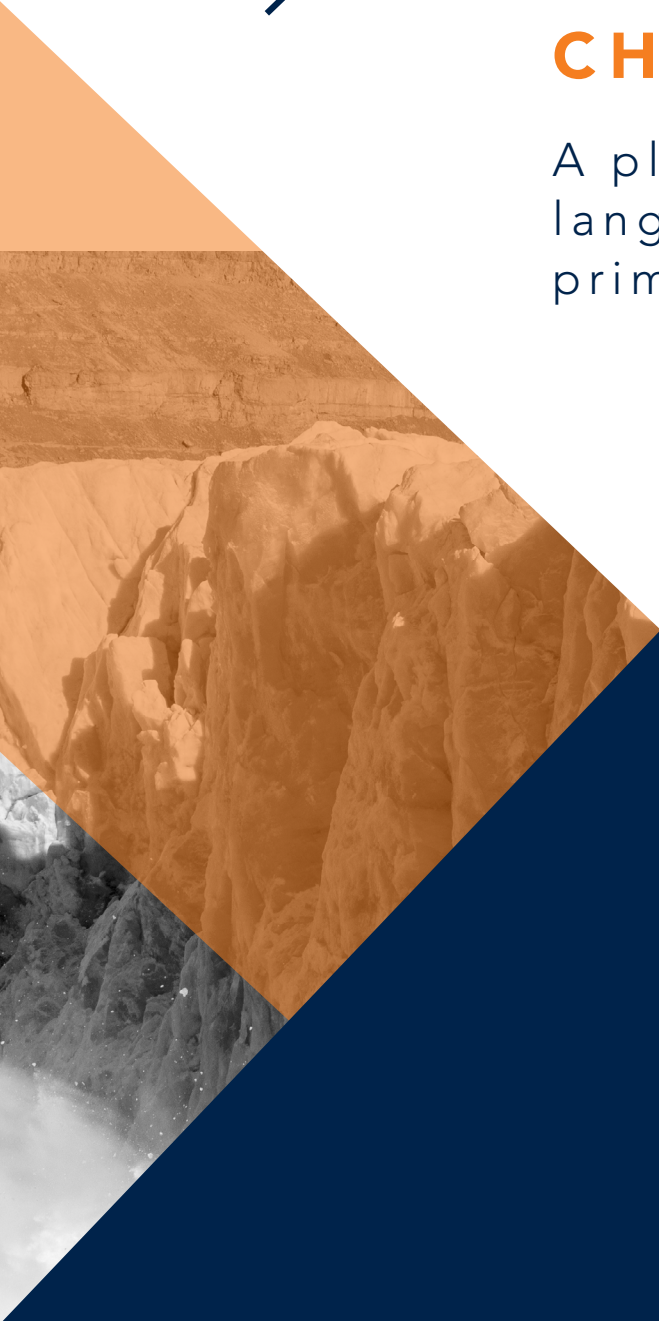
It does not purport to cover narrative disclosures that may be in the directors’ report or Operating & Financial Review that (other than consistency review) ordinarily fall outside the external audit remit.

This primer is a general summary only. It does not purport to cover the field of relevant issues, nor comment on the matters that may discharge relevant professional obligations in any given circumstance. To the contrary, it is intended to highlight the significant breadth and depth of financial risk issues associated with climate change, and in so doing highlight the need for accountants to give further, specific consideration to the relevant risks and assumptions in the unique circumstances of a given entity, and to engage subject matter experts as required.

**PART
A**

**WHAT IS
CLIMATE
CHANGE?**

A plain
language
primer





KEY CONCEPT

What is climate change?

'Climate change' is a phenomenon that occurs from the accumulation of 'greenhouse gases' (including carbon dioxide, nitrogen and methane) in the atmosphere.

Human industrial activity has resulted in volumes of emissions significantly higher than the natural baseline. Such activities include (for example) the combustion of hydrocarbon fossil fuels such as coal, oil and gas, the release of methane from livestock and nitrogen in agricultural fertilisers, and the clearing of natural 'sinks' for such gases (such as forests and peats).

The increase in emissions has, in turn, caused the layer of greenhouse gas in the atmosphere to thicken. As it does so, more and more heat is trapped within the Earth's atmosphere (acting as a form of 'greenhouse' – hence, 'the greenhouse effect'). Global average temperatures now exceed 1.1°C above those of pre-industrial times. Scientists have warned that current emissions trajectories may result in catastrophic warming in excess of 4°C by the end of this century.

Global emissions must reach 'net zero' (a balance between sources and sinks) before 2050 and halve by 2030 to have any chance of stabilising the climate at a level that is considered relatively 'safe,' being 1.5-2°C above pre-industrial averages.

2100 Warming projections

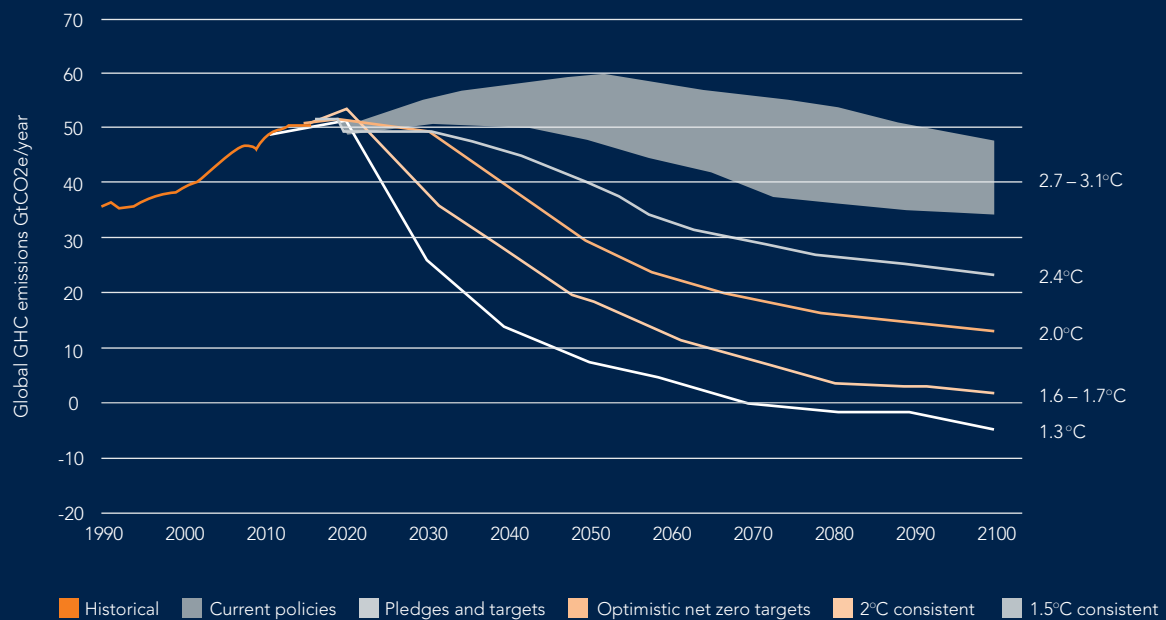


Figure 1 – 2100 warming projections

Source: Climate Action Tracker, <https://climateactiontracker.org/global/temperatures/>

What are the financial risks associated with climate change?

Climate change has rapidly evolved from an ethical and environmental issue to one that presents material financial risks (and opportunities), across mainstream planning, valuation and investment horizons. This has been driven by developments in the climate science, and a stark shift in institutional investor, debt finance, market regulator, contractual counterparty and community expectations. Mainstream investors now identify climate change-related disclosures as decision-useful – particularly in high-risk sectors. At the same time, there has been a significant increase in ‘climate litigation’ that has prompted a reconsideration of approaches to climate-related due diligence, review and assurance.

Climate change creates risks to entities through two primary risk channels: the physical impacts of a changing climate and risks in the transition to a net zero emissions economy. Litigation exposures arise from a failure to manage or disclose these physical and economic transition risks. The summary of the risks and opportunities associated with climate change, and their potential financial impacts, is summarised by the Taskforce on Climate-related Financial Disclosures (TCFD) in Figure 2 on the right. Figure 3 and Figure 4 provide additional details of the kinds of physical and economic transition risks and opportunities that may arise, and examples of their financial consequences.

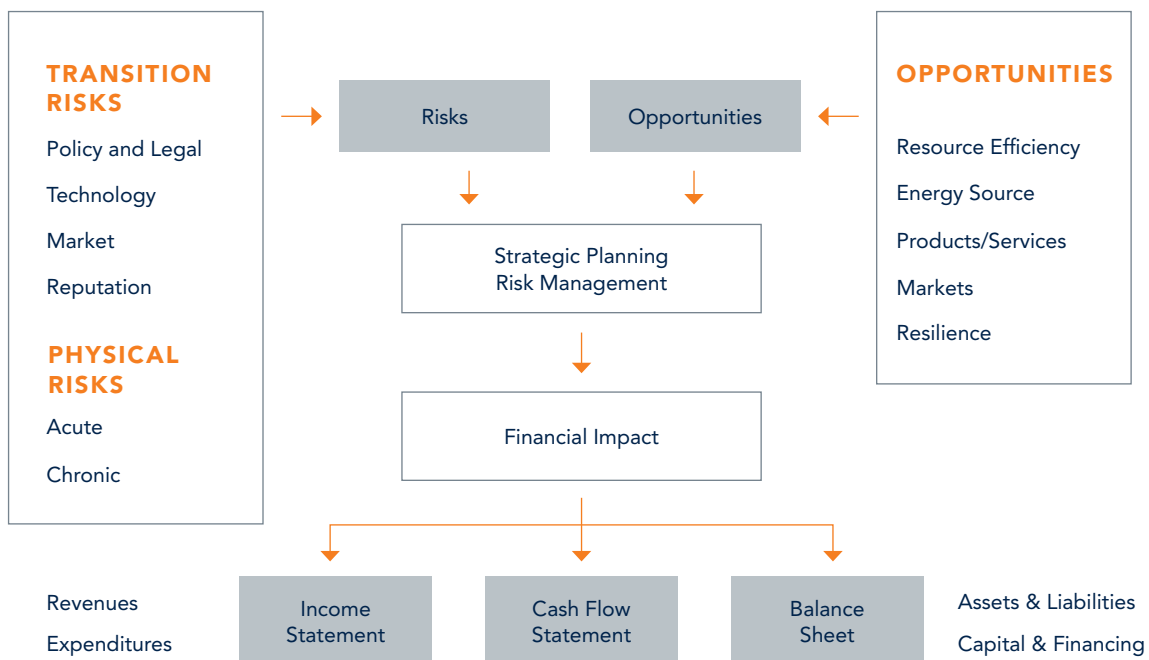


Figure 2 – Climate-related risks, opportunities and financial impacts

Source: Taskforce on Climate-related Financial Disclosures, Implementing the Recommendations of the TCFD, June 2017, p.5.

Physical risks categories

ACUTE

Increased frequency and intensity of extreme weather events – heatwave, drought, extreme precipitation, coastal and inland flooding, bushfire.

GRADUAL ONSET

Long-term changes to weather and climate at local, regional and international scales (eg. increased average temperatures, sea level rise, shifts in precipitation patterns, ecosystem collapse).

Impacts



Increased rainfall variability, leading to increased drought and water stress in some regions, and elevated inland flood risks in others.



Increased frequency and intensity of extreme weather events, including cyclones, storms and bushfires.



Sea level rise, leading to increased inundation risks for coastal and low-lying assets.



Extreme heat leading to lower workforce productivity and adverse health outcomes, design threshold exceedances for machinery, infrastructure and transport.

Figure 3 – Physical risks associated with climate change and example financial consequences

Financial consequences

EXAMPLES

- Elevated risk of damage to real assets and infrastructure – increased costs of repair, maintenance, retrofit and adaptation; production stand-downs; risks to business continuity and contract fulfilment. Consequences for asset valuation, depreciation, impairments, onerous contracts, end of life provisioning.
- Increased scarcity and cost of key inputs (eg fresh water).
- Damage to supply chains and distribution – interruption to key supply chains affecting production; risks to business continuity impacting downstream contract fulfilment; costs of production stand-downs.
- Plant & equipment failures; lower productivity; higher development costs, project delays and scheduling overruns.
- Greater risk profile leading to loss of competitiveness – market, finances, insurance.
- Increased potential for litigation (negligence, nuisance, contract, securities law, work health and safety).

Economic Transition

risk categories

The response of governments and markets (both capital and real economy) in response to climate-related risks – including the transition to a ‘net-zero’ economy in pursuit of Paris Agreement Targets as well as regulatory, technological and shifts in stakeholder preferences.

Impacts



Regulatory response: Paris Agreement decarbonisation pledges; heightened greenhouse gas emissions controls and net zero emissions targets / laws; carbon pricing mechanisms; heightened climate risk disclosure requirements, prudential and capital regulatory standards for ‘green’ vs ‘brown’ assets (eg EU Green Finance Taxonomy); trade restrictions and carbon border tariffs (eg EU, UK, South Korea, Japan, China, US).



Elevated regulatory and administrative requirements for planning, approvals and licenses to prohibit development of assets that are not resilient to physical risks well beyond historical norms; elevated well, facility and mine remediation bonding requirements.



Technological developments – eg increasing competitiveness of renewable energy technologies (stationary energy and transport); investment in commercialisation of emerging technologies such as green hydrogen; carbon capture and storage.



Shifts in equity investor preferences - eg mainstream institutional pressures to align with Paris Agreement net zero targets; portfolio decarbonisation; shareholder requisitions such as ‘Say on Climate’; fossil fuel divestments and tilts.



Shift in debt market preferences – credit ratings impacts; green finance; sustainability-linked (margin-adjusted) loans and bonds; emerging ‘greenium’; bank lending portfolio decarbonisation targets.



Compliance with elevated customer / commercial counterparty sustainability requirements.



Alignment with elevated community, employee and other stakeholder sustainability preferences.

Financial consequences

EXAMPLES

- Increased pressure being applied up supply chains from end-users in jurisdictions with ambitious emissions mitigation targets, controls or pricing mechanisms.
- Higher prices, and reduced demand and margins, for emissions-intensive commodities.
- Elevated risks of 'stranded assets' involved in high-emissions commodity supply chains – consequences for asset valuation, depreciation, impairments, onerous contracts, end of life provisioning, taxation credits etc.
- Increased cost of emissions-intensive production inputs (eg power, transport).
- Increased scrutiny of applications for licences and permits by administrators and third parties, leading to project delays and increased costs.
- Requirements for information and reporting from counterparties on supply chain emissions intensity.
- Reputational damage and competitive positioning – suppliers, customers, employees and the community.
- Increased regulatory and compliance costs.
- Lower liquidity / inability to secure competitive capital for non-adapted assets / operations.
- Negative indicator for credit ratings.
- Inability to obtain competitive insurances.
- Divestment pressure and lower return on capital.
- Negative impact on government and stakeholder relations.
- Increased potential for litigation (securities law, contractual misrepresentation, negligence, directors' and officers' duties, contract).



KEY CONCEPT

What is the Paris Agreement?

In 2015, 196 countries signed the Paris Agreement, containing a core commitment to reduce greenhouse gas emissions to a level consistent with limiting climate change to well below 2°C above pre-industrial averages, and to pursue efforts to limit warming to 1.5°C. Achievement of the Paris Agreement goals will, in turn, require the global economy to transform to net zero emissions before 2050.

Whilst current country decarbonisation pledges are insufficient to keep global warming within the targetted range, signatories are required to review their emissions reduction pledges every five years, and to increase their decarbonisation ambition with each round of commitments.

With nine of world's largest ten economies now having introduced laws or policies to decarbonise in line with Paris Agreement targets by 2050 (or, in the case of China, 2060), it is often referred to as 'the mother of all market signals'.

In the past, there has been a common misconception that the presence (or absence) of a price on carbon, and/or federal policy positioning on climate change, is the sum total of financial exposures associated with this issue. Australia has a current 'Nationally Determined Contribution' (NDC) under the Paris Agreement of a 26-28% emissions reduction by 2030 (against 2005 emission levels).

As the figures above illustrating the nature of the relevant risks illustrate, whilst relevant, the climate-related financial risk drivers for any given reporting entity extend far beyond Federal Government policy mandates – including physical impacts on the natural and built environment, technological developments, and shifts in other stakeholder preferences.

To the latter point, the Paris Agreement has catalysed:

- **State and territory emissions reduction targets** – For example, every state and territory in Australia has set a target to reach net zero emissions by 2050 or sooner for their economies. Some jurisdictions (such as Victoria and the ACT) have enshrined this target, and interim targets for 2025 and 2030, in law.
- **International targets** – As of May 2021, eight of the ten largest economies have pledged to reach net zero emissions by 2050, including the UK, EU, Japan and South Korea. This is on track to be nine, with the introduction of legislation introduced in early 2021. China has set a net zero carbon emissions target by 2060.

- **Physical and market-based risks beyond government policies and targets** – from the Australian, Canadian and Californian bushfires made more intense due to climate change, to the flooding and storm surge from sea level rise, to the write downs of oil, gas and thermal coal assets as economies move away from fossil-fuel based energy production.
- **Stakeholder emissions reductions targets** – from the world’s largest asset owners and managers controlling US\$37 trillion that have set net zero targets as part of the UN’s Race to Zero campaign, to the corporate customers, suppliers or other counterparties that are part of the fifth of the world’s largest companies that have set net zero targets, an increasing number of an entity’s stakeholders have set their own net zero targets and are looking for carrot and stick measures to reduce emissions across their value chains.

Taken together, these targets indicate a significant shift in market preferences towards decarbonisation of economic systems.

They can act to direct economic resources to specific areas of technological development, influence behaviour across supply chains, catalyse policy shifts in adjacent areas of policy and regulation (including prudential regulation, tariffs and trade), and impact on the cost and availability of finance and insurance. Accordingly, an understanding of these market signals, and their consequences for the financial position and prospects of a reporting entity, will be critical to the presentation of complete and accurate reporting of financial position and prospects. Similarly, report preparers and reviewers should ensure that the costs and other implications of an entity's own decarbonisation pledges have been considered in the preparation of the financial statements.

Further detailed resources



McKinsey, Climate risk and response: Physical hazards and socioeconomic impacts (January, 2020).



Australian National University and Investor Group on Climate Change, Assessing Climate Change Risks and Opportunities for Investors. (Various sectors and various dates).



LSE Grantham Research Institute on Climate Change and the Environment, 'Global trends in climate change litigation – 2021 snapshot' (July 2021).



Australian Prudential Regulation Authority (APRA), 'Information Paper – Climate Vulnerability Assessments' (September 2021).



KEY ISSUE

The role of scenario analysis in the face of radical uncertainty

Climate change is characterised by ‘radical uncertainty’. We know that climate change is causing and will continue to cause physical, economic transition and litigation risks. Yet there is radical uncertainty in the exact nature, magnitude and interaction between these risks, particularly over the medium to long term. These risks will be determined, to a significant extent, by the emissions trajectory of the economic transition to net zero emissions and in turn, whether warming stays within the Paris Agreement temperature limits.

In the face of such uncertainty, entities may need to consider valuations across a broad range of plausible climate futures – from scenarios that involve a sharp, disorderly transition to a net zero economy (higher economic transition risks) to scenarios in which continuing high-emissions trajectories lead to extreme physical risks.

The extraordinarily broad range of plausible climate-related futures makes risk management – and setting reliable assumptions – extremely challenging. However, what is clear is that the future economic context looks very different to that of the past – and even of the present.

Accordingly, while a difficult exercise, report preparers and their auditors will need to consider how material climate-related assumptions may impact on the central planning case that underlies the financial statements, and the range of alternative, yet plausible, assumptions that, if applied, would materially impact on the accounting estimates. This is where the TCFD Recommendations (see Key Concepts pages 20-21) are instructive.



KEY CONCEPT

Emissions trajectories, scenario analysis and the TCFD

While there are innumerable possibilities for how the transition to net zero emissions will play out, climate scenarios set out high level narratives. These include a rapid and orderly transition, a delayed and disruptive transition, and a failed transition to a ‘hothouse’ world.

The most widely used scenarios are the Intergovernmental Panel on Climate Change’s Representative Concentration Pathways (RCPs), as well as energy transition scenarios such as those published by the International Energy Agency. Now central banks are getting into the business, with the Network for Greening the Financial System (NGFS) publishing a set of scenarios for supervisory work. Cumulative emissions determine the amount of warming and associated impacts. Even if we reach global net zero emissions by 2050, the higher that emissions are along the way, the warmer the temperature and (all else being equal) the larger the physical impacts will be.

By contrast, a pathway to net zero emissions by 2050 with deep emissions reductions in the short term results in fewer total emissions and therefore fewer physical impacts, but higher economic transition risks in the short to medium term. In scenarios with business-as-usual emissions or only incremental reductions and where we do not reach net zero emissions by 2050, the physical impacts will be extreme. The Recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) have emerged as authoritative guidance on conducting stress-testing and scenario analysis across the plausible range of climate futures.

The TCFD provides a framework for the kind of information that must be analysed and disclosed in order to truly and fairly represent (and enable assessment of) the impact of climate-related risks on financial positions and prospects. The TCFD calls for clear, comparable and consistent disclosures in mainstream financial filings so information is decision-useful for investors, lenders and insurance underwriters. The TCFD contemplates not only the disclosures themselves, but the metrics and targets, strategy and governance processes within which climate risk issues are managed. It identifies 12 industrial and 4 financial sectors as being particularly exposed to material climate-related financial risks. A central plank of the TCFD recommendations relates to the conduct, and disclosure, of stress-testing and scenario planning of business strategies against a plausible range of climate futures – including a ‘well below’ 2°C emissions pathway consistent with Paris Agreement targets.

Reporting entities should not consider frameworks ‘as either or’ (AASB guidance or TCFD) but rather both, connecting the information contained in the front and back ends of the annual report using consistent assumptions, treatment of uncertainties and integration of strategy.

Are any sectors more heavily impacted by climate-related risks than others?

Climate change presents different risks for different sectors – and for companies within a given sector – depending on variables from the emissions intensity of their key inputs, operations and downstream use of their products, to their geographic location and resilience planning.

Different climate-related risks impact in different ways on different sectors. Some sectors and companies are impacted more acutely than others.

Sectors that are acutely impacted include the energy and resources sector, chemicals and manufacturing, agriculture, food and beverage, tourism, infrastructure, real estate and development, logistics and transport, and financial services.

For example, the Taskforce on Climate-related Financial Disclosures identifies the following industries as being particularly exposed to climate-related financial risks, and the nature of their financial impacts.

GROUPS AND INDUSTRIES		REVENUES	EXPENDITURES	ASSETS AND LIABILITIES	CAPITAL AND FINANCING
FINANCIAL	Banks	■		■	
	Insurers	■	■	■	
	Asset Owners	■		■	
	Asset Managers	■		■	
ENERGY	Oil and Gas	■	■	■	■
	Coal		■	■	■
	Electric Utilities	■	■		■
TRANSPORTATION	Air Freight		■		■
	Passenger Air Transportation		■		■
	Maritime Transportation		■		■
	Rail Transportation		■		■
	Trucking Services		■		■
	Automobiles and Components	■	■		■
MATERIALS AND BUILDINGS	Metals and Mining		■		■
	Chemicals	■	■		■
	Construction Materials	■	■		■
	Capital Goods	■	■		■
	Real Estate Management and Development	■	■	■	■
AG, FOOD, AND FOREST	Beverages		■	■	■
	Agriculture	■	■	■	■
	Packaged Foods and Meats		■	■	■
	Paper and Forest Products	■	■	■	■

Figure 5 – TCFD evidence of financial impact

Source: Taskforce on Climate-related Financial Disclosures, Implementing the Recommendations of the TCFD, June 2017, p.6.

Similarly, the influential US-based Sustainability Accounting Standards Board (SASB) has recently updated its Technical Bulletin on Climate Change (April 2021), in which it sets out its analysis of material climate-related risks across 79 sectors of the US economy. That analysis is summarised in Figure 6 below.

		CLIMATE RISK CATEGORY		
SECTOR	INDUSTRIES	PHYSICAL	TRANSITION	REGULATORY
CONSUMER GOODS	Apparel, Accessories & Footwear	■	■	
	Appliance Manufacturing		■	
	Household & Personal Products	■	■	
	Building Products & Furnishings		■	■
	E-Commerce	■	■	
	Multiline and Specialty Retailers & Distributors		■	
	Toys & Sporting Goods			
EXTRACTIVES & MINERALS PROCESSING	Coal Operations	■	■	■
	Construction Materials	■	■	■
	Iron & Steel Producers	■	■	■
	Metals & Mining	■	■	■
	Oil & Gas – Exploration & Production	■	■	■
	Oil & Gas – Midstream			■
	Oil & Gas – Refining & Marketing	■	■	■
	Oil & Gas – Services	■	■	■
FINANCIALS	Asset Management & Custody Activities		■	
	Commercial Banks		■	
	Consumer Finance			
	Insurance	■	■	
	Investment Banking & Brokerage		■	
	Mortgage Finance	■		
	Security & Commodity Exchanges			
FOOD & BEVERAGE	Agricultural Products	■	■	■
	Alcoholic Beverages	■	■	
	Meat, Poultry & Dairy	■		■
	Non-Alcoholic Beverages	■	■	■
	Processed Foods	■	■	
	Food Retailers & Distributors		■	■
	Restaurants		■	■
	Tobacco			
HEALTH CARE	Biotechnology & Pharmaceuticals			
	Health Care Delivery	■	■	
	Health Care Distributors		■	
	Managed Care	■	■	
	Drug Retailers		■	
INFRASTRUCTURE	Electric Utilities & Power Generators	■	■	■
	Engineering & Construction Services	■	■	■
	Gas Utilities & Distributors		■	■
	Home Builders	■	■	■
	Real Estate	■	■	■
	Real Estate Services		■	
	Water Utilities & Services	■	■	■
	Waste Management			■

CLIMATE RISK CATEGORY

SECTOR	INDUSTRIES	PHYSICAL	TRANSITION	REGULATORY
RENEWABLE RESOURCES & ALTERNATIVE ENERGY	Biofuels	■	■	■
	Forestry Management	■		
	Fuel Cells & Industrial Batteries		■	
	Pulp & Paper Products	■	■	■
	Solar Technology & Project Developers	■	■	■
	Wind Technology & Project Developers		■	
RESOURCE TRANSFORMATION	Aerospace & Defense		■	■
	Chemicals	■	■	■
	Containers & Packaging	■	■	■
	Electrical & Electronic Equipment		■	
	Industrial Machinery & Goods		■	■
SERVICES	Advertising & Marketing			
	Casinos & Gaming		■	■
	Education			
	Hotels & Lodging	■	■	■
	Leisure Facilities		■	■
	Media & Entertainment			
	Professional & Commercial Services			
TECHNOLOGY & COMMUNICATIONS	Electronic Manufacturing Services & Original Design Manufacturing	■	■	
	Internet Media & Services	■	■	
	Semiconductors	■	■	■
	Software & IT Services	■	■	
	Telecommunication Services	■	■	
	Hardware		■	
TRANSPORTATION	Airlines			■
	Air Freight & Logistics		■	■
	Automobiles		■	■
	Auto Parts		■	■
	Car Rental & Leasing		■	
	Cruise Lines			■
	Marine Transportation			■
	Rail Transportation			■
	Road Transportation			■
NO. OF INDUSTRIES IMPACTED BY CLIMATE RISK CATEGORY		36	57	40

Figure 6 – SASB analysis of material climate-related financial risks by sector
 Source: Sustainability Accounting Standards Board (SASB), Climate Risk – Technical Bulletin (2021) p.14-15.

The analysis in Figure 5 and Figure 6 demonstrates that although climate change may have differentiated impacts on reporting entities in different sectors, it has the potential to materially impact on the vast majority of companies in the vast majority of sectors in the Australian economy. These impacts may be either direct or indirect due to broader impacts on institutions and financial systems.

Accordingly, it is prudent for report preparers, reviewers and auditors to approach an entity's financial reports on the presumption that climate change may present risks that have a material impact on corporate line items and disclosures – unless a robust process of assessment demonstrates otherwise.

Further detailed resources



Taskforce on Climate-related Financial Disclosures, Final Report - Recommendations (2017); Final Report – Annex (2017); Status Report (2020).



Bank of England, Prudential Regulation Authority, Transition in thinking: The impact of climate change on the UK banking sector (September 2018) p 9.



Network for Greening the Financial System, NGFS climate scenarios for central banks and supervisors (June 2021).ot' (July 2021). 'Information Paper – Climate Vulnerability Assessments' (September 2021).

PART **B**

WHAT IS THE **REGULATORY** FRAMEWORK

within which report preparers, reviewers and auditors must consider climate change?



Whilst there is no stand-alone legislative obligation, or accounting or auditing standard, that purports to prescribe the issues and processes that should be applied in relation to climate change...

this does not mean that report preparers and reviewers are not obliged to consider these issues within their general obligations to prepare financial statements that are complete and accurate, and present a true and fair view of an entity's financial performance and position.

There has been clear guidance on the applicability of climate-related issues to these general obligations from ASIC, the AASB and AUASB (and their international counterparts). Litigation against companies, their directors and their auditors alleging misleading disclosure on climate-related financial risks is increasingly common.

As set out in Part A, the precise impacts of climate change and society's responses in the economic transition are dynamic and uncertain. It is recognised the impacts will be significant, but it is not known exactly when and how these will occur. This has implications for balance sheets, investor portfolios and financial stability. This Part B sets out the guidance, expectations and factors that frame the application of the regulatory regime to ensure that financial statements present a true and fair view of position and performance.



Corporations law and accounting standards

- **Corporations Act 2001 (Cth)** – financial statements and their notes must give a ‘true and fair view’ of the financial position and performance of the company (s 297). ‘True and fair’ is not defined in the Corporations Act or accounting standards, but is generally understood as an indication that ‘the totality of information provided reflects the substance of the business’s activity and position during the period’. ‘Relevant climate-related assumptions may need to be disclosed in the notes to the financial statements in order to ensure that they present a ‘true and fair view’ of an entity’s financial position, performance and prospects, in a way that is fair and balanced, and relevant and reliable.
- **Accounting standards** – The financial reports must comply with the accounting standards and be externally audited (ss 296, 301).

Accounting and audit guidance

- **Australian Accounting Standards Board and Auditing and Assurance Standards Board** – The AASB and AUASB have issued a joint guidance statement on the integration of climate change-related risks into financial statement materiality considerations: *Climate-related and other emerging risk disclosures*:



Assessing financial statement materiality using AASB Practice Statement 2

It represents an unequivocal statement by Australia's accounting and audit standard-setters that climate-related risks are relevant to accounting estimate materiality assessments: from asset fair values and impairments to changes in useful life assumptions and provisions for onerous contracts.

While not mandatory, the AASB and AUASB warn that they expect that directors, preparers and auditors will actively consider the materiality of relevant climate-related risks when preparing, approving and auditing financial statements. The guide is particularly significant in its repositioning of climate-related risks squarely within the scope of external audit scrutiny.

- **International Accounting Standards Board** – In November 2019, IASB Executive Member Nick Anderson published an article echoing the AASB / AUASB joint guidance. It explains that the principles-based IFRS standards address material climate change issues, despite the fact that climate change is not explicitly referred in the requirements. This was followed by 'educational material' on the Effects of climate-related matters on the financial statements in November 2020, with a non-exhaustive list of examples of when reporting entities may need to consider climate matters in the financial statements. The guidance on the way in which climate-related assumptions may be materially relevant to accounting estimates underlying line items is discussed in Part C below.

- **International Auditing and Assurance Standards Board** – The IAASB has published guidance on how existing international audit standards require consideration and assessment of climate risks during the audit process if these risks have a significant impact on the company. Auditors should also read and consider the information presented in the front half of the annual report, such as TCFD disclosures and narrative reports on material risks, to assess the risks of material inconsistency with the financial statements.ⁱⁱ

Regulator and central bank expectations

Regulators and central banks across the globe, but particularly in Australia, continue to elevate baseline expectations around corporate disclosure of climate risks in both the narrative statements (Operating and Financial Review) and financial statements and notes. In Australia, the Council of Financial Regulators has established a working group on the financial implications of climate change to help coordinate their responses.ⁱⁱⁱ

- **Australian Prudential Regulation Authority** – APRA has communicated over a number of years its expectations that its regulated entities understand and manage climate-related financial risks through stress-testing, scenario analysis and disclosure of decision-useful information to the market. Development of a prudential practice guide focused on climate-related financial risks is underway (see draft Prudential Practice Guide CPG 229 Climate Change Financial Risks) and climate vulnerability assessments will be incorporated into its stress testing of the financial system, starting with banks in 2021.^v
- **Australian Securities and Investment Commission** – ASIC regards climate change as a ‘systemic risk that could have a material impact on the future financial position, performance or prospects of entities’ and has updated its regulatory guidance on disclosures in prospectuses and OFRs to refer to the kinds of climate risks described in the TCFD recommendations.^{vi}
- **Reserve Bank of Australia** – The RBA’s Deputy Governor has acknowledged that the physical and transition risks associated with climate change as ‘likely to have first-order economic effects’ and the RBA’s 2019 half-yearly Financial Stability Review devoted a section to climate change.^{vii}
- **Australian Stock Exchange** – The ASX Corporate Governance Council specifically encourages entities to consider the framework set out in the TCFD recommendations in the 4th edition of the Corporate Governance Principles and Recommendations.^{viii}
- **Network for Greening the Financial System** – As a coalition of over 70 central banks and supervisors, the NGFS acknowledges climate change as a source of financial risk and is therefore within the mandates of central banks and supervisors to take steps to ensure the financial system is resilient to these risks. The NGFS has published recommendations and resources to this end, including publishing climate scenarios and guides to stress testing and scenario analysis for central banks and supervisors.^{ix}
- **International Organization for Securities Commissions** – IOSCO has established a board level task force on Sustainable Finance and is exploring how its members could be involved in sustainability reporting to facilitate the disclosure of both quantitative and qualitative decision-useful information for investors.^x



KEY CONCEPTS

Paris-aligned accounts

Shareholder groups such as the Australian Investor Group on Climate Change (representing members with A\$2 trillion under management) and the €35 trillion Institutional Investor Group on Climate Change, have begun to call for the preparation of 'Paris-aligned accounts'. This means that the assumptions underlying the central planning and valuation case are aligned with an emissions trajectory that reaches net zero by 2050 or sooner, with cumulative emissions along the way that limit global average warming to 1.5°C above pre-industrial temperatures. If this is not the central case or a full shadow scenario, these investors have asked for disclosures in the notes to the financial statements, such as sensitivity analysis using demand outlooks and commodity prices aligned with a 'Paris-aligned scenario'.

Whilst the concept of 'Paris-aligned accounts' and sensitivity analysis remains, as at the date of preparation of this report, at a nascent stage of adoption, it is indicative of the accelerating demands of investors for more granular and decision-useful information on the impact of climate-related risks on investee entities.

Investor expectations

As a financial risk to entities and a systemic risk that is largely non-diversifiable, climate change is an increasing concern for debt and equity investors, prudential regulators and accounting/audit standards setting bodies.

Companies are subject to increasing demands to improve climate governance, take action to reduce emissions across value chains and disclose in accordance with the TCFD recommendations.

Corporates may face increasing investor pressure to make a 'Paris Agreement-aligned' business strategy a central pillar of their corporate rebuilding and recovery plans, with a measurable pathway to net zero emissions. Some of Australia's largest publicly-listed companies received requests in August 2020 from the Climate Action 100+, and investor coalition representing US\$50 trillion FUM, for narrative disclosure in accordance with a Net Zero Reporting Benchmark.

In November 2020, another investor coalition, the €35 trillion FUM International Investor Group on Climate Change (IIGCC) requested a number of the largest Australian and global companies for financial report alignment with a 1.5°C climate change trajectory.^{xi}

The IIGCC Investor Expectations on Paris-Aligned Accounts considers that the financial statements should be 'climate proof',^{xii} asking investee companies for Paris-aligned accounts [see Key Concept, left) or disclosures in the notes on how Paris-aligned assumptions would impact the reported financial statements. The letter further called for an affirmation that the goals of the Paris Agreement have been considered in drawing up the accounts.

An even broader grouping of investors representing investors with US\$103 trillion in assets under management has called on companies and auditors to fully reflect the financial impacts of climate change in the accounts in the September 2020 Open Letter on Accounting Standards.

Rather than making a normative call for the central case, as in the IIGCC Investor Expectations on Paris-Aligned Accounts, the open letter calls on companies to apply the IASB guidance (described on page 30) 'in the letter and the spirit', including showing the key assumptions that have been made with regard to climate-related risks. It calls on auditors not to sign off on accounts that do not apply the IASB guidance 'in the letter and the spirit'.^{xiii}

These heightened reporting demands are a reflection of the concern that orthodox approaches to financial reporting, in which there is historically limited recognition of the potential market impacts of a climate future that diverges significantly from historical experience, do not provide sufficient information to provide decision-useful insights into whether an investee company's position and its forward strategy are consistent with the investors' own portfolio decarbonisation targets.

In general terms, these heightened reporting demands can be interpreted to apply in a manner consistent with the scope of current regulatory disclosure requirements. This is not to say that full compliance with all the heightened reporting demands, particularly the IIGCC Investor Expectations on Paris-aligned Accounts, is yet necessary for reporting entities to fulfil the normative requirements to present material information under the applicable accounting regulations, if the entity does not use a 1.5°C consistent set of assumptions for its central planning and valuation case.

SASB

The non-profit Sustainability Accounting Standards Board (SASB) produces sustainability reporting standards for the subset of ESG issues that are most material to investors, including climate issues. The world's largest institutional investor, BlackRock, expects investee companies to report climate risk with regard to both the TCFD and SASB framework.^{xiv}

The 2021 edition of its Climate Risk Technical Bulletin finds that climate risk is likely to materially affect nearly every one of the 77 industries covered by SASB's materiality map, but manifests differently in each industry.^{xv} Note that SASB has merged with the International Integrated Reporting Council (IIRC) to form the Value Reporting Foundation.

Other sustainability standards

In March 2021, the International Financial Reporting Standards (IFRS) Foundation announced that it is pushing forward on a proposal to set up an international sustainability standards board it would oversee along with the International Accounting Standards Board. If established, it is proposed that climate standards would be the priority of the sustainable standards board.^{xvi}

More broadly, there is a trend towards alternative value measures and disclosures.^{xvii} These reflect an acknowledgement that the gap between financial reporting and broader sustainability reporting narrows when externalities are priced.

Litigation for misleading disclosure

Claims against corporations and / or their directors and officers in relation to misleading financial reports are not uncommon in Australia. Litigation is a costly and time-consuming exercise for a plaintiff as well as the defendants. In general, investors are unlikely to sue on misleading disclosure in the absence of a 'stock drop' – that is, a loss of corporate value that is alleged to have been caused upon the correction of an earlier misrepresentation. However, in relation to climate change, we are also seeing the emergence of 'strategic litigation', where either securities regulators or well-funded activist litigants seek declarations that disclosures are misleading, without the burden of having to establish causation or loss.

Further detailed resources



IFRS, Effects of climate-related matters on financial statements (Nov 2020).



AASB / AUASB, Joint Guidance on Climate-related and other emerging risk disclosures (April 2019)



IIGCC, Investor expectations for Paris-aligned accounts (Nov 2020).



World Business Council for Sustainable Development, TCFD Preparer Forums.



CDSB and SASB, TCFD Implementation Guide: Using SASB Standards and the CDSB Framework to Enhance Climate-Related Financial Disclosures in Mainstream Reporting (2019).



World Economic Forum and International Business Council, Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation (September 2020).



SASB, Climate Risk Technical Bulletin (April 2021).



UK Financial Reporting Council, Climate Thematic (Nov 2020).



CDSB, Accounting for Climate: Integrating climate-related matters into financial reporting (December 2020).

PART C

**A
HIGH-LEVEL
GUIDE**



Some climate-related risks and opportunities feed into critical accounting assumptions and can affect the figures in the financial statements. Even where they do not materially affect those figures, there is increasing pressure on reporting entities to disclose material climate-related assumptions whether or not there is a material quantitative impact on particular line items, including under IFRS and AASB/AUASB guidance.

Set out below is an introductory guide to assist both report preparers, reviewers and auditors in undertaking the robust consideration of climate risks.

It is not considered to be a prescriptive or exhaustive framework on the identification of climate-related issues, or an assessment of their potential impact on accounting estimate valuations, but as an introductory aid to consider climate-related issues within existing processes of financial statement preparation and audit.

Each 'step' features questions to assist you getting started, directions to more detailed resources to assist as you progress, and real-life examples.



1 Identify key climate-related value drivers to the entity's financial position and prospects, including physical, transition and liability risks.



2 Consider relevance and materiality of identified climate-related issues for particular line items.



3 Consider key sources of accounting estimation uncertainty generally, and areas of significant judgement.



4 Climate-related materiality thresholds.



5 External audit.



6 Holistic review.



1. Identify key climate-related value drivers to the entity's financial position and prospects, including physical, transition and liability risks.

The climate-related assumptions that are relevant to each reporting entity's business will be unique to the business. However, they must be based on a robust consideration of the external environment in which the business operates, as that environment may change over the years and decades relevant to positive and negative impacts on future cash flows reflected in the financial statements.

The nature of climate-related risks to a given entity, and their potential to impact on the financial prospects of a reporting entity, are commonly subject of discussion in the narrative commentary within an annual report (i.e. the directors' report or OFR – see for example ASIC RG247.66). However, an understanding of the nature of those issues and their potential impact on an entity's financial position will also be essential in the preparation of the financial statements, compliance with accounting standards, audit and review of those statements and presentation of a true and fair view.

Refer to Part A above for examples of the relevant climate-related risks (and opportunities) that may impact on a given entity's financial position and/or prospects.

Questions to get you started

- What are the key value drivers for the entity's business, and how do climate-related physical, economic transition and liability-related risks impact on those drivers?
- Over what time-horizon(s) are relevant issues expected to manifest?
- How do staff responsible for report preparation, review and audit remain appropriately knowledgeable of relevant climate-related issues that may be relevant to an entity's financial position and prospects?
- Are the controls and processes applied to identify, assess and monitor relevant climate-related issues robust?
- Does the entity's risk register comprehensively address these issues?
- What capacity-building may be required?
- When should we consult with or otherwise seek support from specialist subject-matter experts?
- Have such specialists been involved in the development of guidance and templates for use in the report preparation, and / or external audit where required?

Further detailed resources



Taskforce on Climate-related Financial Disclosures, Final Report - Recommendations (2017); Final Report – Annex (2017); Status Report (2020).



McKinsey, Climate risk and response: Physical hazards and socioeconomic impacts (January, 2020).



Australian National University and Investor Group on Climate Change, Assessing Climate Change Risks and Opportunities for Investors (Various sectors and various dates).



SASB, Climate Risk Technical Bulletin (April 2021).

PRACTICAL EXAMPLES



OMV Group, Annual Report 2020

Notes to Financial Statements, p107:

EFFECT OF CLIMATE-RELATED MATTERS AND ENERGY TRANSITION

The short and long-term effects of climate-related matters and energy transition impact the significant accounting estimates performed by management and included in the group financial statements in estimates such as recoverable amounts and expected useful lives of the Company's assets.

These estimates incorporate the future effects of OMV's own strategic decisions and commitments on having its portfolio adhered to the energy transition targets, short and long-term impacts of climate-related matters and energy transition to a lower-carbon energy sources together with management's best estimate on global supply and demand, including forecasted commodities prices.

OMV's view on such future market trends is aligned with the International Energy Agency (IEA) Stated Policies (SP) Scenario, and in accordance with such scenario incorporates current and announced (not yet fully realized) policies, targets, and plans.

OMV is aware of its responsibility and will live up to its commitment to the Paris Agreement and the EU climate targets. OMV is committed to reach net-zero GHG emissions of operations (scope 1 and 2) by 2050 or sooner. Nevertheless, there is significant uncertainty around the changes in the mix of energy sources over the next 30 years and the extent to which such changes will meet the ambitions of the Paris Agreement.

While companies can commit to such ambitions, financial reporting under IFRS requires the use of assumptions that represent management's current best estimate of the range of expected future economic conditions, which may differ from such ambitions.

Consequently, in order to reflect a faster paced energy transition, OMV revised its Brent oil price planning assumptions in 2020 which have an impact on the recoverability of its fixed assets. It is OMV's view that the long long-term assumptions and the inverse price curve applied for Brent oil take into consideration the impacts of climate-related matters and energy transition to lower-carbon energy sources.

The updated long term Brent oil price assumption is USD 60/bbl vs USD 75/bbl in 2019, in real terms. More details on the oil and gas assumptions can be found in Note 2.3j.

Notes to Financial Statements, Risk Management, p173:

CLIMATE CHANGE RISKS

OMV consistently evaluates the Group's exposure to risks related to climate change in addition to the market price risk from European Emission Allowances. Such risks comprise the potential impact of acute or chronic events like more frequent extreme weather events or systemic changes to our business model due to a changing legal framework or substitution of OMV's products due to changing consumer behaviour. OMV recognizes climate change as a key global challenge.

PRACTICAL EXAMPLES



Commonwealth Bank,
Annual Report 2020

Notes to Financial Statements, p207:

STRATEGIC RISK

Strategic risk is the risk of material stakeholder value destruction or less than planned value creation. The Group is exposed to strategic risk primarily through:

- Changes in the Group's external and internal operating environments (including macro-economic conditions, competitive forces, technology, regulatory, political and social trends, customer expectations and the environment); and
- Risk associated with the process for strategy development and monitoring of strategy implementation.

GOVERNING POLICIES:

- Group Strategic Risk Management Policy
- Environmental & Social Policy

KEY MANAGEMENT COMMITTEE:

- Executive Leadership Team

STRATEGIC RISK:

- Strategy development, approval and review;
- Identifying and monitoring changes and potential changes to the operating environment; and
- Monitoring execution progress of strategies. In developing the strategy, the following is considered:
 - Impact of strategy on the Group's risk profile and measures of risk appetite;
 - Recent execution progress; and
 - Assumptions concerning the operating environment.

Climate risk represents a strategic risk due to the potential material transition and physical climate related impacts to the Group, if not managed effectively.

The potential adverse impacts of climate change manifest, and are therefore measured and managed, as an outcome of the other material risk types. In order to understand these potential impacts, and in support of our commitment to limiting the impacts of climate change the Group:

- Develops scenario analyses to understand the impacts of both transition and physical climate-related risks on the business and the implications for strategic and tactical portfolio decisions; and
- Develops strong policy frameworks which consider Environmental, Social and Governance issues, including climate change impacts in assessing our relationships with customers and suppliers.

Corporate Responsibility programs outline the objectives for safeguarding the environment, while supporting economic growth and development and provide guidelines in monitoring and reducing the Group's own greenhouse gas emissions and energy use. OMV thus integrates the related risks and opportunities into the development of the Company's business strategy.

Changes in the pace of energy transition compared to OMV's expectations and thus changes in the future development of supply and demand could have a negative impact on the valuation of OMV's oil and gas assets.



ANZ, Annual Report 2020

Note to Financial Statements, Financial Risk Management, p166:

KEY MATERIAL FINANCIAL RISKS	KEY SECTIONS APPLICABLE TO THIS RISK
OVERVIEW	<ul style="list-style-type: none"> • An overview of our Risk Management Framework
CREDIT RISK	<ul style="list-style-type: none"> • Credit risk overview, management and control responsibilities
<p>The risk of financial loss resulting from:</p> <ul style="list-style-type: none"> • a counterparty failing to fulfil its obligations; or • a decrease in credit quality of a counterparty resulting in a financial loss. <p>Credit risk incorporates the risks associated with us lending to customers who could be impacted by climate change or by changes to laws, regulations, or other policies adopted by governments or regulatory authorities, including carbon pricing and climate change adaptation or mitigation policies.</p>	<ul style="list-style-type: none"> • Maximum exposure to credit risk • Credit quality • Concentrations of credit risk • Collateral management



2. Consider relevance and materiality of identified climate related issues for line items

Considered together, the AASB / AUASB and IFRS Guidance state that climate-related assumptions may be materially relevant to accounting estimates stated for line items including:

BALANCE SHEET ITEM	EXAMPLES OF POTENTIAL CLIMATE-RELATED IMPACTS	EXAMPLES OF RELEVANT ACCOUNTING STANDARDS
Asset fair valuation and impairment arising from changes in increased costs and/or reduced price/demand outlooks, cash flow projections or the level of risk in achieving cash flows	Transition risks such as the introduction or increase in carbon prices and stakeholder shifts away from fossil fuel energy may affect the recoverable amount calculations for long-lived assets in the energy and resources sectors.	IFRS 13 Fair Value Measurement AASB 116 / IAS 16 Property, Plant & Equipment AASB136/ IAS 36 Impairment of Assets
Changes in useful life of assets as assets become physically unavailable or commercially obsolete earlier than expected or there is accelerated timing of replacement of assets	An automotive manufacturer may assess that the useful life of its plant and equipment used in the manufacturing of internal combustion engines is reduced, resulting in a change in the useful life of the asset. This is consistent with its estimates of uptake of electric vehicles on which it bases its valuation of its new electric vehicle manufacturing operations and inventories.	AASB 116 / IAS 16 Property, Plant & Equipment AASB136/ IAS 36 Impairment of Assets AASB 138 / IAS 38 Intangible Assets AASB/IFRS 13 Fair Value Measurement
Depreciation, depletion and amortisation costs	Following from the change in the useful life of its plant and equipment (see immediately above), the automotive engineer may be required to change the amount of depreciation for current and future periods.	AASB 116 / IAS 16 Property, Plant & Equipment AASB 138 / IAS 38 Intangible Assets
Estimation of future margins to evaluate the recoverability of assets	The physical impacts of climate change may increase the costs and reduce the revenue of an entity that operates seaside hotels, as it is forced to build a sea wall to protect its buildings from storm surges associated with sea level rise, and sees visitor numbers reduce during the longer wet season.	AASB 116 / IAS 16 Property, Plant & Equipment AASB136/ IAS 36 Impairment of Assets AASB 138 / IAS 38 Intangible Assets AASB/IFRS 13 Fair Value Measurement
Recognition and measurement of deferred tax assets	Transition risks affect an entity's estimate of future taxable profits resulting in the entity being unable to recognise deferred tax assets or derecognise previously recognised ones.	AASB 12 / IAS 12 Income Taxes
Provisions for onerous contracts, bad and doubtful debts	An increase in the cost of energy due to an increase in carbon prices, or an increase in the cost of water due to climate-related scarcity, could require a provision to reflect the increasing costs of fulfilling the onerous contract.	AASB 137 / IAS 37 Provisions, Contingent Liabilities and Contingent Assets
Asset closure and retirement obligations	A bank may have to adjust the value of its agricultural loan assets where it assesses that a financial asset is credit impaired and/or adjusts its measurement of expected credit losses because of a reduction in farming revenues in a warming climate.	AASB 137 / IAS 37 Provisions, Contingent Liabilities and Contingent Assets
Changes in expected credit losses for loans and other financial assets (investments and receivables)	A bank may have to adjust the value of its agricultural loan assets where it assesses that a financial asset is credit impaired and/or adjusts its measurement of expected credit losses because of a reduction in farming revenues in a warming climate.	AASB 137 / IAS 37 Provisions, Contingent Liabilities and Contingent Assets
Disclosures of risk to a company's financial instruments and the accounting of financial instruments	In addition to changes in expected credit losses (see above), climate-related matters could affect how loans are classified and measured, such as where interest payments (and therefore cash flows) are linked to the achievement of emissions reduction targets in sustainability-linked loans.	AASB / IFRS 9 Financial Instruments AASB / IFRS 7 Financial Instruments: Disclosures
The realisable value of inventories	Inventories of entities that support fossil fuel-adjacent industries, such as internal combustion engine parts, may become obsolete and require write down to their net realisable value if their cost is not recoverable.	AASB 2 / IAS 2 Inventories
Specific disclosure of areas in which it has been determined that climate-related variable adjustments are not material	The international peers of an oil and gas company have made significant write downs in the previous 12 months citing a reduction in the oil and gas prices and increase in climate-related regulation. These trends do not materially affect the reporting entity, a small oil producer that has contracted to sell its entire output at fixed prices (not by reference to the spot price) under a long-term contract that covers the remainder of the production life of the entity's asset. Consider whether to disclose that unlike its peers, the international trends do not affect it.	AASB 101 / IAS 1 Presentation of Financial Statements APS / PS 2 Making Materiality Judgments
Overall presentation of financial statements	Consider whether, taken as a whole, the financial statements are complete and accurate, and present a true and fair view of the entity's financial performance and position. See further discussion under / Materiality, below.	AASB 101 / IAS 1 Presentation of Financial Statements

Questions to get you started

Which climate-related variables are material to the accounting estimates in our financial statements?

How have these variables been considered and applied in the calculation of each balance?

Consider, in particular:

- asset fair valuation and impairment arising from changes in increased costs and/or reduced price/demand outlooks, cash flow projections or the level of risk in achieving cash flows;
- changes in useful life of assets as assets become physically unavailable or commercially obsolete earlier than expected or there is accelerated timing of replacement of assets;
- depreciation, depletion and amortisation costs;
- estimation of future refining margins to evaluate the recoverability of manufacturing, supply and distribution assets;
- recognition and measurement of deferred tax assets;
- provisions for onerous contracts, bad and doubtful debts, asset closure and retirement obligations;
- potential provisions and contingent liabilities arising from fines or penalties;
- changes in expected credit losses for loans and other financial assets (investments and receivables);
- insurance contract liabilities;
- recoverable amounts of exploration and production assets, including joint venture and associate interests;
- the company's ability to continue as a going concern;
- the realisable value of inventories; and
- disclosures of risk to a company's financial instruments and the accounting of financial instruments.

Have relevant assumptions been integrated and consistently applied across valuation models?^{xviii}

- What disclosures of key assumptions and uncertainties may be required to facilitate investors' reasonable understanding of the financial statements?
- Have costs and other forecast variables associated with an entity's climate commitments or targets been factored into the accounts?

Further detailed resources



AASB and AUASB Joint Guidance, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2, April 2019.



IFRS, Effects of climate-related matters on financial statements, Nov 2020.



A4S CFO Leadership Network, Essential Guide to Valuations and Climate Change, 25 February 2021.

PRACTICAL EXAMPLES

Climate-related sensitivity analysis for impairment calculations and post-tax headroom

Metals and miner Glencore Plc included in its 2020 Accounts a quantified sensitivity analysis relating to the impairment calculations for energy coal assets using external prices from the IEA Sustainable Development Scenario, indicating an illustrative impairment of up to US\$7,770 million.



Glencore Plc, Annual Report
2020 page 140:

ACCOUNTING POLICIES

The impairment assessment assumes that through the remaining life of mine, there will continue to be a ready market for thermal coal at a Newcastle FOB export price of \$80/tonne (6,000 NAR), South African FOB export price of \$80/tonne and Colombian CIF price (destination: Rotterdam) of \$65/tonne. The International Energy Agency (IEA) provides a comprehensive view of how the global energy system could develop in the coming decades through a number of scenarios.

Our base case production decline profile inconsistent with the demand decline profile of the IEA's Paris-aligned scenarios. Should coal be displaced as a fuel for power generation more rapidly than currently expected, the resulting supply overhang could result in lower commodity prices.

We have illustrated this by showing the various impairment scenarios versus current carrying values at possible commodity price curves consistent with the IEA's scenarios:

- Stated Policies Scenario (STEPS) – the impact of existing policy frameworks and today's announced policy intentions (consistent with our "Current Pathway" scenario);
- Sustainable Development Scenario (SDS) – the impact should additional policy mechanisms be implemented sufficient for full alignment with the Paris Goals (consistent with our "Rapid Transition" scenario). The sensitivity prices set out below are those included in the documentation to the IEA's World Energy Model 2020, except that IEA thermal coal prices are on a delivered basis. These have been adjusted to FOB pricing on the basis of forward freight costs.

The base case price used in the impairment assessment is higher than that in STEPS due to our assumption that such higher price will be required to induce the required investment to maintain supply levels under this scenario. Notwithstanding this assumption, we also consider prices in STEPS to be a reasonably possible change in our assumptions within the next financial year. Europe's demand for thermal coal has reduced significantly in recent years, and this is currently the key market for Colombian coal.

Accordingly we consider the SDS prices for Colombian coal to be a reasonably possible change in our assumptions within the next financial year and have sensitised Cerrejon against these. The SDS price sensitivities for Australia and South Africa are provided for additional information.

The sensitivities are presented on price alone and assume no mitigating actions, therefore the impairments in each scenario are likely higher than would transpire. In practice, in a sustained lower price environment, management would alter mine plans to cut operating and capital costs, potentially at the expense of future volumes, in order to reduce the overall NPV impact.

The IEA has also published a net zero emissions by 2050 scenario (consistent with our "Radical Transformation" scenario), but has not published price assumptions for this scenario. Our assumption is that demand (and therefore price) would be similar to SDS, but with large-scale uptake of carbon capture, utilisation and storage to mitigate the effects of such. In itself, this reflects that in all credible energy transformation scenarios, thermal coal will continue to be required as a transition fuel for several decades.

Coking coal prices have not been sensitised, reflecting limited alternatives in relevant industrial applications. We have not sensitised the NPV of our oil producing assets, reflecting the relatively low capital allocated to such.

Our life of mine planning reflects operating cash flows from Cerrejon until 2032, South African coal mines until 2043 and Australian coal mines until at least 2050. Production is weighted towards the earlier part of the mines' lives. We have illustrated this by showing the year in which 50% of saleable coal would be extracted under the current plan, well within the next decade.

CASH-GENERATING UNIT

US\$ MILLION	THERMAL	THERMAL SOUTH AFRICA	CERREJON	TOTAL THERMAL COAL
BASE CASE ASSUMPTIONS IN LIFE OF MINE PLAN:				
LOM saleable tonnes (Glencore consolidated) (million tonnes)	1,300	380	85	
Projected year when 50% LOM tonnage depleted	2028	2028	2026	
Long-term price (Newcastle FOB/API4 FOB/API2 CIF) (\$/t) (real terms)	80	80	65	
Discount rate applied (ranges represent opencut/underground)	6.1%-6.7%	7.9%-8.5%	7.9%	
SHORT TO LONG-TERM PRICES APPLIED IN SELECTED SCENARIOS:				
STEPS	77-74	72-79	63-73	
SDS	67-58	62-63	54-59	
Carrying value of non-current capital employed as 31 December 2020	8,565	2,804	595	11,964
ILLUSTRATIVE IMPAIRMENT ARISING:				
STEPS	1,900	590	–	2,490
SDS	5,800	1,700	230	7,730

The potential impact of climate change on non-current assets was also recognised as a key audit matter by the auditor Deloitte.



Glencore Plc, Annual Report 2020 page 122:

POTENTIAL IMPACT OF CLIMATE CHANGE ON NON-CURRENT ASSETS

Description of key audit matter

As described on pages 16 to 21, climate change, and the world's response to climate change, present significant risks and uncertainties for Glencore's energy industrial assets as a result of the sensitivity to demand for future fossil fuels, particularly thermal coal. Glencore's thermal coal portfolio at 31 December 2020 has a carrying value of \$11.9 billion.

As described on page 16, in December 2020 the Group published its Climate Report 2020: Pathway to net zero, which sets out the Group's target of a 40% reduction in total emissions by 2035 and its ambition to achieve net zero total emissions by 2050.

To test the resilience of its portfolio to the impacts of climate change, the Group has developed three scenarios:

- Current Pathway scenario, consistent with the IEA Stated Policies Scenario (STEPS);
- Rapid Transition Scenario, consistent with IEA Sustainable Development Scenario (SDS), and
- Radical Transformation Scenario, consistent with the IEA Net Zero Emissions by 2050 scenario (NZE2050).

Glencore's base case production decline profile used in its internal modelling and business plans is consistent with the Group's net zero ambition. However, as explained in note 1, the base case price assumptions used in management's impairment assessment (see the key audit matter above) are higher than those assumed in STEPS and SDS.

While under all credible scenarios, fossil fuels (coal, gas and oil) will continue to be part of the global energy mix into the future, policies supporting the Rapid Transition and Radical Transformation scenarios would lead to significant coal demand decline over the longer term and likely lower prices.

The Group has set out in note 1 to the financial statements illustrative impairment downside impacts to current carrying values at possible commodity price curves consistent with STEPS and SDS.

Under STEPS the illustrative impairment is \$2.5 billion while under SDS the illustrative impairment is \$7.7 billion.

We identified a key audit matter relating to the accuracy and presentation of this analysis and the consistency of the Group's net zero ambition with its internal modelling and business plans, including those used in its impairment assessment.

PRACTICAL EXAMPLES

PRACTICAL EXAMPLES

HOW THE SCOPE OF OUR AUDIT RESPONDED TO THE KEY AUDIT MATTER

We worked with Deloitte internal environmental specialists in considering potential climate change risk factors such as stranded assets, green taxes, the potential impact of activities of investors and other stakeholders, environmental legislation, loss of customers or demand and loss of sources of – and access to – funding.

We challenged management’s assertion on the impact of climate-related risks relating to its thermal coal portfolio by comparing management’s impact assessment with reputable publicly available industry projections of demand and long-term prices into the future, such as STEPS and SDS scenarios.

We reviewed the time period through coal CGUs are valued (life of mine plan) to assess if the assumptions are consistent with management’s long-term investment plans, public disclosures and credible external scenarios about energy transition timing and effects.

We reviewed management’s impairment models and reperformed the calculation of sensitivities in note 1 applying the IEA’s short-to long-term price assumptions.

We considered whether management’s sensitivity and estimation uncertainty disclosures were adequate in the context of climate risks and uncertainties.

We read the other information included in the annual report and considered whether there was any material inconsistency between the other information and the financial statements, or whether there was any material inconsistency between the other information and our understanding of the business based on audit evidence obtained and conclusions reached in the audit.

Similarly, British energy and services company Centrica plc included in its 2020 Accounts a high-level sensitivity analysis, setting out the change in post-tax headroom and impairment for its upstream oil and gas assets against oil and gas demand and forecast prices consistent with the IEA Sustainable Development Scenario.



Centrica Plc 2020 Annual Report and Accounts page 123:

EXCEPTIONAL ITEMS AND CERTAIN RE-MEASUREMENTS

Furthermore, there is also uncertainty due to climate change and international governmental intervention to reduce CO2 emissions and the likely impact this will have on both gas and oil demand and forecast prices. As a result, a further sensitivity is disclosed below based on forecast prices aligned to the International Energy Agency's ('IEA') Sustainable Development Scenarios, which assumes governmental policies are put in place to achieve the temperature goals under the Paris Agreement.

This sensitivity retains the prices for the liquid period (4 years) but replaces the longer term thereafter with the IEA's forecast prices for Sustainable Development.

	TEN-YEAR LONG-TERM AVERAGE PRICE (i)	CHANGE IN POST -TAX HEADROOM/(IMPAIRMENT) (ii)
	2026-2035	
	2020	£m
NBP (p/th)	33	(132)
Brent (\$/bbl)	55	

(i) Prices shown in 2019 real terms.

(ii) Change in impairment would create Goodwill.



3. Consider key sources of accounting estimation uncertainty generally, and areas of significant judgment

Entities must disclose key sources of accounting estimation uncertainty that have a significant risk of resulting in a material adjustment to the carrying value of assets and liabilities within the next financial year in accordance with AASB 101 / IAS 1. This includes assumptions about the future and the effects of uncertain future events on the financial statements, such as changes in prices affecting revenue or costs, the effect of technological innovation or obsolescence on inventories, and risk adjustments to cash flows or discount rates.^{xx} This requirement applies:

... to estimates that require management's most difficult, subjective or complex judgements. As the number of variables and assumptions affecting the possible future resolution of the uncertainties increases, those judgements become more subjective and complex, and the potential for a consequential material adjustment to the carrying amounts of assets and liabilities normally increases accordingly.

Given the range and complexity of uncertainty of potential climate futures and market responses in the transition to net zero emissions, including in the short term, it is foreseeable that assumptions relating to the impacts of climate change may have a significant risk of material adjustment to carrying values within the next financial year. Where this is the case, these assumptions must be disclosed under AASB 101 / IAS 1. In circumstances where there is a high level of uncertainty, an entity may need to disclose sensitivity analysis, such as stress testing or scenario analysis.^{xxii} Regard should also be given to application of AASB 108 / IAS 8 and choices around the selection and changing of accounting policies.

Similarly, climate-related assumptions may be a significant variable in the recognised balance sheet item for assets carried at fair value, such that assumptions may need to be disclosed under AASB 13.

An entity's 'view of the world' is a central input to both corporate forecasts and planning, as well as accounting estimates, particularly fair value assessments and impairments.

If the economic context is one in which historical market norms – even of the most recent past – are recognised as being unlikely to prevail into the future, unchanged assumptions are likely to become increasingly unfit for purpose. The point in time at which assumptions that were previously reasonable for a particular entity become unreasonable for that entity will of course vary depending on the circumstances.

However, the significance and dynamics of this issue suggests two conclusions:

- the 'central case' trajectory upon which an entity bases its accounting estimates, and planning and investment decisions, will be a matter of decision-useful information for investors and thus warrants disclosure, no matter what trajectory that may be; and
- it will be incumbent upon preparers to continue to consider, and auditors to continue to test, whether the assumptions remain fit-for-purpose in an extremely dynamic market landscape.

The breadth of potential climate futures, and the number of uncertainties and variables at play, suggests that there is an accordant breadth of 'reasonable' assumptions. In turn, this suggests that there is significant potential for the application of alternative, yet also reasonable, assumptions to lead to a materially different impact on financial performance, position or prospects.

Entities must also disclose significant judgments (in addition, those involving accounting estimates) that management has made that have the most significant effect on the amounts recognised in the financial statements.^{xxiii} Preparers and auditors should consider making disclosures on whether the central planning case is Paris-aligned to 1.5°C or well below 2°C global average warming (see Page 11, Figure 1), or implies an emissions trajectory that would result in a higher global average warming scenario, such as 3°C or higher.

Questions to get you started

- What are the relevant plausible climate-related scenarios?
- Which material climate-related variables and assumptions underpinning the accounting estimates are a matter of significant accounting judgment and estimation of uncertainty?
- Do we understand the areas in which material judgment has been applied by management?
- What are the processes and controls by which management has identified and considered relevant climate-risk issues, and how the assumptions were derived?
- Do the assumption applied by management fall within a reasonable range, on a forward-looking basis?
- What process of (re)examination has been applied to material assumptions, and how have they been verified as remaining appropriate in this dynamic field?
- Are assumptions consistently applied across the balance sheet?
- Are there other reasonable assumptions that, if applied, would lead to materially different accounting estimates?
- Which financial statement accounting estimates may be materially impacted?

Further detailed resources



AASB and AUASB Joint Guidance, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2, April 2019.



IFRS, Effects of climate-related matters on financial statements, Nov 2020.



A4S CFO Leadership Network, Essential Guide to Valuations and Climate Change, 25 February 2021.



UK Financial Reporting Council, Climate Thematic, Nov 2020.

PRACTICAL EXAMPLES

Disclosure of estimation uncertainty /significant judgment



[APA, Annual Report 2020, p69:](#)

CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the process of applying the Group's accounting policies, a number of judgements and estimates have been made.

Judgements and estimates which are material to the financial statements are found in the following disclosures:

- Property, plant and equipment (note 11)
- Impairment of non-financial assets (note 13)
- Fair value of financial instruments (note 19(c))

Judgements and estimates require assumptions to be made about highly uncertain external factors such as: discount rates; probability factors; the effects of inflation; commercial contract lives and renewals; market supply-and-demand conditions; changing technology; timing of occurrence; input costs; political and social trends, and climate change. As such the actual outcomes may differ as a result of these judgements and assumptions.



Rolls Royce, Annual Report 2020, p179:

KEY AREAS OF JUDGEMENT AND SOURCES OF ESTIMATION UNCERTAINTY

The carrying value of the investment in subsidiary undertakings is reviewed for impairment on an annual basis. The recoverable amount is determined based on value in use which requires the determination of appropriate assumptions (which are sources of estimation uncertainty) in relation to the cash flow forecasts (including the impact of climate change), the long-term growth rate to be applied and the risk-adjusted discount rate used to discount the estimated cash flows to present value.

Estimation uncertainty arises due to changing economic and market factors, most particularly as a result of the COVID-19 pandemic. The recoverable amount of the investments in Rolls-Royce Group Limited and Rolls-Royce plc of £14.7bn has been assessed for impairment based on a value in use calculation using cash flow projections from the Group's latest forecasts which have regard to the current market and the Group's views on the future achievable growth.

Discount rates used reflect current market assessments of the time value of money and the rate of return a market participant would require. The rate used to discount the forecast cash flows reflect the individual businesses in the Group and is 9% post-tax. The Directors have determined that no impairment charge is required. An increase in the rate from 9% to 10% would cause the carrying amount of the Company's investment to equal its recoverable amount. This sensitivity does not assign value to the new programmes that the Company expects to bring to market as part of its sustainability initiatives.

Climate change identified as an area of significant judgment



Property, Plant and Equipment, BHP Annual Report 2020, p199:

KEY JUDGEMENTS AND ESTIMATES

Judgements: Assessment of indicators of impairment or impairment reversal and the determination of CGUs for impairment purposes require significant management judgement.

Indicators of impairment may include changes in the Group's operating and economic assumptions, including those arising from changes in reserves or mine planning, updates to the Group's commodity supply, demand and price forecasts, or the possible additional impacts from emerging risks such as those related to climate change and the transition to a lower carbon economy and pandemics similar to COVID-19.

CLIMATE CHANGE

Impacts related to climate change and the transition to a lower carbon economy may include:

- demand for the Group's commodities decreasing, due to policy, regulatory (including carbon pricing mechanisms), legal, technological, market or societal responses to climate change, resulting in a proportion of a CGU's reserves becoming incapable of extraction in an economically viable fashion;
- physical impacts related to acute risks resulting from increased severity of extreme weather events, and those related to chronic risks resulting from longer-term changes in climate patterns.

The Group continues to develop its assessment of the potential impacts of climate change and the transition to a lower carbon economy. Where sufficiently developed, the potential financial impacts on the Group of climate change and the transition to a lower carbon economy have been considered in the assessment of indicators of impairment, including:

- the Group's current assumptions relating to demand for commodities and carbon pricing and their impact on the Group's long term price forecasts;
- the Group's operational emissions reduction strategy. For example, transitioning to renewable power supply contracts at the Group's Escondida and Spence operations.

Property, Plant and Equipment:



APA, Annual Report
2020, p81:

CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY – USEFUL LIVES OF NON-CURRENT ASSETS

APA Group reviews the estimated useful lives of property, plant and equipment at the end of each annual reporting period.

Physical, economic and environmental factors are taken into consideration in assessing the useful lives of the assets, including but not limited to asset condition and obsolescence, technology changes, commercial contract lives and renewals, global and regional gas supply-and-demand, and climate change based on TCFD scenario testing to 2030. Any reassessment of useful lives in a particular year will affect the depreciation expense.

The following estimated useful lives are used in the calculation of depreciation:

- buildings 30 – 50 years;
- compressors 10 – 50 years;
- gas transportation systems 10 – 80 years;
- meters 20 – 30 years;
- power generation facilities 3 – 25 years;
- other plant and equipment 3 – 20 years;
- ROU land and buildings 1 – 40 years; and
- ROU property, plant and equipment 1 – 4 years.

PRACTICAL EXAMPLES

PRACTICAL EXAMPLES

Closure and rehabilitation provisions



BHP, Annual Report
2020, p200:

CLOSED SITES

Where future economic benefits are no longer expected to be derived through operation, changes to the associated closure and remediation costs are charged / (credited) to the income statement in the period identified. This amounted to a charge of US\$669 million in the year ended 30 June 2020 (2019: charge of US\$251 million; 2018: credit of US\$(21) million).

KEY ESTIMATES

The recognition and measurement of closure and rehabilitation provisions requires the use of significant estimates and assumptions, including, but not limited to:

- the extent (due to legal or constructive obligations) of potential activities required for the removal of infrastructure and rehabilitation activities (including activities to mitigate the potential physical impact of climate change);
- costs associated with future rehabilitation activities;
- applicable real discount rates;
- the timing of cash flows and ultimate closure of operations.

Rehabilitation activities are generally undertaken at the end of the production life at the individual sites, the estimated timing of which is informed by the Group's current assumptions relating to demand for commodities and carbon pricing, and their impact on the Group's long-term price forecasts. Remaining production lives range from 4-91 years with an average for all sites, weighted by current closure provision, of approximately 28 years.

Impairment of non-financial assets

The discount rates applied to the Group's closure and rehabilitation provisions were revised during the year to reflect decreases in market interest rates. The effect of changes to discount rates was an increase of approximately US\$675 million in the closure and rehabilitation provision of which US\$90 million in respect of closed sites was recognised in the income statement.

A further 0.5 per cent decrease in the real discount rates applied at 30 June 2020 would result in an increase to the closure and rehabilitation provision of US\$772 million, an increase in property, plant and equipment of US\$606 million in relation to operating sites and an income statement charge of US\$166 million in respect of closed sites. In addition, the change would result in an increase of approximately US\$35 million to depreciation expense and a US\$16 million reduction in net finance costs for the year ending 30 June 2021.

Given the long-lived nature of the majority of the Group's assets, closure activities are not expected to occur for a significant period of time. While the closure and rehabilitation provisions reflect management's best estimates based on current knowledge and information, further studies and detailed analysis of the closure activities for individual assets will be performed as the assets near the end of their operational life and / or detailed closure plans are required to be submitted to relevant regulatory authorities.

Such studies and analysis can impact the estimated costs of closure activities. Estimates can also be impacted by the emergence of new restoration techniques, changes in regulatory requirements for rehabilitation, risks relating to climate change and the transition to a lower carbon economy, and experience at other operations. These uncertainties may result in future actual expenditure differing from the amounts currently provided for in the balance sheet.



APA, Annual Report
2020, p83:

OPERATING ASSETS AND LIABILITIES

13. Impairment of non-financial assets (continued)

Critical accounting judgements and key sources of estimation uncertainty – impairment of assets

The key estimates and assumptions used in the assessment of impairment include but are not limited to: asset capacity; asset lives; forecast operating costs and margins; gas field reserve estimates; the effect of inflation; discount rates; customer contract terms and renewals; residual value; and asset construction costs.

Where the key assumptions for the assessment of new assets such as expected construction costs, expected time to commissioning, expected revenues, expected operating and capital costs at the time of investment differs from the final outcomes, significant variances to the key assumptions may cause triggers for impairment.

These assumptions have been determined with reference to historic information, current performance and expected changes taking into account external information such as market inputs on discount rates, the effects of inflation, climate change based on TCFD scenario testing to 2030, the outlook for global and regional gas market supply-and-demand conditions, and internal information such as contract renewals, and forecast input costs. Such estimates may change as new information becomes available.



4. Climate-related materiality thresholds

Information is included or omitted from financial statements according to a materiality threshold.^{xxiv} Under AASB 101 / IAS 1 Presentation of Financial Statements and APS / PS2 Making Materiality Judgements, 'materiality' is not to be determined solely by reference to quantitative size or proportionality. Rather, if material information is omitting, misstating or obscuring it could reasonably be expected to influence user's investment decisions or, in other words, is decision-useful to a reasonable investor. Accordingly, the requirement to disclose 'material information' may lead to reporting of additional information not specifically otherwise required by the accounting standards.

Reporting entities should consider whether (a) climate-related assumptions materially affect the financial statements due to the magnitude of their impact on the numbers; or (b) regardless of their numerical impact, the nature of climate-related issues would lead to reasonable investors expecting disclosure on these issues.^{xxv}

Indeed, it is becoming increasingly decision-useful for investors to be able to understand the basis for any conclusion that climate change will not materially impact on the company's financial position performance or prospects – particularly in high-risk industries such as those identified by the TCFD (as discussed on pages 20-21).

This was expressly emphasised in the Joint Guidance of the AASB and AUASB:

[A]s set out in AASB/IASB Practice Statement 2 Making Materiality Judgements (APS/PS 2), qualitative external factors such as the industry in which the entity operates, and investor expectations may make such risks 'material' and warrant disclosures when preparing financial statements, regardless of their numerical impact.

... For example, an entity in an industry likely to be impacted by climate-related risks determines that its impairment testing does not need to include a specific assumption regarding such risks. However, taking into account investor comments on the importance of climate-related risks to their investment decisions and reasonable expectations that the entity could be impacted by such risks, applying APS/PS 2, the entity assesses that its assumptions regarding climate-related risks are material and need to be specifically disclosed, even though there is no impact on amounts recognised in the financial statements.^{xxvi}

...For example, an entity may need to explain its judgment that it was not necessary to factor climate change into the impairment assumptions, or how estimates of expected future cash flows, risk adjustments to discount rates or useful lives have, or have not, been affected by climate change... ...[or disclose] assumptions made about climate change in the assessment of an impairment loss for an individual asset even though such disclosure is not required under AASB 136/IAS 36 as no impairment has been recognised (particularly if including an assumption would result in an impairment) or the impairment recognition was not impacted by a climate risk assumption. Similarly, entities may disclose their significant estimates or judgements made about climate related risks even if there is currently no financial impact or significant risk of materially adjusting the carrying amounts of assets and liabilities in the next financial year and hence no disclosure required under AASB 101/IAS 1.^{xxviii}

The Joint Guidance sets out a decision-tree to assist in consideration of whether disclosures are material to the financial statements:



Source: AASB and AUASB, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2 (April 2019), p 5.

Where an issue or assumption is determined to be material, it is important that the notes focus on specific issues and assumptions that are relevant to the recognised balances, rather than 'boilerplate' statements.

Questions to get you started

- What are the relevant plausible climate-related scenarios?
- For which values could information on the impact of climate-related risks be considered decision-useful to a reasonable investor, but that management has determined will not have a material qualitative impact?
- Are any of those issues of such qualitative significance that investor expectations suggest that the entity's position should be disclosed?
- Will it be material to an investor's understanding of the financial statements (or investment decisions made on the basis of those statements) to disclose why it is considered that a particular climate-related risk, or its impact on the entity, is not material? For example, is this because the entity can demonstrate a position very low on the industry cost curve, or superior quality product? Or on the basis of future commercialisation of technologies (and if so, how the entity is positioned to take advantage of those technologies, e.g. investment in relevant R&D)? Or due to the entity's time horizons being shorter than those over which the material climate risks are expected to crystallise?

Further detailed resources



AASB and AUASB Joint Guidance, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2, April 2019.



IFRS, Effects of climate-related matters on financial statements, Nov 2020.



A4S CFO Leadership Network, Essential Guide to Valuations and Climate Change, 25 February 2021.



UK Financial Reporting Council, Climate Thematic, Nov 2020.

Disclosure of material issues where impact judged to be immaterial



[QBE, Annual Report 2020, page 12](#)

REPUTATIONAL RISK

QBE assesses reputational risk through the quality of the relationships with key stakeholders, including shareholders, regulators, customers, government, communities, employees, and third-party partners including distributors and suppliers. Each of these relationships is managed through divisional and group teams, including corporate affairs, human resources, regulatory, compliance and distribution teams.

ESG AND EMERGING RISKS

QBE's ESG risk and emerging risk standards operationalise QBE's approach to managing ESG and emerging risks respectively, including climate change. Biannual horizon scans are performed on ESG and emerging risks, including assessment of potential financial and reputational impacts to the Group. Risk treatment plans are developed for material risks, which include development of underwriting and investment policy, monitoring frameworks and stress and scenario analysis. ESG and emerging risks are regularly reported to the Executive Non-Financial Risk Committee and the Board Risk & Capital Committee.

Climate change is a material business risk for QBE, potentially impacting our business and customers in the medium to long term. We have considered potential short-term scenarios that could affect our insurance business written to date and our current investments, and we expect no material impact on the amounts recognised or disclosed in the financial statements. Further detail on QBE's approach to climate change, is included in our climate change disclosures on pages 28 to 35 of this Annual Report.



5. External Audit

The AUASB has made clear that auditors should consider the implications of climate-related risk in order to discharge their professional obligations, including under Auditing Standards ASA 315 Identifying and Assessing the Risks of Material Misstatement and ASA 330 The Auditor's Responses to Assessed Risks:

[A]uditors would be expected to consider and understand the implications of climate-related risk and how it affects their own work and procedures. If climate-related risk has a significant impact on the entity, the auditor is expected to consider whether the financial statements, appropriately reflect this in accordance with the applicable financial reporting framework. This information would then be audited under the Australian Auditing Standards. In order to address these issues confidently, auditors will need to understand how climate-related risk relates to their existing legal and professional duties.^{xxix}

If, based on that consideration and understanding, the auditor considers that climate change-related assumptions may be material to a recognised balance, ASA 540 Auditing Accounting Estimates and Related Disclosures would require them to:

- identify and assess the risk of material misstatement in order to evaluate the degree of estimation uncertainty associated with the estimate;
- respond to the assessed risks of material misstatement by selecting an appropriate testing strategy;
- perform an overall evaluation including the reasonableness of the estimate;
- assess the adequacy of disclosures relating to estimates;
- obtain written representations from management;
- communicate with those charged with governance, management or other relevant parties about certain matters, as appropriate; and
- document the basis for their conclusion about the reasonableness of accounting estimates and indicators of possible management bias, if any.^{xxx}

ASA 720 / ISA 720 The Auditor's Responsibilities Relating to Other Information explains that material inconsistencies between the other information presented in the annual statement and the financial statements may indicate that there is a material misstatement of the financial statements or that a material misstatement of the other information exists. For example, the entity may include in the other information a scenario analysis that shows the potential future effects of climate change and related issues on the entity's operations. When such analysis shows that the entity could be significantly affected by climate change and the disclosures in the financial statements do not appropriately highlight this (i.e., in applying the requirements of the applicable financial reporting framework), it may indicate that there is a material misstatement of the financial statements or that a material misstatement of the other information exists.

Questions to get you started

- What engagement is there between management, the Audit & Risk Committee and auditors in relation to these issues?
- Have any climate-related issues been raised as 'key audit matters'?
- Are there any climate-related matters of disagreement between report preparers and auditors?

Further detailed resources



AASB and AUASB Joint Guidance, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2, April 2019.



IFRS, Effects of climate-related matters on financial statements, Nov 2020.



A4S CFO Leadership Network, Essential Guide to Valuations and Climate Change, 25 February 2021.



UK Financial Reporting Council, Climate Thematic, Nov 2020.

GLENCORE EXAMPLE

Potential impact of climate change on non-current assets



Deloitte Auditors' Report – Glencore financial statements AR20 p122:

DESCRIPTION OF KEY AUDIT MATTER

As described on pages 16 to 21, climate change, and the world's response to climate change, present significant risks and uncertainties for Glencore's energy industrial assets as a result of the sensitivity to demand for future fossil fuels, particularly thermal coal. Glencore's thermal coal portfolio at 31 December 2020 has a carrying value of \$11.9 billion.

As described on page 16, in December 2020 the Group published its Climate Report 2020: Pathway to net zero, which sets out the Group's target of a 40% reduction in total emissions by 2035 and its ambition to achieve net zero total emissions by 2050.

To test the resilience of its portfolio to the impacts of climate change, the Group has developed three scenarios:

- Current Pathway scenario, consistent with the IEA Stated Policies Scenario (STEPS);
- Rapid Transition Scenario, consistent with IEA Sustainable Development Scenario (SDS), and
- Radical Transformation scenario, consistent with the IEA Net Zero Emissions by 2050 scenario (NZE2050).

Glencore's base case production decline profile used in its internal modelling and business plans is consistent with the Group's net zero ambition. However, as explained in note 1, the base case price assumptions used in management's impairment assessment (see the key audit matter above) are higher than those assumed in STEPS and SDS.

While under all credible scenarios, fossil fuels (coal, gas and oil) will continue to be part of the global energy mix into the future, policies supporting the Rapid Transition and Radical Transformation scenarios would lead to significant coal demand decline over the longer term and likely lower prices. The Group has set out in note 1 to the financial statements illustrative impairment downside impacts to current carrying values at possible commodity price curves consistent with STEPS and SDS. Under STEPS the illustrative impairment is \$2.5 billion while under SDS the illustrative impairment is \$7.7 billion.

We identified a key audit matter relating to the accuracy and presentation of this analysis and the consistency of the Group's net zero ambition with its internal modelling and business plans, including those used in its impairment assessment.

HOW THE SCOPE OF OUR AUDIT RESPONDED TO THE KEY AUDIT MATTER

We worked with Deloitte internal environmental specialists in considering potential climate change risk factors such as stranded assets, green taxes, the potential impact of activities of investors and other stakeholders, environmental legislation, loss of customers or demand and loss of sources of – and access to – funding.

We challenged management's assertion on the impact of climate-related risks relating to its thermal coal portfolio by comparing management's impact assessment with reputable publicly available industry projections of demand and long-term prices into the future, such as the STEPS and SDS scenarios.

We reviewed the time period through which coal CGUs are valued (life of mine plan) to assess if the assumptions are consistent with management's long-term investment plans, public disclosures and credible external scenarios about energy transition timing and effects.

We reviewed management's impairment models and reperformed the calculation of sensitivities in note 1 applying the IEA's short- to long-term price assumptions. We considered whether management's sensitivity and estimation uncertainty disclosures were adequate in the context of climate change risks and uncertainties.

We read the other information included in the annual report and considered whether there was any material inconsistency between the other information and the financial statements, or whether there was any material inconsistency between the other information and our understanding of the business based on audit evidence obtained and conclusions reached in the audit.



6. Holistic review

The risks associated with misleading disclosure exposure will turn on whether the entity undertakes a robust process of analysis. A preparer will need to satisfy that the central planning and valuation case remains valid and representative of its view of likely market developments in the transition to net zero emissions. Reporting entities should consider consistency between the risk disclosures contained in the OFR and those in the financial statements, or explanations of any divergences.

Reporting entities and auditors should ask informed questions that interrogate the robustness of the integration of climate into the accounts, including:

- Do the critical accounting judgments (assumptions and estimates) incorporate reasonable and robust climate risk assumptions?
- Where is best to place narrative disclosures relating to the financial impacts of climate change in the annual report?
 - > Notes to the financial statements
 - > Alternative Performance Measures
 - > OFR
- Where the central case is not aligned with a Paris-aligned economic trajectory, should further information be disclosed and if so, how much? For example, should this be a single variable sensitivity analysis (such as a commodity price) or multi-factor scenario analysis? If choosing to do a sensitivity analysis, is it appropriate to limit it to certain line items, such as non-current PPE impairments and closure / rehabilitation liability provisions?
- What are the appropriate accompanying explanatory disclosures that clearly specify the purpose, scope and limitations of the sensitivity analysis, scenarios or other additional disclosures?
- Whether and how should the radical uncertainty relating to climate risk and the net zero transition be reflected in the discount rate?
- How should treatment of physical risk be integrated into the financial statements? Whilst investor focus to date has been on accounts aligned with a rapid decarbonisation trajectory to meet the Paris Agreement goals, the application of 1.5°C-aligned scenario as a central case would result in fewer (though not insignificant) physical risks. The Investor Expectations on Paris-Aligned Accounts does not ask for this physical risk sensitivity analysis, instead asking for disclosures of 4°C if the company decides not to assume Paris alignment as the central case (p 21, endnote 3).



Questions to get you started

- What disclosures may be required in the notes to the financial statements to ensure that the financial statements are, as a whole, complete and accurate, and present a true and fair view of the entity's financial position?
- What process of review has been undertaken to ensure consistency between the financial statements and narrative disclosures (by both the disclosing entity, and by the auditors under ASA 720 The Auditor's Responsibilities Relating to Other Information)?

REFERENCES



ⁱⁱIAASB Staff Audit Practice Alert, The Consideration of Climate-Related Risks in an Audit of Financial Statement:
<https://www.iaasb.org/news-events/2020-10/iaasb-issues-staff-audit-practice-alert-climate-related-risks>



ⁱⁱⁱReserve Bank of Australia, 4. Regulatory Developments, Financial Stability Review, October 2018:
<https://www.rba.gov.au/publications/fsr/2018/oct/regulatory-developments.html>



^{iv}See, e.g., Geoff Summerhayes, APRA Executive Member, 'Australia's new horizon: Climate change challenges and prudential risk' Speech to the Insurance Council of Australia Annual Forum, Sydney (17 February 2017):
<https://www.apra.gov.au/news-and-publications/australias-new-horizon-climate-change-challenges-and-prudential-risk>
Geoff Summerhayes, APRA Executive Member, The weight of money: A business case for climate risk resilience' Speech to the Centre for Policy Development, Sydney (29 November 2017):
<https://www.apra.gov.au/news-and-publications/weight-of-money-a-business-case-for-climate-risk-resilience>
APRA, Media release: APRA to step up scrutiny of climate risks after releasing survey results (20 March 2019):
<https://www.apra.gov.au/news-and-publications/apra-to-step-up-scrutiny-of-climate-risks-after-releasing-survey-results>;
APRA, 'Letter to All APRA-regulated entities: Understanding and managing the financial risks of climate change' (24 February 2020):
<https://www.apra.gov.au/understanding-and-managing-financial-risks-of-climate-change>



^vAPRA; Consultation on draft Prudential Practice Guide CPG 229 Climate Change Financial Risks (31 July 2021);

<https://www.apra.gov.au/consultation-on-draft-prudential-practice-guide-on-climate-change-financial-risks>;

APRA, Letters to All APRA-regulated entities: Consultation on draft Prudential Practice Guide on Climate Change Financial Risks (22 April 2021)

<https://www.apra.gov.au/consultation-on-draft-prudential-practice-guide-on-climate-change-financial-risks-0>



^{vi}ASIC, 'RG 247 Effective disclosure in an operating and financial review' (August 2019):

<https://asic.gov.au/regulatory-resources/find-a-document/regulatory-guides/rg-247-effective-disclosure-in-an-operating-and-financial-review/>

ASIC, 'RG 228 Prospectuses: Effective disclosure for retail investors' (August 2019):

<https://asic.gov.au/regulatory-resources/find-a-document/regulatory-guides/rg-228-prospectuses-effective-disclosure-for-retail-investors/>

See also ASIC, REP 593 Climate risk disclosure by Australia's listed companies (20 September 2018):

<https://asic.gov.au/regulatory-resources/find-a-document/reports/rep-593-climate-risk-disclosure-by-australia-s-listed-companies/>



^{vii}Guy Debelle, 'Climate Change and the Economy' (March 2019):

<https://www.rba.gov.au/speeches/2019/sp-dg-2019-03-12.html>;

Reserve Bank of Australia, Financial Stability Review (October 2019):

<https://www.rba.gov.au/publications/fsr/2019/oct/box-c-financial-stability-risks-from-climate-change.html>.



^{viii}ASX, Corporate governance principles and recommendations (4th edn, 2019):

<https://www.asx.com.au/documents/asx-compliance/cgc-principles-and-recommendations-fourth-edn.pdf>



^{ix}NGFS, A Call for action (April 2019):

<https://www.ngfs.net/en/first-comprehensive-report-call-action>;

NGFS, Guide to climate scenarios analysis for central banks and supervisors (June 2020):

<https://www.ngfs.net/en/guide-climate-scenario-analysis-central-banks-and-supervisors>



^xOUIV-IOSCO Board, Sustainable Finance and the Role of Securities Regulators and IOSCO, Final Report (April 2020):

<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD652.pdf>



^{xi}IIGCC, Investor Expectation on Paris-Aligned Accounts (November 2020):

<https://www.iigcc.org/resource/investor-expectations-for-paris-aligned-accounts/#:~:text=The%20Investor%20Expectations%20set%20out,not%20'Paris%2Daligned'>



^{xii}Ibid p7. It is not clear if the investors mean the accounts should be climate-resilient (like weather-proof) or transition ready, in that the accounts need to prove the case the company has a 1.5°C-aligned strategy.

<https://ccli.ubc.ca/resource/audit-committees-and-effective-climate-governance-a-guide-for-boards-of-directors/>



^{xiv}PRI, AIGCC, UNEP FI, PLSA, IIGCC, Open Letter on Accounting Standards (16 September 2020):

https://igcc.org.au/wp-content/uploads/2020/09/161020_Open-Letter_IASB.pdf?mc_cid=6c8ccf4ae5&mc_eid=92ce87d37e



^{xiv}BlackRock, Larry Fink's 2021 letter to CEOs (January 2021); BlackRock, Larry Fink's 2020 letter to CEOs (January 2020):

<https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>



^{xv}SASB, Climate Risk Technical Bulletin (12 April 2021):

<https://www.sasb.org/knowledge-hub/climate-risk-technical-bulletin/>



^{xvi} IFRS Foundation, Consultation paper on Sustainability Reporting:
<https://cdn.ifrs.org/-/media/project/sustainability-reporting/consultation-paper-on-sustainability-reporting.pdf>



^{xvii} WEF, EY, Deloitte, KPMG and PwC: Measuring Stakeholder Capitalism – Towards Common Metrics & Consistent Reporting of Sustainable Value Creation:
http://www3.weforum.org/docs/WEF_IBC_Measuring_Stakeholder_Capitalism_Report_2020.pdf



^{xviii} Sarra, J., Roopa Dave, Meghan Harris-Ngae and Ravipal Bains, Audit Committees and Effective Climate Governance – A Guide for Directors, Canada Climate & Law Initiative, December 2020, p.41.



^{xix} Centrica Plc, Annual Report 2020, p 123:
<https://www.centrica.com/media/4860/centrica-ar2020.pdf>



^{xx} AASB 101 / IAS 1 [125]-[126].



^{xxi} AASB 101 / IAS 1 [127].



^{xxii} Deloitte, A Closer Look: Climate Change (2019) p 9.



^{xxiii} AASB 101 / IAS 1 [122]-[125].



^{xxiv} AASB 101 / IAS 1, Presentation of Financial Statements (applies 1 January 2019-1 January 2020), p7, definition of 'material'. See also AASB/IASB, Practice Statement 2 Making Materiality Judgments [17]-[19].



^{xxv} AASB and AUASB, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2 (April 2019);



^{xxvi} AASB and AUASB, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2 (April 2019), page 2.



^{xxvii} AASB and AUASB, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2 (April 2019), page 9.



^{xxviii} AASB and AUASB, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2 (April 2019), page 9.



^{xxix} AASB and AUASB, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2 April 2019), page 15.



^{xxx} AASB and AUASB, Climate-related and other emerging risk disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2 (April 2019), page 16.

