

How do climate-related matters affect financial statements?



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Agenda

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2 How should the disclosures look like?

3 What's next for you as an Audit Committee (AC) member?



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Why do the disclosures matter now?

Why do the disclosures matter now?

Expectations from the stakeholders, in particular investors and regulators

WHY?



Climate-related matters may impact a number of accounting areas



Material from a qualitative perspective



The financial statements (FS) need to be frequently updated to reflect the evolving sustainability commitments including climate-related matters



Consistency between the FS and info outside of the FS

Types of climate-related risks

Transition risks

The transition to a lower-carbon global economy

Physical risks

Climate change which can be event-driven (acute) or longer-term shifts (chronic)

Law and regulations

Acute

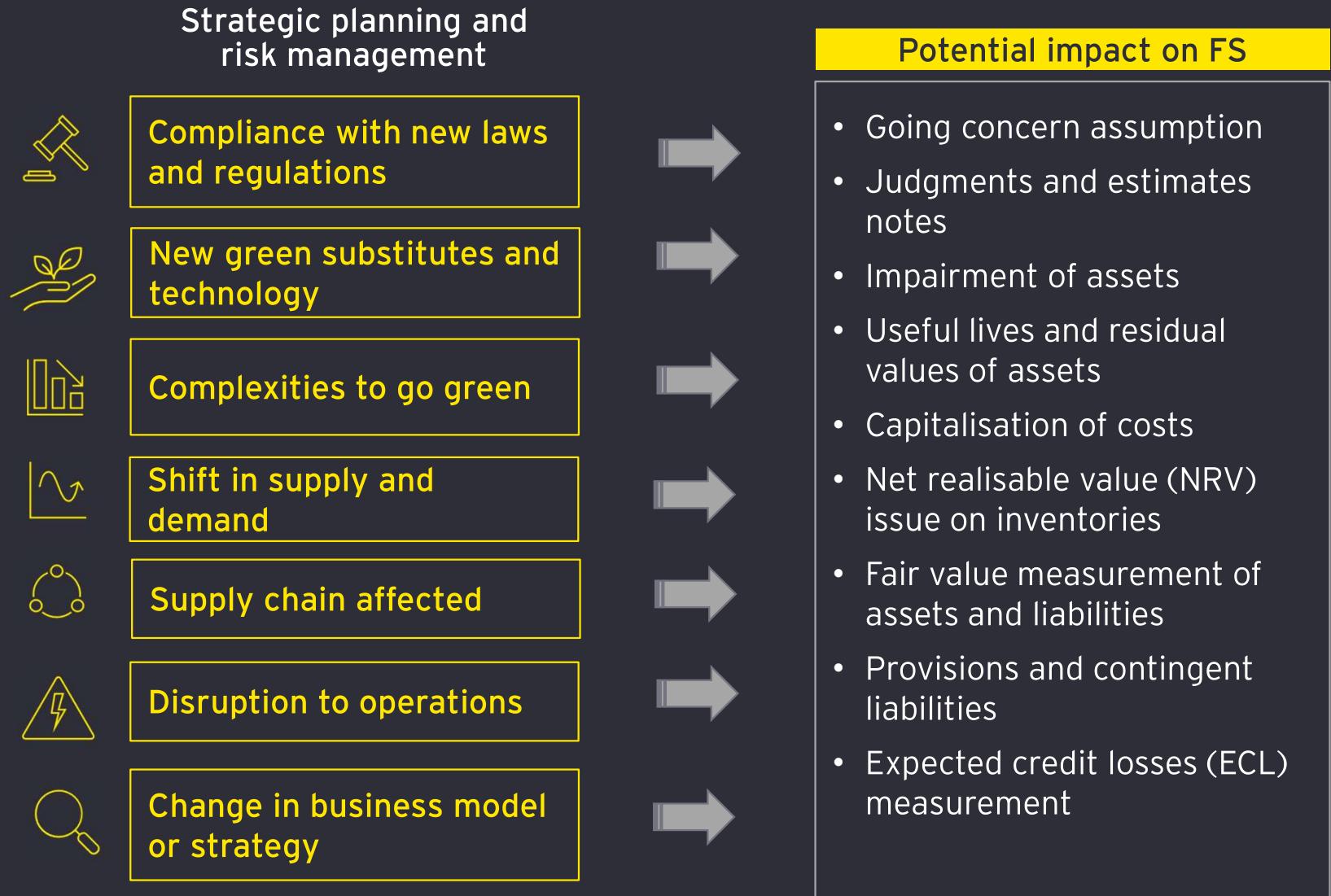
Technology

Chronic

Market

Reputation

Potential impact of climate-related risks on financial statements



Illustrative examples by industry

Industries	Examples of risks and opportunities	Potential impact on FS
 Clothing	Supply disruption	<ul style="list-style-type: none">• NRV of inventories• Provision for onerous contracts
 Extractive	Portfolio rationalisation	<ul style="list-style-type: none">• Impairment of assets• Useful lives of assets• Decommissioning provision
 Bank	Decrease in creditworthiness of clients in certain sectors	<ul style="list-style-type: none">• ECL on receivables
 Agriculture	Crop yields affected	<ul style="list-style-type: none">• Impairment of assets• Provision for onerous contracts
 Airlines	Transition to low-carbon emission aircraft	<ul style="list-style-type: none">• Impairment of assets• Useful lives of assets• Residual value of assets

Illustrative examples by industry

Industries	Examples of risks and opportunities	Potential impact on FS
	Consumer products	<p>Transition to recycled plastic packaging</p> <ul style="list-style-type: none">• Impairment of assets• Useful lives of assets
	Real estate	<p>Certain housing areas prone to flooding</p> <ul style="list-style-type: none">• NRV of unsold completed property• Recoverability of property development costs
	Industries with high energy consumption, e.g., retail	<p>Imposition of an emission tax and transition to renewable energy</p> <ul style="list-style-type: none">• Impairment of assets• NRV of inventories• Provisions• Useful lives of assets• Capitalisation of costs



How should the
disclosures look like?

Examples of climate risks disclosures

Illustration 1 - Significant judgment and key estimates note: EasyJet Plc - 2022 annual report (Airline sector)

Goodwill and landing rights - £523 million (2021: £533 million) (note 10)

It is management's judgement that there are two separate cash generating units which generate largely independent cash flows, these being easyJet's airline route network and its holidays business. The recoverable amount of goodwill and landing rights has been determined based on value in use calculations for the airline route network cash generating unit. The value in use is determined by discounting future cash flows to their present value. When applying this method, easyJet relies on a number of key estimates including the ability to meet its strategic plans, future fuel prices and exchange rates, long-term economic growth rates for the principal countries in which it operates, and its pre-tax weighted average cost of capital. Strategic plans include assessments of the future impact of climate change on easyJet to the extent these can be estimated. This includes, for example the future estimated price of ETS permits, the phasing out of the free ETS permits from 2024, the expected price and quantity required of Sustainable Aviation Fuel usage and fleet renewals. The impact of longer-term climate change risks that are not part of the strategic plans have been considered as part of the stress testing and plausible scenarios modelled.

Fuel price and exchange rates continue to be volatile in nature and the ability to pass these changes on to the customer is a critical judgement that requires estimation. The assumptions used are sensitive to significant changes in these rates. In addition, assumptions over customer demand levels could have a significant effect on the impairment assessment performed. Any future events that would lead to extended travel restrictions or fleet grounding may impact future impairment or useful economic life assessments. The stress

How does it impact?

Future estimated price of Emissions Trading System (ETS) permits and phase out of free ETS permits

What does it impact?

Impact of ETS is included in the discounted cash flows for the calculation of value in use

Examples of climate risks disclosures

Illustration 2 - PP&E: National Grid - 2022 annual report (Utility sector)

13. Property, plant and equipment

The role that our US gas networks play in the pathway to achieving the greenhouse gas emissions reductions targets set in the jurisdictions in which we operate is currently uncertain. In the year, policymakers in New York and Massachusetts have indicated an increase in electrification and a strategic downscaling of gas networks in their formal plans to meet their respective decarbonisation targets. As a result, there is a risk that the UELs of certain elements of our gas networks may be shortened in line with future legislation.

We believe the gas assets which we own and operate today will continue to have a crucial role in maintaining security, reliability and affordability of energy beyond 2050, although the scale and purpose for which the networks will be used is dependent on technological, legal and regulatory developments.

In the US, our gas distribution asset lives are assessed as part of detailed depreciation studies completed as part of each separate rate proceeding. Depreciation studies consider the physical condition of assets and the expected operational life of an asset. We believe these assessments are our best estimate of the UEL of our gas network assets in the US.

The weighted average remaining UEL for our US gas distribution fixed asset base is circa 52 years; however, a sizeable proportion of our assets are assumed to have UELs which extend beyond 2080. We continue to believe the lives identified by rate proceedings are the best estimate of the assets' UELs, although we continue to keep this assumption under review as we gain more certainty about policy-driven legislation. We continue to actively engage and support our regulators to enable the clean energy transition in a safe, reliable and affordable way.

Asset depreciation lives feed directly into our US regulatory recovery mechanisms, such that any shortening of asset lives and regulatory recovery periods as agreed with regulators should be recoverable through future rates, subject to agreement, over future periods, as part of wider considerations around ensuring the continuing affordability of gas in our service territories.

Given the uncertainty described relating to the UELs of our gas assets, below we provide a sensitivity on the depreciation charge for our New York and New England segments were a shorter UEL presumed. It should be noted that all net zero pathways suggest some role of gas in heating buildings beyond 2050, so our sensitivity analysis for 2050 illustrates an unlikely worst-case scenario:

	Increase in depreciation expense for the year ended 31 March 2023		Increase in depreciation expense for the year ended 31 March 2022	
	New York £m	New England £m	New York £m	New England £m
UELs limited to 2050	185	54	140	40
UELs limited to 2060	90	21	67	15
UELs limited to 2070	42	3	31	1

Note that this sensitivity calculation excludes any assumptions regarding the residual value for our asset base and the effect that shortening asset depreciation lives would be expected to have on our regulatory recovery mechanisms. In the event that any of the US gas distribution assets are stranded, the Group would expect to recover the associated costs. While recovery is not guaranteed and is determined by regulators in the US, there are precedents for stranded asset cost recovery for US utility companies.

How does it impact?

Legislation to increase electrification and downsize gas networks may shorten the useful lives of certain assets

What's the impact?

Sensitivity analysis of the impact on depreciation due to shortened useful lives:

Useful lives (limited to)	Increase in depreciation (£m)	
	New York	New England
2050	185	54
2060	90	21
2070	42	3

Examples of climate risks disclosures

Illustration 3 - Impairment of non-current assets: Tesco Plc - 2023 annual report (Retail sector)

Note 14 Impairment of non-current assets

Value in use

Retail

The Group applies an expected cash flow approach by probability-weighting different cash flow scenarios. The greatest probability weighting is applied to the cash flows derived from the three-year internal forecasts. Additional scenarios take account of the risks presented by a macroeconomic downturn, higher levels of operating costs and climate change, consistent with the viability statement scenarios (see the Longer term viability statement in the Strategic report) as well as an upside scenario. The viability statement scenarios reflect 'severe but plausible' risks which are adjusted for impairment testing in order to reflect management's best estimate of future economic conditions, including any reasonably possible upside to the three-year internal forecasts.

In addition to the climate change scenario included within the probability-weighted cash flows, the Group incorporates other climate change related assumptions into the impairment modelling, including, but not limited to, investments in technology to aid the Group's net zero commitments, the costs associated with replacing assets with more environmentally friendly alternatives, and assumptions over the cash flow profile of the Group's fuel business.

How does it impact the entity?

Investments in technology to aid net zero commitments, costs associated with replacing assets with environmentally-friendly options and pricing and demand uncertainty over its fuel business

What's the impact?

Additional climate change assumptions incorporated into the impairment modelling

Examples of climate risks disclosures

Illustration 4 - Impairment of non-current assets: Shell Plc - 2022 annual report (Energy sector)

Price sensitivities using climate price lines

Sensitivity to changes in commodity prices has been tested as follows:

Priceline 1 – Average prices from three [A] 1.5-2 degrees Celsius external climate change scenarios: in view of the broad range of price outlooks across the various scenarios, the average of three external price outlooks was taken.

[A] The IEA SDS scenario applied in 2021 is no longer published and has therefore been taken out for 2022.

- **IHS Markit/ACCS 2022** – under this scenario oil prices (real terms 2022 (RT22)) gradually decrease towards \$36.5 per barrel (/b) in 2039, recovering to \$94.3/b in 2050. Gas prices (RT22) decrease from \$3.7 per million British thermal units (/MMBtu) in 2023 towards 2024 to slightly below \$3/MMBtu for Henry Hub, remaining around that level until 2050. For Europe, prices decrease from \$35/MMBtu in 2023 towards around \$4/MMBtu in 2029, remaining around that level until 2040 and then gradually increasing to a level around \$5/MMBtu in 2050. For Asia, prices decrease towards around \$5/MMBtu in 2029, again gradually increasing from 2045 to a level around \$6/MMBtu in 2050.
- **Woodmac WM AET-1.5 degree** – under this scenario oil prices (RT22) gradually decrease towards \$27/b in 2050. Gas prices (RT22) decrease from around \$5/MMBtu in 2023 to \$3/MMBtu in 2024, gradually increasing to some \$4/MMBtu in 2045 and again decreasing to some \$3/MMBtu in 2050 for Henry Hub. For Asia and Europe, gas prices (RT22) decrease from around \$30/MMBtu in 2023 to some \$6/MMBtu and \$5/MMBtu respectively in 2031, gradually increasing again to some \$10/MMBtu and some \$8/MMBtu respectively around 2040 and subsequently decreasing to \$6/MMBtu and some \$5/MMBtu respectively in 2050.
- **IEA NZE50** – under this scenario oil prices (RT22) gradually decrease towards some \$25/b in 2050. Gas prices (RT22) decrease from some \$3.5/MMBtu in 2023 to around \$2/MMBtu for Henry Hub in 2030, remaining slightly below that level until 2050. For Asia and Europe, gas prices (RT22) decrease from some \$10/MMBtu and \$9/MMBtu respectively in 2023 to some \$6/MMBtu and \$5/MMBtu respectively around 2030, with a decrease towards some \$5/MMBtu and \$4/MMBtu respectively in 2050.

This average priceline provides an external view of the development of commodity prices under 1.5-2 degrees Celsius external climate change scenarios over the whole period under review.

Applying this priceline to Integrated Gas assets of \$75 billion (2021: \$65 billion [A]) and Upstream assets of \$88 billion (2021: \$89 billion [A]) as at December 31, 2022, shows recoverable amounts that are \$4-6 billion (2021: \$13-16 billion) and \$1-2 billion (2021: \$14-17 billion) lower, respectively, than the carrying amounts as at December 31, 2022.

How does it affect the entity?

Commodity price outlooks influenced by pace of growth of low-carbon solutions and future supply and demand

What's the impact?

Commodity prices under 1.5°C to 2°C climate change scenarios: a potential impairment of \$4-6 billion on gas assets and \$1-2 billion on upstream assets

Examples of climate risks disclosures

Illustration 5 - Forestry assets Level 3 fair value measurement: Mondi Plc - 2022 annual report (Containers and packaging sector)

14 Forestry assets

The fair value of forestry assets is a level 3 measure in terms of the fair value measurement hierarchy, consistent with prior years.

The following assumptions have a significant impact on the valuation of the Group's forestry assets:

- The net selling price, which is defined as the selling price less the costs of transport, harvesting, extraction and loading. The net selling price is based on third-party transactions and is influenced by the species, maturity profile and location of timber. In 2022, the net selling price used ranged from the South African rand equivalent of €14 per tonne to €47 per tonne (2021: €14 per tonne to €44 per tonne), with a weighted average of €33 per tonne (2021: €24 per tonne).
- The conversion factor, which is used to convert hectares of land under afforestation to tonnes of standing timber, is dependent on the species, the maturity profile of the timber, the geographic location and a variety of other environmental factors, such as the anticipated impact of climate change on water scarcity and fire risks. In 2022, the conversion factors ranged from 7.9 to 23.9 (2021: 8.3 to 24.1).
- The risk premium on immature timber of 12.5% (2021: 12.9%) is based on an assessment of the risks associated with forestry assets in South Africa and is applied for the years the immature timber has left to reach maturity. A risk premium on mature timber of 4.0% (2021: 4.0%) was applied. The risk premium applied to immature and mature timber include factors for the anticipated impact of climate change on water scarcity and fire risks. An increase in the severity and frequency of extreme weather events, such as higher temperatures, changes in rainfall patterns and drought conditions, may result in higher timber losses in future years caused by stronger winds, erosion, fires, pests and diseases.

How does it impact?

Water scarcity, fire risks and increase in the severity and frequency of extreme weather events

What's the impact?

Inputs into fair value measurement (risk premium and conversion factor) adjusted for such risks

Examples of climate risks disclosures

Illustration 6 - ECL assessment:

ABN AMRO Bank N.V. - Integrated Report 2022 (Financial services sector - banking)

Credit risk overview section

During 2022, management overlays decreased to a total of EUR 328 million (31 December 2021: EUR 424 million). Of this decrease, EUR -43 million was due to reclassification of overlays to input data and in-model adjustments and did not have P&L impact. The remaining management overlays were mainly recorded for risks in the corporate loans portfolios and comprised the following:

- ▶ A new management overlay was applied for potential effects of the war in Ukraine that are not fully captured by the latest projections in our macroeconomic scenarios and existing IFRS 9 models. An initial overlay for second-order impact on potentially vulnerable clients was cancelled after individual clients were reviewed and, where appropriate, reclassified. As the uncertainty in the macroeconomic outlook as a whole continues to be high, the initial overlay was replaced by an overlay on impairments for third-order effects, amounting to EUR 123 million at year-end 2022.
- ▶ A new management overlay of EUR 34 million was formed for the potential impact that the government's measures to reduce nitrogen emissions may have on clients in livestock farming businesses in the Netherlands.
- ▶ The existing overlays, which cover anticipated additional risk costs relating to the wind-down of portfolios, decreased in line with the reducing exposure to these portfolios.

What's the impact

Additional overlay of €34 million in the ECL assessment of corporate loans portfolios to reflect potential deterioration of creditworthiness

How does it impact the entity?

Impact of government measures to reduce nitrogen emissions on clients in the livestock farming business

Examples of climate risks disclosures

Illustration 7 - ECL assessment:

National Australia Bank Limited - 2022 Annual Report (Financial services sector - banking)

NOTE 19 FINANCIAL RISK MANAGEMENT

Credit risk section

ESG risks

The Group is exposed to ESG and other emerging risks. The following items are examples of how these risks may impact the Group:

- Increases in the frequency and severity of climatic events could impact customers' ability to service their loans or the value of the collateral held to secure the loans.
- Action taken by governments, regulators and society more generally, to transition to a low-carbon economy, could impact the ability of some customers to generate long-term returns in a sustainable way or lead to certain assets being stranded in the future.
- Failure to comply with environmental and social legislation (emerging and current) may impact customers' ability to generate sustainable returns and service their loans.
- If in future customers don't hold appropriate levels of insurance for physical assets against certain risks, this may impact the value the Group can recover in the event of certain natural disasters.

The Group considers these risks as part of the credit risk assessment and due diligence process before a customer is granted credit and for new product development. The Group also manages its total credit portfolio within established risk appetite and limits, particularly for specific industries or regions that are more exposed to these types of risks. As at 30 September 2022, the

Group holds FLAs in its credit impairment provisions reflecting the potential impact of emerging ESG risks. This includes \$14 million (2021: \$nil) for the potential impact of the Lismore floods.

How does it impact the entity?

Increase in credit risks due to frequency and severity of climatic events

What's the impact

Specific credit impairment provision of \$14 million to account for potential impact of Lismore floods

Examples of climate risks disclosures

Illustration 8 - Decommissioning provision: Rio Tinto Plc - 2022 annual report (Extractive sector)

14 Close-down and restoration provisions		
Impact of climate change on our business - Close-down, restoration and environmental cost		
The underlying costs for closure have been estimated with varying degrees of precision based on a function of the age of the underlying asset and proximity to closure. For assets within ten years of closure, closure plans and cost estimates are supported by detailed studies which are refined as the closure date approaches. These closure studies consider climate change and plan for resilience to expected climate conditions with a particular focus on precipitation rates. For new developments, consideration of climate change and ultimate closure conditions are an important part of the approval process. For longer-lived assets, closure provisions are typically based on conceptual level studies that are refreshed at least every five years; these are evolving to incorporate greater consideration of forecast climate conditions at closure.		
Closure cost composition as at 31 December		
Decommissioning, decontamination and demolition	2022 US\$m	2021 US\$m
Closure and rehabilitation earthworks ^(a)	3,386	3,343
Long-term water management costs ^(b)	4,760	4,125
Post closure monitoring and maintenance	1,092	967
Indirect costs, owners' costs and contingency ^(c)	1,846	1,676
Total	15,759	14,542
(a) A key component of earthworks rehabilitation involves re-landscaping the area disturbed by mining activities utilising largely diesel powered heavy mobile equipment. In developing low-carbon solutions for our mobile fleet, this may include electrification of the vehicles during the mine life. The forecast cash flows for the heavy mobile equipment in the closure cost estimate are based on existing fuel sources. The cost incurred during closure could reduce if these activities are powered by renewable energy.		
(b) Long-term water management relates to the post-closure treatment of water due to acid rock drainage and other environmental commitments and is an area of research and development focus for our Closure team. The cost of this water processing can continue for many years after the bulk earthworks and demolition activities have completed and are therefore exposed to long-term climate change. This could materially affect rates of precipitation and therefore change the volume of water requiring processing. It is not currently possible to forecast accurately the impact this could have on the closure provision as some of our locations could experience drier conditions whereas others could experience greater rainfall. A further consideration relates to the alternative commercial use for the processed water, which could support ultimate transfer of these costs to a third party.		
(c) Indirect costs, owners' costs and contingency include adjustments to the underlying cash flows to align the closure provision with a central-case estimate. This excludes allowances for quantitative estimation uncertainties, which are allocated to the underlying cost driver and presented within the respective cost categories above.		

How does it affect the entity?

Precipitation rates affecting closure conditions

What's the impact?

Extent of restoration costs updated to reflect the latest closure studies which incorporated the impact of climate conditions



What's next for you
as an AC member?

What's next for you as an AC member?



Questions
you may
ask

- ▶ **Governance:** Does the current governance structure of ESG reporting cover oversight of disclosures of climate-related matters in the financial statements?
- ▶ **Controls:** Should there be additional internal controls over financial reporting or disclosure controls to support the preparation of robust disclosures in the FS?
- ▶ **Policies and procedures:** Are there policies and procedures in place to drive a coherent set of disclosures on climate-related matters, including the FS?
- ▶ **Engagement with external auditors:** How have the auditors considered the impact of climate-related matters in their audit?

Resources



Please scan the QR code to get a copy of the EY publication on “Applying IFRS – Accounting for Climate Change (Updated August 2023)”

For other EY publications, please visit
https://www.ey.com/en_gl/ifrs-technical-resources



Please scan the QR code to get a copy of IFRS educational material on the effects of climate-related matters on financial statements

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