Climate risk in the financial statements

Are you analyzing the potential effects of climate risk on your financial statements?
Ask yourself the questions that we pose in this publication, create your own checklist, and monitor your organization’s environment and circumstances.

US GAAP

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Prepare. Now.

Climate risk dominates the current ESG headlines. US registrants are waiting to see what disclosures the SEC will propose. Multinationals with operations in the European Union are analyzing the implications of the proposed Corporate Sustainability Reporting Directive. The international community awaits the formation of the International Sustainability Standards Board.

This comes against the backdrop of increasing questions about the role of the financial statements in highlighting the effects of climate risk, and in particular companies’ efforts to reduce emissions or to operate in a low-carbon world. Some commentators believe the financial statements should include explicit disclosures related to climate risk – based on their view that such disclosure would be consistent with the principles of GAAP.

The reality is more complex.

Liabilities are not recognized, assets are not written down, estimates are not adjusted, until the criteria in the relevant standards are met. And although a company’s financial statement disclosures may sometimes go beyond the strict requirements of the standards, typically they do not venture into what-if scenario analysis.

This does not mean that climate risk is irrelevant to the financial statements – it is very relevant. But context is everything. An intention to be net-zero by 2050 is not the same as an action plan to reduce emissions by 2030 that is already underway. As intentions change to strategies and then to actions, the potential effects on the financial statements increase.

So the message in this publication is to prepare your organization. Ask yourself the questions that we pose, create your own checklist, and monitor your environment and circumstances.

Today climate risk may have no effect on your financial statements, but tomorrow or one day soon, that may change.

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About this publication

The purpose of this publication is to assist you in understanding the potential effects of climate risk on financial statements prepared in accordance with US GAAP.

Climate risk as a component of ESG

This publication focuses on climate risk as just one component of ESG. While many of the concepts discussed may have broader applicability, it is not intended to cover all ESG issues that might affect the financial statements.

In addition, this publication focuses mainly on the risks associated with climate change because they link to the risk that the financial statements might be misstated if they are not accounted for properly – e.g. impairments and other writedowns, liabilities and contingent losses. However, climate-related opportunities (e.g. new and innovative investments and arrangements) are included to the extent that we are encountering issues in practice.

Direct and indirect effects

This publication deals with two distinct manifestations of climate risk:

— events and transactions that have clear financial statement implications – e.g. a flood, fire or hurricane that damages property, or the issuance of a sustainability-linked bond; and

— estimates and valuations that are based on current expectations and projected financial information – e.g. the useful lives of long-lived assets and impairment calculations. While equally important in preparing financial statements, the implications on the financial statements are often less clear because they may only impact one input to the estimate among many.

Not a complete picture

This publication comprises a collection of issues and examples that we believe are relevant for entities thinking about the ways in which climate risk can affect their financial statements. Our intent is to stimulate your thinking about how climate risk might manifest in your financial statements.

For the issues raised, the questions and brief summaries do not represent all of the accounting that might be relevant, and we provide links to further resources. And with the exception of chapter 13, in general we do not discuss the specific disclosures that relate to the accounting issues discussed. We also do not discuss disclosures outside of the financial statements – e.g. in MD&A; see discussion on SEC developments.

The issues highlighted in this publication are based on our experience in responding to questions about the application of US GAAP when climate risk was one of the drivers in the background. We expect these issues to evolve over time.
SEC developments

SEC guidance released in 2010 highlighted climate-related matters that may be relevant when considering various Regulation S-K disclosure requirements; in February 2021, the SEC announced that the staff would review the extent to which registrants address the topics identified in the 2010 guidance. For a discussion of these disclosure requirements, which are not in the financial statements and not in the scope of this publication, read our Defining Issues, SEC on ESG: Focus on climate-related disclosures.

In June 2021, the SEC indicated that it will issue specific proposals in three areas: climate change, human capital (in particular, diversity) and cybersecurity risk governance. As input to helping the staff develop proposals, then-Acting SEC Chair Allison Herren Lee issued an informal request for public comment in March 2021. Comments closed mid-June, with over 550 unique comment letters being received. Read our comment letter.

In September 2021, the SEC staff published a sample letter highlighting its extensive questioning of the quality of public companies’ climate disclosures.

— The first question, which is general, highlights that the staff is interested in differences between companies’ ESG or sustainability reports and their filings. The question asks what consideration was given to providing the same type of climate-related disclosure in SEC filings as was provided in the ESG or sustainability report. This line of inquiry is consistent with the staff questioning why certain information discussed in earnings calls or on the company’s website, for example, was not considered material for disclosure in SEC filings.

— The additional sample inquiries and instructions relate to specific disclosures in the risk factors and MD&A sections of a company’s 10-K.

— Questions include requests for information about the material effects on the company of transitioning to a low-carbon economy (e.g. market trends, technological changes); the physical effects of climate change (e.g. floods, hurricanes); and the indirect consequences of climate-related regulation or business trends.

— The letter also asks for material increased compliance costs related to climate change to be quantified; and for disclosures about the purchase or sale of carbon credits or offsets.

— Requests for revised disclosures relate to pending or existing climate-related legislation, regulations and international accords; and past and/or future capital expenditures for climate-related projects.

— The letter is accompanied by a general reminder that companies need to disclose “such further material information, if any, as may be necessary to make the required statements, in light of the circumstances under which they are made, not misleading.”

This scrutiny of public company disclosures comes as the staff finalizes climate-related disclosure proposals that are expected to be published by the end of 2021.

To stay up to date with SEC developments, visit our ESG resource page on KPMG Financial Reporting View.
FASB developments

In March 2021, the FASB staff published an education paper, *Intersection of Environmental, Social, and Governance Matters with Financial Accounting Standards*. The examples raised in that paper are included in this publication.

In June 2021, the FASB published its *Agenda Consultation*, which included a specific question on common ESG-related transactions and whether constituents felt there was a lack of clarity or a need to improve the associated accounting requirements. Comments closed on September 22, 2021 and as a next step the FASB will analyze the comments received. Read our comment letter.

References to the literature

Our commentary is referenced to the FASB’s Accounting Standards Codification® and other literature, as appropriate. The following are examples:

- 360-10-35-2 is paragraph 35-2 of ASC Subtopic 360-10
- CON8.OB2 is paragraph OB2 of Concepts Statement No. 8
- AU-C 320.04 is paragraph 4 of Section 320 of the AICPA Clarified Statements on Auditing Standards
- TOA 2210.15 is paragraph 15 of Technical Question & Answer Section 2210
- ASU 2016-02.BC193 is paragraph 193 of the basis for conclusions to Accounting Standards Update 2016-02.

Abbreviations and terminology

We use the following abbreviations and terminology in this publication:

- ARO: Asset retirement obligation
- ESG: Environmental, Social and Governance
- GHG emissions: Greenhouse gas emissions
- MD&A: Management’s Discussion & Analysis
- Net-zero: Target to become carbon neutral, whereby the amount of carbon released is equal to the carbon emissions taken out of the atmosphere
- Paris agreement: Aims to limit global warming by reducing GHG emissions to below 2°C above pre-industrial levels
- PP&E: Property, plant and equipment
- SASB: Sustainability Accounting Standards Board (now part of the Value Reporting Foundation)
- TCFD: Task Force on Climate-related Financial Disclosures
1. Executive summary

We asked participants at a recent KPMG webcast for their thoughts on ESG and climate risk.

More than half of respondents see financial disclosures of climate change mostly as an opportunity to promote their ESG advantage to employees and investors and distinguish themselves from competitors – as opposed to a new compliance requirement.

Just over a third of respondents have started considering the accounting effects of risks arising from transition to a low-carbon economy.


About climate risk

The SASB categorizes climate risk as follows.

<table>
<thead>
<tr>
<th>Physical risk</th>
<th>Regulatory risk</th>
<th>Transition risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effects of climate risk on the physical environment</strong></td>
<td><strong>Legal and regulatory issues arising from climate risk</strong></td>
<td><strong>Risks arising from transition to a low-carbon economy</strong></td>
</tr>
<tr>
<td><strong>Examples</strong>: floods, hurricanes, wildfires, drought, rising temperatures and sea levels, weather pattern changes.</td>
<td><strong>Examples</strong>: environmental laws, exposure to litigation, pricing mechanisms on emissions, emissions reporting obligations.</td>
<td><strong>Examples</strong>: changing customer behavior, availability of capital, stigmatization of industries, stranded assets.</td>
</tr>
</tbody>
</table>

Note: The TCFD categorizes climate risk as transition risks and physical risks. Transition risks include policy and legal risks, which are the same as regulatory risks under the SASB classification.

High-risk industries

While the effects of climate risk are relevant to all entities, certain industries are more susceptible by their nature. The following industries have been identified as high risk by the TCFD: finance because of its central role in the economy,
and the other industries by virtue of being responsible for the largest proportion of GHG emissions, energy usage and water usage.

<table>
<thead>
<tr>
<th>Finance</th>
<th>Energy</th>
<th>Transportation</th>
<th>Material and buildings</th>
<th>Agriculture, food, forestry products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>Oil and gas</td>
<td>Air freight</td>
<td>Materials, mining</td>
<td>Beverages</td>
</tr>
<tr>
<td>Insurance companies</td>
<td>Coal</td>
<td>Passenger air</td>
<td>Chemicals</td>
<td>Agriculture</td>
</tr>
<tr>
<td>Asset owners</td>
<td>Electric utilities</td>
<td>Rail</td>
<td>Construction materials</td>
<td>Packaged foods</td>
</tr>
<tr>
<td>Asset managers</td>
<td></td>
<td>Trucking</td>
<td>Capital goods</td>
<td>meats</td>
</tr>
</tbody>
</table>

Although industry is an indicator of risk, ultimately the nature and extent of risk to which an entity is exposed depends on numerous factors, including its business model, assets, geographical locations, services provided and supply chains.

**Questions to ask**

To help you formulate a view of the potential effects of climate risk on your financial statements, this publication asks a series of questions – first at the business level and then specific to each accounting topic. These questions are not intended to be exhaustive. Instead, they are designed to help you create your own checklist that you can modify and adapt to suit your organization’s specific circumstances.

**Big picture**

As a starting point to understanding the potential effects of climate risk on your financial statements, an in-depth understanding of your organization and its business environment is required. The objective is to gain an understanding of the pressures the entity faces that may give rise to climate risk – if not now, then in the future.

These pressures are multi-dimensional.

- Internal (arising from the entity’s actions) and external (arising from third-party actions).
- Domestic and foreign.
- Direct (e.g. via physical operations or a stock exchange listing) and indirect (e.g. via customers and suppliers).

The following are some general questions (not exhaustive) that look at the bigger picture and help you determine the pressure points in the business; none are determinative. They are supplemented by more specific accounting-based questions in the sections that follow.
<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RELEVANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your organization operate in a high-risk industry?</td>
<td>In general, entities in higher-risk industries are predisposed to a wider variety of risks related to climate, and the severity of any particular risk may be greater.</td>
</tr>
<tr>
<td>Will your organization be affected by country or jurisdictional plans to reduce emissions?</td>
<td>Exposure to countries or jurisdictions that plan to reduce emissions results in increased likelihood of regulatory and transition risk.</td>
</tr>
<tr>
<td>What is your organization’s exposure via its wider supply chain and customer base?</td>
<td>The ecosystem is interconnected, with each party potentially putting pressure on its suppliers to reduce emissions. As a result, every entity faces potential pressure from its customers, and may in turn pressure its suppliers.</td>
</tr>
</tbody>
</table>
| Has your organization committed to reduce emissions? Have its competitors? | While a commitment to reduce emissions may in the first instance be little more than a statement of intent, the plans and actions that follow are likely to have widespread accounting implications.  
If the entity has not yet committed to reduce emissions but competitors have, this may indicate pressure on the entity to follow suit. |
<p>| Is your organization planning acquisitions and/or disposals?            | Many plans to reduce emissions are accompanied by strategic acquisitions and disposals.                                                                                                                   |
| What are investors telling your organization?                           | Shareholder activism related to emissions reduction plans is becoming increasingly common and more successful.                                                                                               |</p>
<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RELEVANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are lenders telling your organization?</td>
<td>Lending facilities linked to ESG (and emissions targets and ratings) are becoming increasingly common and are expected to grow more significant.</td>
</tr>
<tr>
<td></td>
<td>Potential access to lower interest rates may provide an incentive to embark on a plan to reduce emissions, or speed the progress of an existing plan.</td>
</tr>
<tr>
<td>What can your organization learn from its insurance premiums?</td>
<td>Insurers are at the forefront of pricing climate risk into their business models. Increasing insurance premiums may provide early warning of high-risk operations from a climate perspective.</td>
</tr>
<tr>
<td>What pressure is your organization getting from key customers?</td>
<td>Are key customers making inquiries as to the entity’s emissions reduction plans? This may provide early warning of more direct action as customers seek to credentialize their supply chain.</td>
</tr>
<tr>
<td>What pressure is your organization placing on key suppliers?</td>
<td>In the reverse of pressure from customers, is the entity making inquiries as to the emissions reduction plans of key suppliers.</td>
</tr>
</tbody>
</table>

In formulating an understanding of these pressure points, not all of the information may be in the Finance function. Other sources of information may include the teams covering sustainability, asset management, client relationships, sales and marketing, among others.

In addition, the entity may produce an ESG (or sustainability or other impact) report outside of the Finance function, which may be another key source of information in understanding the pressure points.

**Long-lived assets**

Read more: Chapter 3

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will existing assets be replaced earlier than expected (required or voluntary)?</td>
<td>Review the estimated useful lives of PP&amp;E.</td>
</tr>
</tbody>
</table>
### Climate risk in the financial statements

#### Executive summary

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>For assets that are routinely replaced while they still have significant resale value, are market changes affecting those values?</td>
<td>Review the salvage values used in calculating depreciation.</td>
</tr>
<tr>
<td>Are market changes affecting customer sentiment?</td>
<td>Review the useful lives of intangible assets, including the appropriateness of any that are indefinite-lived.</td>
</tr>
<tr>
<td>Are new environmental regulations requiring assets to be disposed of in a certain way, or changing the manner of disposal for assets that were already subject to regulation?</td>
<td>New AROs may need to be recognized and existing ones may need to be remeasured.</td>
</tr>
<tr>
<td>Is significant expenditure on new assets expected?</td>
<td>Understand which costs are capitalized versus expensed.</td>
</tr>
<tr>
<td>Will future expenditure have a significant software component?</td>
<td>The accounting for software costs is complex; understand the requirements for what costs are capitalized versus expensed.</td>
</tr>
<tr>
<td>Are assets located in areas that are becoming high risk for extreme weather events?</td>
<td>Understand the timing of the different accounting entries, which can be in different reporting periods: loss recognition, loss recovery, additional gains.</td>
</tr>
</tbody>
</table>

### Leases

Read more: Chapter 4

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do leases contain rights that allow the lessor to substitute the asset?</td>
<td>Understand the limited circumstances in which substitution rights lead to a conclusion that there is no lease.</td>
</tr>
<tr>
<td>Lessee: Is the exercise (or non-exercise) of renewal options in leases being reconsidered?</td>
<td>Understand how a business decision can trigger the need to reassess or remeasure the lease term or the lease payments.</td>
</tr>
</tbody>
</table>
### Climate risk in the financial statements

#### Executive summary

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lessee: Will modifications be negotiated with the lessor?</strong></td>
<td>Understand when a modification results in the remeasurement of the lease liability and right-of-use asset versus a separate contract.</td>
</tr>
<tr>
<td><strong>Lessee: Will leases be terminated?</strong></td>
<td>Understand the accounting for termination payments.</td>
</tr>
<tr>
<td><strong>Lessor: Will leases be modified?</strong></td>
<td>Understand the accounting from the lessor’s perspective, which is not aligned (conceptually or mechanically) with the lessee’s accounting.</td>
</tr>
</tbody>
</table>

**Impairment of nonfinancial assets**

Read more: Chapter 5

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Are industry and market conditions changing?</strong></td>
<td>— Understand the external and internal pressure points that affect the recoverability of assets.</td>
</tr>
<tr>
<td><strong>Is the legal or regulatory environment changing?</strong></td>
<td>— Set up a process for monitoring events that might trigger the impairment testing of groups of assets or of goodwill more broadly.</td>
</tr>
<tr>
<td><strong>Are new competitors emerging?</strong></td>
<td>— Understand the ripple effect of extreme weather events on all aspects of the entity’s value chain as one of the pressure points on the entity.</td>
</tr>
<tr>
<td><strong>Are costs increasing?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Is financial performance deteriorating?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are projects essential to your organization’s future strategy struggling to produce results?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are operations exposed to areas that are becoming high risk for extreme weather events?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are operations being reorganized, either physically or in terms of reporting?</strong></td>
<td>Consider whether there is a change in how goodwill or long-lived assets should be grouped for impairment testing, which may lead to a need for immediate testing.</td>
</tr>
</tbody>
</table>
## Financial instruments

Read more: Chapter 6

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will debt instruments containing an ESG feature be issued (e.g. a sustainability-linked bond)?</td>
<td>Evaluate whether the ESG feature represents an embedded derivative and, if so, whether it needs to be separated from the host contract.</td>
</tr>
</tbody>
</table>
| Does your organization provide financing to entities in industries that are susceptible to climate risk? | — Climate risk may introduce idiosyncratic risk to a borrower or industry, requiring the lender to evaluate its expected credit loss methodology.  
— Entities susceptible to climate risk may require modification of loan terms due to a changing business environment. |
| Do your organization’s climate-related commitments require changes to the measurement or classification of available-for-sale or held-to-maturity debt securities? | — Review the measurement and classification of available-for-sale and held-to-maturity debt securities.  
— Available-for-sale: assess whether there has been a change in the intent to sell certain debt securities classified as available-for-sale.  
— Held-to-maturity: assess whether the ability to hold securities that remain in the held-to-maturity category to maturity is in doubt. |
| Have the underlying investees associated with equity securities without readily determinable fair values or equity method investments experienced losses due to extreme weather events? | Consider whether investee operating losses may have impaired the value of investments. |
### Contingencies and insurance

Read more: Chapter 7

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has climate affected the probability of forecasted transactions occurring?</td>
<td>Review hedging relationships to determine if they should be discontinued.</td>
</tr>
<tr>
<td>Does your organization hold over-the-counter derivative instruments in which the counterparty is in an industry susceptible to climate risk?</td>
<td></td>
</tr>
<tr>
<td>Are new environmental regulations changing what assets require environmental remediation or the manner in which remediation is done?</td>
<td>Consider whether new environmental remediation liabilities need to be recognized or existing ones remeasured.</td>
</tr>
<tr>
<td>Are operations exposed to areas that are becoming high risk for extreme weather events?</td>
<td>Understand the timing of the different accounting entries, which can be in different reporting periods: loss recognition, loss recovery, additional gains.</td>
</tr>
<tr>
<td>Is insurance coverage changing?</td>
<td>Understand the implications for financial performance if losses are becoming more likely with shrinking insurance recoveries.</td>
</tr>
</tbody>
</table>

### Revenue and inventories

Read more: Chapter 8

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do revenue contracts include emissions reduction targets?</td>
<td>Understand the implications for revenue recognition.</td>
</tr>
<tr>
<td>Are customers seeking to negotiate modified (or even terminate) contracts?</td>
<td>Understand when a modification results in an adjustment to revenue recognized under the current contract (current period or prospective) versus a separate contract.</td>
</tr>
</tbody>
</table>
### Climate risk in the financial statements

#### Executive summary

**QUESTION**

<table>
<thead>
<tr>
<th>Is climate risk affecting the selling price of inventories?</th>
<th>Review the net realizable (or market) value of inventories.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is climate risk affecting the cost of materials used in production?</td>
<td>Review the net realizable (or market) value of inventories.</td>
</tr>
<tr>
<td>Is climate risk affecting the availability of materials used in production?</td>
<td>Reassess what is considered ‘normal’ operating capacity in allocating overhead to inventory.</td>
</tr>
<tr>
<td>Are production facilities located in areas that are becoming high risk for extreme weather events?</td>
<td>Understand the accounting for ‘normal’ versus ‘abnormal’ inventory costs.</td>
</tr>
</tbody>
</table>

### Compensation and benefits

Read more: Chapter 9

**QUESTION**

<table>
<thead>
<tr>
<th>Will emissions reduction targets be included in stock option awards?</th>
<th>Understand the implications for the recognition of compensation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will emissions reduction targets be included in other compensation arrangements?</td>
<td>Understand the implications for the recognition of compensation.</td>
</tr>
<tr>
<td>Will the emissions reduction plans result in employees being terminated?</td>
<td>Understand the different types of termination benefits, which have different accounting requirements.</td>
</tr>
<tr>
<td>Will voluntary terminations be offered?</td>
<td>Understand the timing of liability recognition, which is based on ‘acceptance’.</td>
</tr>
<tr>
<td>Will an arrangement for ongoing termination benefits be set up for longer term use as your organization carries out its strategy?</td>
<td>Understand the timing of liability recognition, which is based on ‘probability of entitlement’.</td>
</tr>
<tr>
<td>Will a restructuring result in a one-time arrangement under which employees will be involuntarily terminated?</td>
<td>Understand the timing of liability recognition, which is based on ‘communication’ date.</td>
</tr>
</tbody>
</table>
## Income taxes

Read more: Chapter 10

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are industry and market conditions changing?</td>
<td>— Understand the external and internal pressure points that affect the recoverability of deferred tax assets.</td>
</tr>
<tr>
<td>Is the legal or regulatory environment changing?</td>
<td>— If a process is set up for monitoring events that might trigger the impairment testing of groups of assets or of goodwill more broadly, that same process can be used to help assess valuation allowances.</td>
</tr>
<tr>
<td>Are new competitors emerging?</td>
<td></td>
</tr>
<tr>
<td>Are costs increasing?</td>
<td></td>
</tr>
<tr>
<td>Is financial performance deteriorating?</td>
<td></td>
</tr>
<tr>
<td>Are projects essential to your organization’s future strategy struggling to produce results?</td>
<td></td>
</tr>
<tr>
<td>Are operations exposed to areas that are becoming high risk for extreme weather events?</td>
<td></td>
</tr>
<tr>
<td>Are tax laws changing in jurisdictions in which your organization operates?</td>
<td>Understand the timing of accounting for the effects of changes in tax law or tax rates.</td>
</tr>
<tr>
<td>Will your organization acquire property that qualifies for investment tax credits?</td>
<td>Elect an appropriate accounting policy to be applied consistently to all such credits.</td>
</tr>
</tbody>
</table>

## Acquisitions and restructuring

Read more: Chapter 11

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do contracts to acquire businesses include consideration that is contingent on emissions reduction targets?</td>
<td>Understand the accounting for contingent consideration, as part of the acquisition accounting and subsequently.</td>
</tr>
<tr>
<td>Will operations be restructured?</td>
<td>Understand how to account for the cost of exit activities, including terminating contracts.</td>
</tr>
</tbody>
</table>
### Executive summary

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will your organization dispose of assets as part of its strategy?</td>
<td>Assess the criteria for classifying assets (disposal groups) as held-for-sale, and understand the related measurement.</td>
</tr>
<tr>
<td>Will the disposals represent a significant change in operations?</td>
<td>Assess whether a (planned) disposal rises to the level of a discontinued operation.</td>
</tr>
</tbody>
</table>

### Fair value measurement and projections

**Read more:** Chapter 12

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>What assets are measured at fair value?</td>
<td>Prepare an inventory of assets measured at fair value.</td>
</tr>
<tr>
<td>Are any liabilities measured at fair value?</td>
<td>Prepare an inventory of liabilities measured at fair value.</td>
</tr>
<tr>
<td>What approach(es) are used to measure fair value?</td>
<td>Map the inventory of assets and liabilities measured at fair value to the approaches used.</td>
</tr>
<tr>
<td>Has climate risk been considered in measuring fair value using the income approach?</td>
<td>Review the key assumptions in measuring fair value.</td>
</tr>
<tr>
<td>Is climate risk a factor in assessing the recoverability of long-lived assets?</td>
<td>Review the key assumptions in estimating the recoverability of long-lived assets.</td>
</tr>
</tbody>
</table>

### Presentation and disclosure

**Read more:** Chapter 13

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do conditions and events related to climate risk raise substantial doubt about your organization’s ability to continue as a going concern?</td>
<td>Understand the steps required in management’s assessment of whether it is probable the entity will be unable to meet its obligations over a period of one year from the date the entity’s financial statements are issued (or available to be issued).</td>
</tr>
<tr>
<td>QUESTION</td>
<td>ACTIONS IF ‘YES’</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Are operations being reorganized, either physically or in terms of</td>
<td>Consider whether there is a change in operating segments or reportable segments.</td>
</tr>
<tr>
<td>reporting?</td>
<td></td>
</tr>
<tr>
<td>Does your organization have climate-related contingencies that do not</td>
<td>Assess the disclosures being made, particularly in light of SEC staff concerns</td>
</tr>
<tr>
<td>meet the criteria to be recognized?</td>
<td>about the robustness of disclosures.</td>
</tr>
<tr>
<td>Is your organization subject to climate-related risks and uncertainties</td>
<td>Assess the quality of the disclosures being made.</td>
</tr>
<tr>
<td>that could affect estimates in the financial statements in the near</td>
<td></td>
</tr>
<tr>
<td>term?</td>
<td></td>
</tr>
<tr>
<td>Does your organization have significant concentrations (e.g. through</td>
<td></td>
</tr>
<tr>
<td>its supply chain or customer base) that create exposure as a result of</td>
<td></td>
</tr>
<tr>
<td>climate risk?</td>
<td></td>
</tr>
<tr>
<td>Has your organization made purchase commitments as a result of its</td>
<td>Assess purchase contracts and determine if they fall in the scope of disclosures</td>
</tr>
<tr>
<td>emissions reduction strategy that require disclosure?</td>
<td>for commitments.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Climate risk and the financial statements

Detailed contents

2.1 How climate risk manifests
2.2 High-risk industries
2.3 General considerations in preparing financial statements
2.4 Questions to ask
2.1 How climate risk manifests

**SASB CLIMATE RISK CATEGORIES**

Below are detailed definitions of climate risk categories used by SASB. These categories are not mutually exclusive:

**Physical Effects**

Climate change has a range of current and projected acute (punctuated, unpredictable) and chronic (progressive, predictable) effects on the physical environment. The probability, magnitude, and timing of these impacts are uncertain and will be influenced by geographic location, industry, and capacity for adaptation. Disclosures can help both companies and investors understand their exposure to the physical risks of climate change.

*Acute (event-related)*

Acute physical risks are associated with the impacts of more frequent and more severe catastrophic weather events (e.g., droughts, flooding, extensive wildfires, greater precipitation, higher wind speeds, etc.). Examples of such impacts may include physical damage to assets, supply chain disruptions, and/or electricity grid disruptions.

*Chronic (progressive)*

Chronic physical risks could be associated with sustained greenhouse gas emissions into the atmosphere, leading to the progressive impacts of increasing temperatures, changing precipitation patterns, and rising sea levels. Impacts may affect agricultural yields, shift growing seasons and species distribution, cause human disease migration, affect the availability and quality of water resources, and impact coastal residential and commercial real estate and infrastructure.

**Transition to a Low-Carbon, Resilient Economy**

Transition risk refers to climate risk that manifests itself through shifts in market forces, including new products and services that support mitigation or adaptation to climate change, as well as direct changes in consumer preferences. Such changes may be connected to GHG emissions intensity of operations and products (e.g., energy intensity of product manufacturing, fuel efficiency of vehicles, energy efficiency of home appliances, end-of-life emissions of products) or water consumption of operations or products (e.g., water intensity of food or beverage production, as well as for manufacturing and power generation, lifecycle water consumption of home appliances, end-of-life contamination of freshwater sources).

The mitigation and adaptation to climate-related impacts may be influenced by the regulatory environment and the geographic location of a company, depending on what physical risks of climate change are present. Therefore, transition risk is often connected to either physical or regulatory risk—or to both. Such connections may exist in a company’s direct operations or arise from downstream or upstream relationships in the value chain—e.g., regulatory pressures may prompt automakers to pursue a range of fuel-economy...
strategies, which can shift demand among auto parts manufacturers toward inputs that can enhance fuel efficiency, as well as among mining and chemicals companies for lithium to produce electric vehicle batteries.

Mitigation responses are those technologies and services that reduce a company’s potential contributions to climate change, such as through increased energy efficiency, water efficiency, renewable energy uptake, and the capture or sequestration of carbon dioxide. Adaptation responses include, but are not limited to, infrastructure resiliency efforts and business model shifts (e.g., the introduction of new products and services, and aligning business models with new environmental conditions).

**Regulatory Risk**

Regulatory risks may result from a range of legal and regulatory issues associated with climate change. This encompasses all international, national, and subnational targets, mandates, legislation, and regulations to address climate change. It also includes those that establish a price for carbon emissions and compliance with policy-driven responses to climate change such as those that mandate energy, water, and fuel efficiency, regulate greenhouse gas emissions, restrict or mandate specific electricity sources, and/or those that directly incentivize and subsidize certain services and technologies.

This category also encompasses a range of potential impacts that may occur due to legal actions against companies related to climate change. These include action against those deemed liable for the physical effects of climate change, including but not limited to deforestation and water withdrawal (also referred to as “liability risks”), allegations of breach of fiduciary duty by directors and officers, and disputes over the implementation of climate-related regulation.


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Of the three categories of climate risk used by the SASB, perhaps the easiest to understand are physical risk and regulatory risk.

— **Physical risk** can be witnessed in the extreme weather events occurring in the US and in other parts of the world, both in the number of instances and in their severity – e.g. floods, hurricanes, wildfires, drought. This risk typically manifests in events and transactions that have clear financial statement implications – e.g. loss and replacement of physical assets.

Reports about rising temperatures and sea levels, and changes in weather patterns, are examples of physical risks that have a longer tail. Although such phenomena have a less immediate accounting outcome, in many cases they are driving business strategy and investments, and may be relevant in estimates that have a longer-term outlook – e.g. useful lives and salvage values of PP&E.

— **Regulatory risk** is evident in laws and regulations that respond to climate risk, including environmental laws, pricing mechanisms on GHG emissions, emissions reporting obligations and exposure to litigation.
The remaining risk category, **transition risk**, encompasses the myriad of risks of transitioning to a lower-carbon economy other than regulatory risk (which is separate). These include risks related to the following.

- **Technology**, such as:
  - the substitution of existing products and services with lower-emission options
  - unsuccessful investment in new technologies
  - costs to transition to lower-emissions technology
  - reliability.

- **Market**, such as:
  - changing customer behavior
  - uncertainty in market signals
  - increased cost of raw materials
  - availability of capital.

- **Reputation**, such as:
  - customer satisfaction
  - stigmatization of industries
  - increased stakeholder concern or negative stakeholder feedback.

**Note:** The TCFD categorizes climate risk as physical risk and transition risk. Transition risk includes policy and legal risks, which are the same as regulatory risks under the SASB classification.

### 2.2 High-risk industries

While the effects of climate risk are relevant to all entities, certain industries are more susceptible by their nature. The following industries have been identified as high risk by the TCFD: finance because of its central role in the economy, and the other industries by virtue of being responsible for the largest proportion of GHG emissions, energy usage and water usage.

- **Finance**
  - Banks
  - Insurance companies
  - Asset owners
  - Asset managers

- **Energy**
  - Oil and gas
  - Coal
  - Electric utilities

- **Transportation**
  - Air freight
  - Passenger air transportation
  - Maritime transportation
  - Rail transportation
  - Trucking services
2. Climate risk and the financial statements

— Automobiles and components

— **Material and buildings**
  — Materials and mining
  — Chemicals
  — Construction materials
  — Capital goods
  — Real estate

— **Agriculture, food, forestry products**
  — Beverages
  — Agriculture
  — Packaged foods and meats
  — Paper and forest products

Although industry is an indicator of risk, ultimately the nature and extent of risk to which an entity is exposed depends on numerous factors, including its business model, assets, geographical locations, services provided and supply chains.

### 2.3 General considerations in preparing financial statements

**Estimation uncertainty**

Estimation uncertainty is inherent in preparing financial statements. An estimate is the outcome of applying an accounting principle (method) using the best information available at the measurement date, and it changes as new information becomes available. Some estimates are based on market data and market-based assumptions (e.g. fair value) and others are based on management’s evidence-based actions and plans (e.g. testing the recoverability of long-lived assets).

However, in the absence of a specific requirement, estimates are never based on what-if scenarios or wishful thinking – and a mere intention does not drive accounting. This point is important in the context of climate risk. While a commitment to reduce emissions may be one factor in considering the reasonableness of estimates, management intent on its own does not trigger recognition of a liability or the writedown of an asset. (Management intent is important in the classification of securities as held-to-maturity or available-for-sale – see chapter 6.) This is explored in the chapters that follow.

**Materiality**

The financial statements are prepared within the overall framework of materiality. Similarly, the auditors’ report provides an opinion as to whether the financial statements present fairly, in all **material** respects, the financial position of the entity at specified dates, and the results of its operations and its cash flows for specified periods, in conformity with US generally accepted accounting principles.
The concept of materiality is not discussed in specific Codification Topics, but some guidance on materiality is included in FASB Concepts Statement No. 8 (CON 8). CON 8 was amended in 2018 to reflect an up-to-date understanding of the reporting environment, and to clearly distinguish between relevance (related to the broader financial reporting environment) and materiality (specific to an entity). [CON 8.BC3.18–BC3.18A]

CON 8 provides a framework that is consistent with the precedent on ‘materiality’ established by the Supreme Court, and with the SEC staff’s interpretive guidance that is derived from the Supreme Court precedent. However, FASB Concepts Statements are not authoritative for entities in preparing their financial statements; their purpose is to help the FASB to develop guidance. For this reason, we believe all entities should consider the SEC staff’s interpretive guidance on materiality. [CON 8.QC11 – QC11B, SAB Topic 1M]

As reported in SAB Topic 1M, “The Supreme Court has held that a fact is material if there is — a substantial likelihood that the...fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.”

There is no formal definition of a ‘reasonable investor’ (or ‘reasonable person’). The reasonable person is a user of the financial statements who relies on their accuracy to make economic decisions.

The reasonable person test does not consider every financial statement user individually, but instead as a group. An entity should assume that financial statement users: [AU-C 320.04]

— have a reasonable knowledge of business and economic activities and accounting, and a willingness to study the information in the financial statements with reasonable diligence;
— understand that financial statements are prepared, presented and audited to levels of materiality;
— recognize the uncertainties inherent in the measurement of amounts based on the use of estimates, judgment and the consideration of future events; and
— make reasonable economic decisions based on all information in the financial statements.

The term ‘reasonable person’ may also include regulators, lenders and other users of the financial statements.

We believe there is no need to consider every financial statement user (or possible user) individually, because users’ needs may vary widely. Instead, an entity should consider the financial statement users as one group that relies on the accuracy of the financial statements and considers the common financial information to make decisions. This group could be influenced by several of the factors relevant to a materiality assessment.

### 2.4 Questions to ask

As a starting point to understanding the potential effects of climate risk on your financial statements, an in-depth understanding of the entity and its business environment is required. The objective is to gain an understanding of the
pressures faced by the entity that may give rise to climate risk – if not now, then in the future.

These pressures are multi-dimensional.

— Internal (arising from the entity’s actions) and external (arising from third-party actions).
— Domestic and foreign.
— Direct (e.g. via physical operations or a stock exchange listing) and indirect (e.g. via customers and suppliers).

The following are some general questions (not exhaustive) that look at the bigger picture and help you determine the pressure points in the business; none are determinative. They are supplemented by more specific accounting-based questions in the chapters that follow.

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RELEVANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your organization operate in a high-risk industry? Section 2.2</td>
<td>In general, entities in higher-risk industries are predisposed to a wider variety of risks related to climate, and the severity of any particular risk may be greater.</td>
</tr>
<tr>
<td>Will your organization be affected by country or jurisdictional plans to</td>
<td>Exposure to countries or jurisdictions that plan to reduce emissions results in increased likelihood of regulatory and transition risk.</td>
</tr>
<tr>
<td>reduce emissions?</td>
<td></td>
</tr>
<tr>
<td>What is your organization’s exposure via its wider supply chain and</td>
<td>The ecosystem is interconnected, with each party potentially putting pressure on its suppliers to reduce emissions. As a result, every entity faces potential pressure from its customers, and may in turn pressure its suppliers.</td>
</tr>
<tr>
<td>customer base?</td>
<td></td>
</tr>
<tr>
<td>Has your organization committed to reduce emissions? Have its competitors?</td>
<td>While a commitment to reduce emissions may in the first instance be little more than a statement of intent, the plans and actions that follow are likely to have widespread accounting implications.</td>
</tr>
<tr>
<td></td>
<td>If the entity has not yet committed to reduce emissions but competitors have, this may indicate pressure on the entity to follow suit.</td>
</tr>
<tr>
<td>Is your organization planning acquisitions and/or disposals?</td>
<td>Many plans to reduce emissions are accompanied by strategic acquisitions and disposals.</td>
</tr>
<tr>
<td>What are investors telling your organization?</td>
<td>Shareholder activism related to emissions reduction plans is becoming increasingly common and more successful.</td>
</tr>
</tbody>
</table>
### Climate risk in the financial statements

#### 2. Climate risk and the financial statements

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RELEVANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are lenders telling your organization?</td>
<td>Lending facilities linked to ESG (and emissions targets and ratings) are becoming increasingly common and are expected to grow more significant. Potential access to lower interest rates may provide an incentive to embark on a plan to reduce emissions, or speed the progress of an existing plan.</td>
</tr>
<tr>
<td>What can your organization learn from its insurance premiums?</td>
<td>Insurers are at the forefront of pricing climate risk into their business models. Increasing insurance premiums may provide early warning of high-risk operations from a climate perspective.</td>
</tr>
<tr>
<td>What pressure is your organization getting from key customers?</td>
<td>Are key customers making inquiries as to the entity’s emissions reduction plans? This may provide early warning of more direct action as customers seek to credentialize their supply chain.</td>
</tr>
<tr>
<td>What pressure is your organization placing on key suppliers?</td>
<td>In the reverse of pressure from customers, is the entity making inquiries as to the emissions reduction plans of key suppliers.</td>
</tr>
</tbody>
</table>

In formulating an understanding of these pressure points, not all of the information may be in the Finance function. Other sources of information may include the teams covering sustainability, asset management, client relationships, sales and marketing, among others.

In addition, the entity may produce an ESG (or sustainability or other impact) report outside of the Finance function, which is another key source of information in understanding the pressure points.
3. Long-lived assets

Detailed contents

3.1 Questions to ask

3.2 Useful lives and salvage values

Examples
3.2.1 Impact of net-zero commitment on useful lives
3.2.2 Impact of changing consumer preferences on salvage values

3.3 Involuntary conversions

Example
3.3 Involuntary conversion caused by natural disaster

3.4 Asset retirement obligations

Example
3.4 Timing of recognition of an ARO

3.5 Conversion and upgrade costs

Example
3.5 Upgrade of PP&E and purchase of software to achieve energy efficiency targets
3.1 Questions to ask

In thinking about the effects of climate risk on the financial statements, two of the most cited examples are potential impairments of long-lived assets and the reassessment of useful lives. However, with so much investment in new assets, including new technology, it is also important to understand the concepts behind which costs are capitalized and which are expensed.

This chapter discusses some of the concepts behind depreciation, involuntary conversions, AROs, and conversion and upgrade costs. Impairment is discussed in chapter 5, and assets held-for-sale in section 11.4.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will existing assets be replaced earlier than expected (required or voluntary)?</td>
<td>Review the estimated useful lives of PP&amp;E. Section 3.2</td>
</tr>
<tr>
<td>For assets that are routinely replaced while they still have significant resale value, are market changes affecting those values?</td>
<td>Review the salvage values used in calculating depreciation. Section 3.2</td>
</tr>
<tr>
<td>Are market changes affecting customer sentiment?</td>
<td>Review the useful lives of intangible assets, including the appropriateness of any that are indefinite-lived. Section 3.2</td>
</tr>
<tr>
<td>Are new environmental regulations requiring assets to be disposed of in a certain way, or changing the manner of disposal for assets that were already subject to regulation?</td>
<td>New AROs may need to be recognized and existing ones may need to be remeasured. Section 3.4</td>
</tr>
<tr>
<td>Is significant expenditure on new assets expected?</td>
<td>Understand which costs are capitalized versus expensed. Section 3.5</td>
</tr>
<tr>
<td>Will future expenditure have a significant software component?</td>
<td>The accounting for software costs is complex; understand the requirements for what costs are capitalized versus expensed. Section 3.5</td>
</tr>
<tr>
<td>Are assets located in areas that are becoming high risk for extreme weather events?</td>
<td>Understand the timing of the different accounting entries, which can be in different reporting periods: loss recognition, loss recovery, additional gains. Section 3.3</td>
</tr>
</tbody>
</table>
3.2 Useful lives and salvage values

A long-lived asset is depreciated over its estimated useful life, which is the period over which the asset is expected to provide economic benefit or service potential to the entity. Technology innovations, new legislation or changes in an entity’s use of an asset could affect its useful life. [360-10-35-2 – 35-4]

The other estimate relevant to calculating depreciation is salvage (or residual) value, which is the estimated fair value expected to be recovered at the end of the asset’s estimated useful life. Estimates of fair value are discussed in chapter 12. [360-10-35-4]

In considering the possible effects of climate on the financial statements, the useful lives of PP&E is one of the most cited examples. Whether through operational commitments or in response to changes in consumer trends or regulation, an entity may need to reevaluate the estimated useful life of long-lived assets and their salvage values.

Similarly, intangible assets initially deemed to have indefinite useful lives may be determined to have useful lives and require amortization on a prospective basis. For example, the indefinite life of a brand name that is directly associated with an emissions intensive product might be called into question by changing customer preferences toward low-carbon alternatives. [350-30-35-1 – 35-3]

Example 3.2.1
Impact of net-zero commitment on useful lives

**Scenario 1: Net-zero by 2050 with strategy in place**

Energy Co is an oil and gas company that has committed to be net-zero by 2050 and has a strategy in place for achieving that goal. In addition to reducing its emissions, Energy Co’s strategy includes investing in low-carbon solutions and phasing out some of its existing oil and gas activities.

Energy Co’s refineries, plants and pipeline are depreciated over a period of 15 to 50 years. Following a review, Energy Co adjusts the remaining useful lives of certain PP&E downward. The change is accounted for prospectively (in the current and future years) as a change in estimate.

**Note:** Impairment testing is carried out before adjusting the useful lives of PP&E (see section 5.3).

**Scenario 2: Net-zero by 2050 with strategy not yet in place**

In the current year, Retailer has committed to being net-zero by 2050 and has indicated that it will formulate a strategy for achieving its goal, including measuring scope 3 emissions, over the next two years.

In the absence of a strategy, Retailer is able to assess that at a minimum it will need to make its stores more energy efficient, which will involve investing in new lighting, heating and ventilation solutions if it remains in its current locations.

Retailer’s owned buildings are depreciated over up to 50 years, and store leasehold improvements are depreciated over their useful lives but not
Climate risk in the financial statements
3. Long-lived assets

exceeding the expected lease term of five to ten years. Following a review, Retailer concludes that no adjustment to the remaining useful lives of existing PP&E is required based on its plans and actions to date.

Example 3.2.2
Impact of changing consumer preferences on salvage values

Manufacturer produces goods for the ‘consumer discretionary’ sector, and its focus on high-end products requires it to constantly reevaluate its product range. This typically means that Manufacturer disposes of manufacturing plant before the end of its economic life and reinvests in new manufacturing plant.

As more countries commit to the Paris agreement and more companies make net-zero commitments, Manufacturer’s discussions with key customers (retailers) indicate that consumers are increasingly demanding more sustainable products and this change is not temporary.

Following a review, Manufacturer concludes that no adjustment to the remaining useful lives of its existing manufacturing plant is required, but salvage values need to be adjusted downward. This is because changing consumer preferences are reducing the estimated fair value (see chapter 12) on disposal of the manufacturing plant. The change is accounted for prospectively (in the current and future years) as a change in estimate.

Note: Impairment testing is carried out before adjusting the salvage values of PP&E (see section 5.3).

3.3 Involuntary conversions

Climate risk, and in particular physical risks such as floods and hurricanes, may cause loss or significant damage to PP&E, requiring a full or partial writeoff. The writeoff (involuntary conversion) is accounted for separately from any insurance recovery or subsequent rebuild costs. [610-30-25-1 – 25-4]

Therefore, the following are distinct accounting events that may occur in different periods:

— writeoff of the PP&E when the loss occurs;
— recognition of the insurance recovery (see section 7.4):
  — up to the amount of the recognized loss when receipt is probable and estimable;
  — for any remaining amount when final settlement is reached.
— rebuild costs are either expensed as they are incurred or capitalized based on the initial recognition guidance in Topic 360.

In addition, an involuntary conversion of one or more items of PP&E may indicate an impairment loss for the larger asset group (see section 5.3).
Subsequent events, which are often particularly important in accounting for insurance recoveries (see Example 3.3).

**Example 3.3**

**Involuntary conversion caused by natural disaster**

A hurricane destroyed one of Manufacturer’s distribution centers in Year 1, including most of the related equipment and fixtures. The PP&E destroyed had a net book value of $10,000 and an estimated replacement cost of $15,000.

The PP&E was insured and the following is the timeline of events related to the insurance recovery.

- Year 1: Manufacturer estimated an insurance recovery of at least $12,000.
- February Year 2: Manufacturer reached a settlement with the insurer for $13,000.
- March Year 2: Manufacturer issued its Year 1 financial statements.
- April Year 2: Manufacturer received the insurance settlement.

The destroyed PP&E was replaced during Year 2 at a cost of $16,000; all costs qualified for capitalization.

Manufacturer records the following journal entries related to the loss and subsequent recovery.

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income statement(^1)</td>
<td>10,000</td>
</tr>
<tr>
<td>PP&amp;E</td>
<td>10,000</td>
</tr>
<tr>
<td>Year 1: To recognize writeoff of PP&amp;E destroyed.</td>
<td></td>
</tr>
<tr>
<td>Other asset</td>
<td>10,000</td>
</tr>
<tr>
<td>Income statement(^1)</td>
<td>10,000</td>
</tr>
<tr>
<td>Year 1 (recognized subsequent event triggered by settlement in February Year 2): To recognize probable recovery up to amount of loss recognized.(^2)</td>
<td></td>
</tr>
<tr>
<td>Receivable</td>
<td>13,000</td>
</tr>
<tr>
<td>Other asset</td>
<td>10,000</td>
</tr>
<tr>
<td>Income statement(^1,2)</td>
<td>3,000</td>
</tr>
<tr>
<td>February Year 2: To recognize full recovery upon settlement with insurer.</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>13,000</td>
</tr>
<tr>
<td>Receivable</td>
<td>13,000</td>
</tr>
<tr>
<td>April Year 2: To recognize receipt of recovery.</td>
<td></td>
</tr>
</tbody>
</table>
3.4 Asset retirement obligations

An ARO is an obligation associated with the retirement of a tangible long-lived asset, and includes environmental remediation liabilities that both (1) arise from the normal operation of a long-lived asset and (2) are associated with the retirement of that asset.

AROs are recognized legal obligations, including liabilities that result from the doctrine of promissory estoppel. Therefore, an ARO can result from a governmental action, an agreement between entities, or a promise conveyed to a third party (including the public) that imposes a reasonable expectation of performance under the doctrine of promissory estoppel. [410-20-55-1 – 55-4]

Determining whether a legal obligation exists can be more complicated for an entity operating in multiple locations and jurisdictions. The entity should evaluate the statutes, regulations and laws in each locality, state and foreign jurisdiction in which it owns or operates tangible long-lived assets, and determine its legal obligations related to asset retirement activities.

In summary, Subtopic 410-20 requires entities in all industries to:

— recognize a liability for all legal obligations, including conditional AROs, associated with the retirement of tangible long-lived assets;

— recognize the liability at fair value (see chapter 12), and capitalize an equal amount as a cost of the related long-lived asset, which is depreciated over its estimated remaining useful life;

— increase the liability for the passage of time (accretion) and report the change as an operating expense (accretion expense);

— adjust the liability for changes arising from a change in the timing or amount of the estimated undiscounted future cash flows, with a corresponding change to the carrying amount of the asset; and
— recognize a gain or loss on the settlement of the obligation when the associated asset is retired. The extensive use of estimates may cause entities to record a gain or loss when they settle the ARO.

The liabilities recognized exclude those accounted for under Topic 842 (leases), but in general include the following: [A10-20-15-3(e)]

— obligation to remove leasehold improvements added by the lessee; and
— obligation to restore the leased asset to the condition it was in at lease commencement if it has been modified by the lessee.

An obligation is not recognized for discretionary (i.e. non-ARO) retirement costs. Instead, the entity generally recognizes the costs of the discretionary retirement activities when it incurs the costs or performs the activities. An exception arises when an adjustment is made against the salvage value of a long-lived asset (see section 3.2).

### Example 3.4

#### Timing of recognition of an ARO

**Scenario 1: New environmental regulation enacted**

A new environmental regulation is enacted that requires Manufacturer to decommission an existing, in-use manufacturing plant following specific decontamination procedures, instead of simply transporting it as-is to an approved facility. Because the regulation has been enacted, Manufacturer recognizes an ARO.

**Scenario 2: New environmental law anticipated**

Unlike in Scenario 1, the new environmental regulation has yet not been enacted. Regardless of the likelihood of enactment, Manufacturer does not recognize an ARO because there is no ‘present obligation’ until the regulation is enacted.

**Scenario 3: Net-zero by 2050 with signed memoranda of understanding**

Manufacturer has committed to be net-zero by 2050 and has a strategy in place for achieving that goal. As part of that commitment, and to demonstrate its sustainability leadership, Manufacturer has signed *memoranda of understanding* with state and other local government officials in a number of jurisdictions. These memoranda indicate that Manufacturer has committed to decommission its manufacturing plant in a certain way at the end of the plant’s useful life.

Manufacturer consults with internal and external legal advisors to evaluate whether it has legal obligations – as a result of the doctrine of promissory estoppel – to perform asset retirement activities in each of the locations for which it has signed a memorandum.

As a result of that analysis, Manufacturer concludes that it has a legal obligation in nine of the ten locations, and therefore recognizes an ARO for the related PP&E decommissioning costs in those nine locations.
Scenario 4: Net-zero by 2050 with public statements made

Unlike in Scenario 3, Manufacturer has not made any commitments, or entered into any agreements, related to the decommissioning of PP&E. However, it has spoken about its plans in press releases and in press conferences by executives.

Manufacturer consults with internal and external legal advisors to evaluate whether it has any legal obligations under the doctrine of promissory estoppel to perform asset retirement activities.

As a result of that analysis, Manufacturer concludes that it does not have a legal obligation in any of the jurisdictions in which it operates, and therefore it does not recognize an ARO.

3.5 Conversion and upgrade costs

In response to climate risk, entities may be evaluating their current operations and the impact they have on emissions or the current susceptibility of those assets to climate risk. Often additional expenditures, which may be significant, are required to modify an existing operation to align with internally or externally driven sustainability requirements.

Property, plant and equipment

PP&E is initially recorded at cost, including the acquisition cost and all costs necessarily incurred to bring the asset to the location and working condition necessary for its intended use. Examples include site preparation costs, delivery and handling costs, installation costs, and related professional fees for architects and engineers. The costs incurred need not be external or incremental. Further, interest that is directly attributable to the acquisition, construction or production of a qualifying asset forms part of the cost of that asset. [360-10-30-1 – 30-2, 835-20-15-5 – 15-6]

Subsequent expenditure (including costs incurred to convert or upgrade PP&E) is capitalized following these same parameters to the extent that it increases the service potential of the PP&E. Routine repairs and maintenance costs are expensed as incurred. [360-10-30-1, TQA 2210.15]

Internal-use software

As entities commit to reducing emissions, many of the solutions being introduced rely heavily on new technology. To that end, considerations around the accounting for internal-use software and cloud computing arrangements may be relevant.

The accounting for (1) the acquisition (including licensing) and development of internal-use software and (2) cloud computing arrangements (CCAs) is explained in-depth in KPMG Handbook, Software and website costs, and the references below are to that Handbook.
The following are key points (not exhaustive).

— Acquired internal-use software licenses are recognized as intangible assets; however, the costs of software acquired for R&D purposes (e.g. to develop or test new ‘green’ technology) that does not have an alternative use are expensed as incurred. See section 3.3 of the Handbook.

— Entities are required to recognize as a liability any unpaid internal-use software license fees – e.g. term license fees that will be paid quarterly over a three-year license period. See section 3.3 of the Handbook.

— CCAs are service contracts, which means the hosting service (i.e. subscription) fees are generally recognized over the subscription period without recognizing any software asset or fees liability, other than for the effects of accrual accounting. See section 3.4 of the Handbook.

— Direct costs to implement internal-use software or a CCA (e.g. configuration and testing costs) are generally capitalized and amortized over the useful life of the software or the ‘term of the hosting arrangement’ for CCA implementation costs. However, data conversion/migration and training costs, often part of a software or CCA implementation, are expensed as incurred. See sections 3.2 (capitalization) and 6.2.20 (amortization) of the Handbook.

— Capitalized internal-use software and CCA implementation costs are subject to the abandonment and impairment guidance in Topic 360. See sections 6.2.30 and 6.2.40 of the Handbook.

### Example 3.5

**Upgrade of PP&E and purchase of software to achieve energy efficiency targets**

Retailer installs LED lighting and high-efficiency HVAC systems throughout its stores. The upgrade is intended to help it meet emissions reduction targets, and will reduce store energy costs by an estimated 60%.

As part of the upgrade, Retailer licenses energy management software from Vendor.

Retailer incurs the following costs to purchase and implement the hardware and the software license.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware (lighting fixtures and HVAC equipment), including installation</td>
<td>$27,000</td>
</tr>
<tr>
<td>Software installation, configuration and testing</td>
<td>4,000</td>
</tr>
<tr>
<td>Training</td>
<td>500</td>
</tr>
<tr>
<td>Software interfacing application development stage costs</td>
<td>1,500</td>
</tr>
<tr>
<td>License fees (per year, prepaid annually)</td>
<td>10,000</td>
</tr>
</tbody>
</table>
Retailer accounts for the costs as follows.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liability for unpaid software license fees</td>
<td>$18,080</td>
<td>Present value of two remaining annual $10,000 payments, discounted at 7% (assumed to arrive at fair value).</td>
</tr>
<tr>
<td>PP&amp;E: hardware (including installation)</td>
<td>27,000</td>
<td>From table</td>
</tr>
<tr>
<td>Internal-use software license asset: software license, installation, configuration and testing</td>
<td>32,080</td>
<td>License fees paid of $10,000 + liability for unpaid fees of $18,080 + software installation, configuration and testing of $4,000.</td>
</tr>
<tr>
<td>Internal-use software asset: software interfacing</td>
<td>1,500</td>
<td>From table</td>
</tr>
<tr>
<td>Expensed as incurred: training costs</td>
<td>500</td>
<td>From table</td>
</tr>
</tbody>
</table>
4. Leases

Detailed contents

4.1 Questions to ask

4.2 Definition of a lease: substitution rights
   Example
   4.2 Substitution rights

4.3 Lease accounting (lessee)
   Examples
   4.3.1 Lessee – business decision reassessment triggering events
   4.3.2 Lessee – lease modifications
   4.3.3 Lessee – lease termination

4.4 Lease accounting (lessor modifications)
4. Questions to ask

In response to climate risk, both lessees and lessors will continue to evaluate their portfolio of assets and the agreements under which they are leased. To align with its climate-related sustainability objectives, a lessee may be incentivized to modify or terminate existing lease agreements, or otherwise make decisions that cause it to reassess the accounting. And lessors may themselves be initiating changes that credentialize their products as sustainable.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do leases contain rights that allow the lessor to substitute the asset?</td>
<td>Understand the limited circumstances in which substitution rights lead to a conclusion that there is no lease. Section 4.2 ►</td>
</tr>
<tr>
<td>Lessee: Is the exercise (or non-exercise) of renewal options in leases being reconsidered?</td>
<td>Understand how a business decision can trigger the need to reassess or remeasure the lease term or the lease payments. Section 4.3 ►</td>
</tr>
<tr>
<td>Lessee: Will modifications be negotiated with the lessor?</td>
<td>Understand when a modification results in the remeasurement of the lease liability and right-of-use asset versus a separate contract. Section 4.3 ►</td>
</tr>
<tr>
<td>Lessee: Will leases be terminated?</td>
<td>Understand the accounting for termination payments. Section 4.3 ►</td>
</tr>
<tr>
<td>Lessor: Will leases be modified?</td>
<td>Understand the accounting from the lessor’s perspective, which is not aligned (conceptually or mechanically) with the lessee’s accounting. Section 4.4 ►</td>
</tr>
</tbody>
</table>

Lease accounting under Topic 842 is explained in-depth in KPMG Handbook, Leases.
4.2 Definition of a lease: substitution rights

The definition of a lease is discussed in chapter 3 of KPMG Handbook, Leases. One of the tests in determining whether a contract is or contains a lease is whether there is an “identified” asset. An asset is not identified, and is not subject to a lease, if the supplier has the substantive right to substitute the asset throughout the ‘period of use’.

The issue of supplier substitution rights may frequently arise in certain types of arrangements as suppliers seek flexibility to facilitate their strategies, and efforts to achieve net-zero (for them and their customers). For example, an energy management service provider may have the contractual right to substitute certain assets used in providing its services to achieve greater energy efficiency.

When assessing whether an asset substitution right is substantive in the context of a ‘green’ strategy, it is important to recall that a substitution right is substantive, and the asset subject to that right not identified, only when the supplier:

— has the practical ability to substitute alternative assets throughout the period of use; and
— would benefit economically from the exercise of its substitution right – i.e. the economic benefits that would be derived from substituting the asset exceed the costs of the substitution.

When considering these requirements in this context, it may be particularly important to recall the following.

— The entity (customer or supplier) evaluates whether a supplier substitution right is substantive based only on the facts and circumstances at contract inception. This evaluation excludes consideration of future events that, at inception, are not ‘likely to occur’, including the future introduction of new technology.
— A supplier right or obligation to substitute an asset only for reasons of repair or maintenance, because the asset is not operating properly or because a technical upgrade becomes available is not substantive.
— Economic benefits from substitution do not include purely reputational (or ‘goodwill’) benefits such as may arise from a supplier’s ability to advertise itself as ‘green’ or having achieved a net-zero or other carbon emission target. The economic benefits must be quantifiable to assert that they exceed the costs of the substitution.
— A customer that cannot readily determine whether a supplier substitution right is substantive – e.g. because it does not have information about the supplier’s economic costs of, and benefits from, substitution – should presume that it is not.

Section 3.2.3 of KPMG Handbook, Leases, discusses supplier substitution rights in detail, including all of the points above.
Example 4.2

Substitution rights

As part of its net-zero strategy, Producer has entered into a contract for the right to use a specified (by address) eco-friendly cold storage warehouse owned by Supplier.

Supplier continues to evolve its cold storage products, and it has the right in its contract with Producer to substitute the specified warehouse for another of similar capacity if and when it develops and deploys its next generation of cold storage warehouses with even better sustainability credentials.

The expected economic benefits for Supplier from making the substitution would be the ability to reduce its costs of operating the warehouse (i.e. from more energy efficient cold storage technology). Supplier expects these cost savings to exceed the costs it would incur to relocate Producer. Supplier also expects to benefit from deploying and substituting its existing warehouses with these next generation facilities that it will be able to claim meet the highest sustainability standards. However, that benefit (e.g. reputational and in terms of sustainability ratings) is not quantifiable so would not factor into the substitution right analysis.

Despite estimating that Supplier’s energy cost savings would exceed its costs of relocating Producer, Supplier’s substitution right is determined not to be substantive, and therefore does not preclude the initial warehouse provided for Producer’s use under the arrangement being an ‘identified’ asset.

This is because:

— Supplier only has the right to substitute the warehouse when and if its next generation of warehouses becomes operational and available, meaning its right does not exist ‘throughout the period of use’ (see Question 3.2.55 in KPMG Handbook, Leases); and

— Supplier’s expectation of economic benefits from substitution that will exceed the costs thereof depends on a future event – i.e. Supplier’s successful introduction of next generation warehouses of a particular energy efficiency – that, at contract inception, is not ‘likely to occur’ (see paragraph 3.2.130 in KPMG Handbook, Leases).

4.3 Lease accounting (lessee)

From a lessee’s perspective, a lease reassessment or modification (that is not accounted for as a separate contract) will often result in the remeasurement of the lease liability and the right-of-use asset.

Reassessments

Lease reassessments from the lessee’s perspective are discussed in section 6.6 of KPMG Handbook, Leases. The following discussion touches on some of the points that are relevant in determining whether the lessee should reassess the lease term or a purchase option.
A lessee may be required to reassess and/or remeasure the lease term or the lease payments for one or more of its leases in the following situations. [842-10-35-1, 35-4, 55-28]

— Economic events such as those arising from climate events (e.g. flooding) may trigger a contingency in the lease contract – e.g. a minimum payment clause or a termination right for example. [842-10-35-1(b)]

— The expected residual value of an underlying asset may be affected by the economic circumstances, requiring reassessment of the amount it is probable that the lessee will owe under a residual value guarantee. [842-10-35-4(c)(3)]

In addition, one or more actions a lessee takes in response to climate risk may trigger a requirement to reassess the term of the lease, or an option to purchase the underlying asset. A triggering event is a significant event or significant change in circumstances that both: [842-10-35-1(a), ASU 2016-02.BC232]

— is within the lessee’s control; and

— directly affects the assessment of whether the lessee is reasonably certain to exercise an option.

Making a business decision directly relevant to an option exercise is one example of a triggering event. However, we believe that for a lessee business decision (e.g. to renew or to terminate a lease) to trigger a lease term or purchase option reassessment, that decision must not be reversible without substantive economic cost (or consequence) to the lessee. See Question 6.6.05 in KPMG Handbook, Leases. [842-10-55-28(c), ASU 2016-02.BC193]

Changes in market-based factors (including climate risk factors or changes in the real estate market) do not, in isolation, trigger the reassessment of a lessee option because they are generally not within the lessee’s control. [842-10-55-29, ASU 2016-02.BC232]

**Example 4.3.1**

**Lessee – business decision reassessment triggering events**

As part of its net-zero commitment, Transport Co expects to transition its entire leased fleet of internal combustion engine (ICE) vehicles to electric vehicles within the next three years.

For each leased ICE vehicle, the original lease term was for a period of five years (with four years remaining presently), with the option for Transport Co to terminate the lease at the end of Years 3 and 4. If Transport Co terminates a lease, it must pay a termination fee to the lessor. The fee is higher if Transport Co terminates in Year 3 versus Year 4. Transport Co must give six months’ notice of its exercise of either termination option.

At commencement, it was reasonably certain (see section 5.2 of KPMG Handbook, Leases) Transport Co would not exercise either termination option – i.e. it was reasonably certain Transport Co would continue the lease for the full five years. Consequently, the ICE vehicle right-of-use assets are being amortized over five years.
### Assessing whether a triggering event has occurred

The following table includes scenarios of example actions Transport Co could take in connection with its intention to transition its vehicle fleet to electric vehicles, and evaluates whether each one constitutes a reassessment triggering event for the ICE vehicle leases.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Triggering event?</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transport Co provides legal notification to Lessor that it will terminate the leases.</td>
<td>Yes</td>
<td>Transport Co’s termination notification is legally enforceable. Lessor can now enter into a contract with a replacement lessee for periods after the termination date, and Transport Co cannot reverse its decision without Lessor’s agreement.</td>
</tr>
<tr>
<td>2. The CEO of Transport Co communicates internally that the entity has decided to terminate the leases as part of its electric vehicle fleet migration, but it will not notify Lessor until six months before the termination date.</td>
<td>No</td>
<td>Absent any other actions, the CEO’s decision and internal communication about the leases can be reversed without economic cost or consequence to Transport Co.</td>
</tr>
<tr>
<td>3. Transport Co publicly communicates (via press release) its intent to migrate to electric fleet vehicles as part of its net-zero commitment. Terminating the ICE vehicle leases is part of Transport Co’s plan, but there is no stated timeframe for the migration provided in the public announcement and no other actions have been communicated.</td>
<td>No</td>
<td>Absent any other actions, the public announcement does not create an economic cost or consequence for Transport Co if it changes its net-zero plan in a manner that no longer involves terminating the ICE vehicle leases.</td>
</tr>
<tr>
<td>4. Transport Co enters into a contract to partner with Car Co to obtain electric vehicles for its fleet. The contract is binding and the first vehicles are scheduled to be delivered within two years.</td>
<td>Yes</td>
<td>Transport Co’s contract with Car Co is non-cancellable. Therefore, if Transport Co reverses its decision to terminate the ICE vehicle leases, it would either:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— be required to negotiate an amendment of the contract with Car Co; or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— incur redundant ICE vehicle lease costs – i.e. redundant to the costs it has incurred for the new electric vehicles.</td>
</tr>
</tbody>
</table>
Other accounting implications

Regardless of whether a triggering event has occurred, Transport Co accounts for its existing right-of-use assets following the requirements for long-lived assets (see chapter 3).

Modifications

Lease modifications from the lessee’s perspective are discussed in section 6.7 of KPMG Handbook, Leases. The following discussion touches on some of the points that are relevant in determining whether the lessee has modified a lease.

A lease modification is a change to the terms and conditions of a contract that results in a change in the scope of or the consideration for a lease. For example, a change to the terms and conditions of the contract that adds or terminates the right to use one or more underlying assets or extends or shortens the contractual lease term is a lease modification. [842 Glossary]

Depending on the rights and obligations affected by the modification, the lessee either adjusts the measurement of the lease liability and right-of-use asset, or accounts for it as a separate contract. [842-10-25-8 – 25-14]

A modification, which can be oral or implied, is treated as a separate contract when: [842-10-25-8]

— it grants the lessee an additional right of use that was not included in the original lease – e.g. a right to use an additional asset; and

— the lease payments increase commensurate with the stand-alone price of the additional right of use, as adjusted for the circumstances of the contract.

Example 4.3.2

Lessee – lease modifications

The following are examples of lease modifications. In all scenarios, the lessee accounts for the modification by adjusting the lease liability and recording an equal and offsetting change to the right-of-use asset(s).

Scenario 1: Building upgrade – lessor builds

As part of its net-zero commitment, Retailer aims to upgrade the heating and ventilation systems in its head office building that is leased from Lessor.

Retailer negotiates with Lessor, who agrees to modify the systems in the building (underlying asset), which will significantly enhance the building’s energy efficiency. In return, the lease term is extended and the lease payments are increased.

Scenario 2: Building upgrade – lessee builds

In contrast to Scenario 1, Retailer undertakes the building upgrades itself. Based on the facts and circumstances, these structural upgrades to Lessor’s
building are determined to be lessor-owned improvements; see Question 5.4.80 in KPMG Handbook, Leases.

Retailer’s payment for Lessor-owned assets changes the consideration in the contract, and therefore, gives rise to a lease modification; see Question 5.4.85 in KPMG Handbook, Leases.

**Scenario 3: Change in leased vehicle fleet composition**

Telco leases a fleet of service vehicles that are a combination of internal combustion engine (ICE), electric and hybrid vehicles.

Without changing the size of the fleet (i.e. the number of vehicles), Telco negotiates with Lessor for the composition of the fleet to comprise fewer ICE and more electric vehicles. That is, the underlying assets subject to the fleet lease will be changed.

**Terminations**

A termination penalty paid or received upon termination that was not already included in the lease payments is generally included in the gain or loss on termination. [842-10-30-5(d), 842-20-40-1]

This contrasts with a termination penalty added to the lease payments as a result of a reassessment or modification shortening the lease term. In either of those cases, the termination penalty factors into the changed lease payments and is taken through lease cost over the remaining lease term; see Questions 6.6.115 and 6.7.15 in KPMG Handbook, Leases.

**Example 4.3.3**

**Lessee – lease termination**

Bank decides to terminate a building lease because the ventilation system cannot be upgraded to its satisfaction under its net-zero commitment.

There was no termination option in the lease agreement; therefore, Bank agrees to pay Lessor a termination fee of $5,000 to early terminate the lease six months from now, which was not previously included in the lease payments. Bank negotiates a six-month transition period to permit it to relocate employees, and ready a new, energy efficient building (e.g. install necessary leasehold improvements).

At the effective date of the modification (i.e. the date the modification is agreed between Bank and Lessor), Bank remeasures the lease liability and right-of-use asset to reflect the now-remaining lease term of only six months; this is based on the remaining lease payments due over that term, including the $5,000 termination penalty.

Post-modification, Bank accounts for the lease in the same manner as any other lease with a six-month remaining lease term. This includes recognizing the $5,000 termination fee through lease cost over the remaining six-month lease term instead of immediately.
4.4 Lease accounting (lessor modifications)

Identifying a modification from the perspective of a lessor, and determining whether it should be accounted for as a separate contract, follows the same guidance as for a lessee (see section 4.3).

However, for a modification that does not result in a separate contract, the accounting is not aligned (conceptually or mechanically) with the lessee guidance and differs depending on the nature of the lease. The lessor reassesses the classification of the lease as of the effective date of the modification, based on the modified terms and conditions and the facts and circumstances as of that date – e.g. the fair value and remaining economic life of the underlying asset at that date. The accounting for lease modifications not treated as a separate contract depends on the classification of the modified lease. [842-10-25-9]

When a lessee exercises an option to extend a lease (including by electing not to exercise a termination option) or to purchase the underlying asset that the lessor previously determined the lessee was not reasonably certain to exercise, the lessor accounts for the exercise of that option as a lease modification. Likewise, if a lessee does not exercise an option the lessor previously determined the lessee was reasonably certain to exercise, the non-exercise of the option is accounted for as a lease modification. [842-10-35-3]

A modification that results from the exercise of a termination option or a purchase option is effectively one that terminates the lease. That is, a lease no longer exists once the lessee has either terminated the lease or has purchased the underlying asset.

Section 7.6 of KPMG Handbook, Leases, includes more in-depth discussion of lessor lease modification accounting.
5. Impairment of nonfinancial assets

Detailed contents

5.1 Questions to ask
5.2 Goodwill

Example

5.2 Goodwill – indicators of impairment
5.3 Long-lived assets

Example

5.3 PP&E – indicators of impairment
5.4 Changes in the unit of account

Example

5.4 Change in reporting units following resegmentation as part of implementing net-zero strategy
5.1 Questions to ask

Impairment testing is one of the most cited examples of the potential effect of climate risk on the financial statements. There are a myriad of circumstances that can affect the extent to which an entity will recover the carrying amount of its assets, and many balance sheets carry significant goodwill balances from previous acquisitions. It is therefore important to understand the pressure points – both external and internal – that are created or exacerbated by climate risk.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are industry and market conditions changing?</td>
<td>— Understand the external and internal pressure points that affect the recoverability of assets.</td>
</tr>
<tr>
<td>Is the legal or regulatory environment changing?</td>
<td>— Set up a process for monitoring events that might trigger the impairment testing of groups of assets or of goodwill more broadly.</td>
</tr>
<tr>
<td>Are new competitors emerging?</td>
<td>— Understand the ripple effect of extreme weather events on all aspects of the entity’s value chain as one of the pressure points on the entity.</td>
</tr>
<tr>
<td>Are costs increasing?</td>
<td>— Sections 5.2 and 5.3 ►</td>
</tr>
<tr>
<td>Is financial performance deteriorating?</td>
<td></td>
</tr>
<tr>
<td>Are projects essential to your organization’s future strategy struggling to produce results?</td>
<td></td>
</tr>
<tr>
<td>Are operations exposed to areas that are becoming high risk for extreme weather events?</td>
<td>Consider whether there is a change in how goodwill or long-lived assets should be grouped for impairment testing, which may lead to a need for immediate testing. Section 5.4 ►</td>
</tr>
<tr>
<td>Are operations being reorganized, either physically or in terms of reporting?</td>
<td></td>
</tr>
</tbody>
</table>

Impairment testing of nonfinancial assets is explained in-depth in KPMG Handbook, Impairment of nonfinancial assets.
5.2 Goodwill

Goodwill is tested for impairment: [350-20-35-28, 35-30, ASU 2021-03]

- annually, in which case an optional qualitative assessment may be applied as a screening test; or
- more frequently when one or more events or circumstances indicate that it is more likely than not that its carrying amount is impaired (i.e. trigger-based testing). There is some relief from this trigger-based testing for private and not-for-profit entities.

Any impairment loss is measured as the amount by which the carrying amount of the goodwill (reporting unit) exceeds its fair value (see chapter 12). Once recognized, an impairment loss cannot be reversed. [350-20-35-12 – 35-13]

Goodwill impairment testing is explained in-depth in KPMG Handbook, Impairment of nonfinancial assets.

### Example 5.2

**Goodwill – indicators of impairment**

The following are examples (not exhaustive) of events or circumstances related to climate risk that may suggest a possible impairment trigger for goodwill.

| Industry and market considerations | — Increased competition from new entrants into the marketplace with the next generation of low-carbon products.  
|—— Climate-based regulation in advanced stages of discussion in key markets, which is already affecting market sentiment toward classes of products. |
| Cost factors | — General increases in raw materials and transportation costs following extreme weather events in multiple locations.  
|—— Rising expenditures associated with converting, upgrading or replacing assets to lower-carbon alternatives. |
| Financial performance | Increasing costs of complying with environmental regulations and pressure from changing consumer preferences, which is causing pressure on operating profit, and that pressure looks set to accelerate. |
| Entity-specific events | R&D projects on the next generation of low-carbon products or adoption of more sustainable operating alternatives – which have been assessed as key to the entity maintaining its market share and positive customer sentiment – running behind schedule. |
| Events affecting an entity or reporting unit | — A more-likely-than-not expectation of selling or disposing of all, or a portion, of a reporting unit that presents a challenge to the entity’s net-zero commitment. |
5.3 Long-lived assets

Long-lived assets are tested for impairment when one or more events or circumstances indicate that their carrying amounts may not be recoverable (i.e. trigger-based testing). [360-10-35-21]

In that case, testing is carried out in two steps. [360-10-35-16 – 35-17, 35-29]

— **Step 1.** Does the carrying amount of the asset (asset group) exceed the sum of the estimated undiscounted future cash flows from the use and eventual disposition of the asset group?
  - If no, the asset (asset group) is not impaired; nothing further is required.
  - If yes, proceed to Step 2.

— **Step 2.** Measure the impairment loss as the amount by which the carrying amount of the asset (asset group) exceeds its fair value.

The Step 1 recoverability test is based on entity-specific cash flow forecasts and includes a number of specific requirements about the cash flows to be included in the forecasts; the Step 2 fair value test is based on market values and market-participant assumptions. Projected financial information and fair values are discussed in chapter 12. [360-10-35-29 – 35-35]

Impairment testing of nonfinancial assets is explained in-depth in KPMG Handbook, *Impairment of nonfinancial assets.*

### Example 5.3

**PP&E – indicators of impairment**

The following are examples (not exhaustive) of events or circumstances related to climate risk that may suggest a possible impairment trigger for long-lived assets.

<table>
<thead>
<tr>
<th>Market price</th>
<th>A significant decrease in the market price of an emissions intensive asset due to climate-related legislation enacted into law in the jurisdiction where the asset resides.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in asset use</td>
<td>Following consumer pressure, a significant change in the extent or manner in which an emissions intensive asset (asset group) is being used.</td>
</tr>
<tr>
<td>Change in legal factors / business climate</td>
<td>An adverse action or assessment by an environmental agency or regulator.</td>
</tr>
</tbody>
</table>
5.4 Changes in the unit of account

In response to climate risk, an entity may undergo changes to its overall organization to align with sustainability or net-zero targets, which may include realignments of operations, closures of existing facilities or creation of new facilities or operations. As a result, an entity should remain alert for significant changes in the economic environment as well as any changes in its structure.

Goodwill: change in reporting unit

Goodwill is subject to impairment testing at the reporting unit level. The reporting unit is the level of internal reporting that reflects the way in which an entity manages its business or operations and to which goodwill would naturally be associated. It is either an operating segment (see section 13.3) or a component of an operating segment. [350-20-35-34, 35-36]

A component of an operating segment is one that meets the following criteria. [350-20-35-34]

— It is a ‘business’ for which ‘discrete financial information’ is available.
— Its operating results are reviewed regularly by ‘segment management’.
— Its ‘economic characteristics’ are different from the economic characteristics of the other components of the operating segment.

A change in reporting units that results from changes in facts and circumstances is a change in estimate. Therefore, the change is accounted for prospectively and previously issued financial statements are not revisited. [250-10-45-17]

The unit of account for goodwill impairment testing is explained in-depth in section 3.4 of KPMG Handbook, Impairment of nonfinancial assets.
Example 5.4
Change in reporting units following resegmentation as part of implementing net-zero strategy

O&G Co’s historical business model has been to operate under two separate divisions: upstream and downstream. Following the hiring of a new CEO to guide its net-zero strategy, O&G Co makes a strategic shift to focus on products that support a low-carbon economy and that it believes will be key to its future success.

These changes resulted in O&G Co reorganizing its reporting structure with a consequential change in operating segments (see Example 13.3).

The change in operating segments necessitates a review of reporting units for goodwill impairment testing. As a result of its review, O&G Co concludes that certain reporting units have changed.

In addition, O&G Co concludes that the reorganization (driven by a change in business model) represents an indicator of impairment that requires impairment testing. To demonstrate that the reorganization does not mask a goodwill impairment loss, O&G Co performs the test immediately before and after the reorganization.

Long-lived assets: change in asset group

Assets held-and-used are tested for impairment in asset groups, and there is only one criterion for determining the appropriate groupings. Specifically, long-lived assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Applying this criterion to determine the composition of a long-lived asset group requires significant judgment based on the specific facts and circumstances. [360-10-35-23]

A change in asset groups that results from changes in facts and circumstances is a change in estimate. Therefore, the change is accounted for prospectively and previously issued financial statements are not revisited. [250-10-45-17]

The unit of account for testing long-lived assets for impairment is explained in-depth in section 3.3 of KPMG Handbook, Impairment of nonfinancial assets.

Assets held-for-sale are discussed in section 11.4.
6. Financial instruments

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### 6.1 Questions to ask

Climate risk can have both a direct and indirect effect on the accounting for financial instruments.

- A direct impact can be seen through financial innovation, such as the growing prominence of sustainability-linked bonds in the credit market.
- An indirect impact may result when a financial institution extends credit to a borrower, and the borrower’s financial circumstances subsequently change due to climate risk.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will debt instruments containing an ESG feature be issued (e.g. a sustainability-linked bond)?</td>
<td>Evaluate whether the ESG feature represents an embedded derivative and, if so, whether it needs to be separated from the host contract. Section 6.2 ►</td>
</tr>
<tr>
<td>Does your organization provide financing to entities in industries that are susceptible to climate risk?</td>
<td>Climate risk may introduce idiosyncratic risk to a borrower or industry, which may result in increased credit risk, requiring the lender to evaluate its expected credit loss methodology. Section 6.3 ►</td>
</tr>
<tr>
<td>Do your organization’s climate-related commitments require changes to the measurement or classification of available-for-sale or held-to-maturity debt securities?</td>
<td>Review the measurement and classification of available-for-sale and held-to-maturity debt securities. Available-for-sale: assess whether there has been a change in the intent to sell certain debt securities classified as available-for-sale. Section 6.4 ► Held-to-maturity: assess whether the ability to hold securities that remain in the held-to-maturity category to maturity is in doubt. Section 6.5 ►</td>
</tr>
<tr>
<td>Have the underlying investees associated with equity securities without readily determinable fair values or equity method investments experienced losses due to extreme weather events?</td>
<td>Consider whether investee operating losses may have impaired the value of investments. Sections 6.6 and 6.7 ►</td>
</tr>
<tr>
<td>QUESTION</td>
<td>ACTIONS IF ‘YES’ / REFERENCE</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Has climate affected the probability of forecasted transactions occurring?</td>
<td>Review hedging relationships to determine if they should be discontinued. Section 6.10</td>
</tr>
<tr>
<td>Does your organization hold over-the-counter derivative instruments in which the counterparty is in an industry susceptible to climate risk?</td>
<td></td>
</tr>
</tbody>
</table>
6.2 Sustainability-linked bonds

Recently, there has been an increase in financial innovation linked to ESG factors to help entities achieve their sustainability goals. One such innovation is the sustainability-linked bond.

A sustainability-linked bond’s proceeds are not restricted for a sustainable purpose. Instead, these instruments incentivize companies to make a positive ESG-related impact through an interest rate adjustment. Borrowers and underwriters select Sustainability Performance Targets (SPTs) that are measured by key performance indicators (KPIs) for the issuer to achieve.

Example SPTs and KPIs include a reduction in carbon emissions. A sustainability-linked bond typically features a coupon step-up (often 25 bps) at a pre-determined date unless the issuer has met the SPTs.

Is bond measured at fair value with changes therein reported in earnings?

If the sustainability-linked bond is measured at fair value with changes in fair value reported in earnings as they occur under otherwise applicable US GAAP (e.g. the entity elected the fair value option), the ESG feature is not separated from the host contract and accounted for as a derivative instrument. [815-15-25-1b]

If a sustainability-linked bond is not measured at fair value with changes in fair value reported in earnings as they occur, the entity continues its assessment of whether the ESG feature should be separated from the host contract.

Does bond contain an embedded derivative?

Given the unique features contained in sustainability-linked bonds, an entity will need to evaluate the facts and circumstances of the bond issuance to determine whether it contains an embedded derivative. An entity also needs to consider whether any scope exceptions apply to the embedded feature. [815-10-15]

A derivative instrument is a financial instrument or nonfinancial contract that has all of the following characteristics. [815-10-15-83]

- **Underlying + notional amount or payment provision.** The financial instrument or other contract has both:
  - one or more underlyings; and
  - one or more notional amounts or payment provisions (or both).

- **Initial net investment.** The financial instrument or other contract requires no, or a small, investment at inception of the contract – i.e. the initial net investment is zero, or smaller than would be required for other types of contracts expected to have similar responses to changes in market factors.

- **Net settlement.** The net settlement characteristic is met if the financial instrument or other contract:
  - requires or permits net settlement;
  - can be readily settled net by a means outside of the contract; or
  - provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement.
If the embedded feature contains all of the above characteristics, it is an embedded derivative.

**If yes, does it need to be bifurcated from the host contract?**

Determining whether the identified embedded derivative component should be accounted for separately from the host contract requires judgment. An entity must determine whether the economic characteristics and risks of the embedded derivative component are clearly and closely related to the host contract.

— If they are clearly and closely related, the embedded derivative component is not separated from the host contract.
— However, if they are not, the embedded derivative component is separated from the host contract and accounted for as a derivative instrument.

An embedded derivative is clearly and closely related to its host contract when its underlying economic characteristics and risks (i.e. the factors that cause a derivative to fluctuate in value) are clearly and closely related to the economic characteristics and risks of the host contract. That is, do the attributes of a derivative behave in a manner similar to the attributes of its host contract?

For example, if an embedded component in a debt instrument pays a rate of return tied to the Nasdaq-100 Index, the economic characteristics and risks of the embedded derivative (e.g. equity-price risk) do not behave in a manner similar to the attributes of the debt instrument (i.e. interest rate risk and issuer credit risk). Therefore, an embedded feature tied to equity-price risk would not be clearly and closely related to the debt host contract.

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**Example 6.2**

**Sustainability-linked bond**

**Fact pattern**

Issuer issued a $1.5 billion sustainability-linked bond that includes a pledge to reduce GHG emissions by 75% by 2027. The bonds mature in 2030 and pay 2.65% interest.

If Issuer fails to meet its pledge to reduce GHG emissions by 75% by 2027, its interest payments will rise 25 bps to 2.9% effective September 2028.

Issuer does not measure the bond at fair value with changes in fair value reported in earnings as they occur under otherwise applicable US GAAP.

**Analysis**

Because the sustainability-linked bond is not measured at fair value with changes therein reported in earnings as they occur, Issuer determines whether the bond contains an embedded derivative.

In performing this evaluation, Issuer determines whether the embedded component contains all of the following characteristics: (1) an underlying, (2) a notional amount or payment provision, (3) an initial net investment of zero or an amount smaller than would be required for other types of contracts that would
be expected to have a similar response to changes in market factors, and (4) a net settlement provision. [815-10-15]

<table>
<thead>
<tr>
<th>Characteristic of a derivative</th>
<th>Evaluation of bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underlying</td>
<td>The occurrence (or nonoccurrence) of the reduction in GHG emissions by 2027</td>
</tr>
<tr>
<td>Notional amount or payment provision</td>
<td>$1.5 billion \times 25 bps step-up</td>
</tr>
<tr>
<td>No, or a small, initial net investment</td>
<td>No initial investment</td>
</tr>
<tr>
<td>Net settlement</td>
<td>Contractual net settlement</td>
</tr>
</tbody>
</table>

As a result, Issuer determines that the sustainability-linked bond contains an embedded derivative. For purposes of this example, it is assumed that a scope exception does not apply.

Next, Issuer evaluates whether the embedded derivative component should be separated from the host contract and accounted for as a stand-alone derivative instrument. Issuer evaluates whether the economic characteristics and risks of the embedded derivative component (i.e. the occurrence (or nonoccurrence) of the reduction in GHG emissions) are clearly and closely related to the economic characteristics and risks of the host contract.

Issuer concludes that the ‘clearly and closely related’ test is not met because the economic characteristics and risks most associated with a debt host contract are interest rate and issuer credit risk – not emissions.

Therefore, Issuer bifurcates the embedded derivative component from the host contract and records the derivative at fair value with changes in fair value recognized in earnings immediately.

### 6.3 Expected credit losses

Estimating credit losses on financial assets is explained in-depth in KPMG Handbook, Credit impairment.

The guidance in Topic 326 on estimating lifetime credit losses applies to financial assets measured at amortized cost, including (but not limited to) trade receivables, loans and held-to-maturity debt securities. It also applies to contract assets recognized under Topic 606 (revenue) and off-balance sheet credit exposures such as letters of credit, unused lines of credit and guarantees. [321-10-35-2 – 35-4]

Estimating lifetime credit losses incorporates a number of assumptions, including estimating the effect of current economic conditions and reasonable and supportable forecasts of future economic conditions on the collectibility of the reported amounts. [326-20-30]

As climate risk increases, the reasonable and supportable forecast incorporated into an entity’s estimate of expected credit losses may become more challenging as the entity may have limited experience in determining how physical and transition risk may impact economic variables (e.g. GDP, unemployment).
Certain methods of estimating expected credit losses involve the use of projected information (i.e. the discounted cash flow method) or the fair value of collateral (e.g. a collateral dependent financial asset). Chapter 12 discusses climate risk on projected financial information and fair value measurements.

**Off-balance sheet credit exposures**

In addition, entities also need to evaluate the liability for off-balance sheet credit exposures, such as unfunded loan commitments that are not unconditionally cancellable by the issuer. Estimating this liability typically requires assumptions about both the likelihood of funding and the amount of loss that would be expected if funding were to occur. [326-20-30-11]

In a scenario of increasing uncertainty due to climate risk, some borrowers – especially those that may have experienced a recent deterioration in credit quality – may be more likely to exercise loan commitments or draw down on unfunded lines of credit. As a result, entities may determine that assumptions regarding the likelihood of funding should be revised to reflect changing economic conditions.

---

**Example 6.3**

**Probability of default adjusted for climate plan**

Bank holds a portfolio of loans to US power and utility companies. To measure expected credit losses, Bank uses a probability of default/loss given default method. Bank aggregates the power and utility loans into pools by internal risk rating, size and collateral type.

Following an increase in climate-related risks for power and utility companies, Bank’s credit administration has determined that it should adjust its method to determine the internal risk rating to consider the decarbonization strategy of the power and utility companies. The internal risk rating is mapped to probabilities of default. A power and utility company with a weak decarbonization strategy will receive a higher internal risk rating and a higher probability of default.

---

**6.4 Loan modifications (lender accounting)**

An increase in climate risk may affect a borrower’s ability to repay debt. As a result, lenders may increasingly enter into loan modifications and the accounting – as a troubled debt restructuring (TDR), modification or extinguishment – depends on the nature of the modification. TDRs are discussed in-depth in chapter 11 of KPMG Handbook, Credit impairment.

A TDR is a type of loan modification in which the creditor gives the borrower a concession related to its financial difficulties that it wouldn’t otherwise consider. [310-40  Glossary]

For TDRs that are included in an entity’s historical loss experience (e.g. forgiveness of principal amount), the estimated effect of these TDRs is included
in the initial and subsequent measurement of the entity’s allowance for expected credit losses (see section 6.3).

For TDRs that are not included in an entity’s historical loss experience (e.g. an interest rate reduction), the estimated effect is included in the entity’s allowance for expected credit losses (see section 6.3) when the entity has a TDR that is reasonably expected to occur in the future. This assessment is made at the individual loan level (not the portfolio level) and therefore expected future TDRs are included in the allowance for expected credit losses only when an entity reasonably expects a specific loan to be modified in a TDR. [326-20-30-6]

Example 6.4
Troubled debt restructuring arising from climate risk

Bank holds a $50,000 loan to Power Co, a US-based energy producer. The loan matures in 2035 and is secured by a coal-fired power plant.

Following a shift in consumer demand toward clean energy and Power Co’s commitment to reduce GHG emissions by 85% by 2030, production at the coal-fired power plant has been decreasing and Power Co can no longer service the debt based on the current terms.

Because of these factors, Bank has determined that Power Co is experiencing financial difficulty. Power Co plans to repurpose the coal-fired power plant by converting it to a natural gas facility. To facilitate the conversion, Power Co is seeking to restructure its debt with Bank.

Bank agrees to provide a concession to Power Co – a discharge of $7,500 in principal and extension of the maturity date to 2038.

Bank concludes that the loan modification is a TDR because Power Co is experiencing financial difficulty and for this reason Bank provided a concession that it wouldn’t have otherwise.

6.5 Impairment of available-for-sale debt securities

Credit losses on available-for-sale debt securities are recognized through an allowance for credit losses.

However, when an entity has the intent to sell the debt security – or more likely than not will be required to sell the security before recovery of the amortized cost basis – any allowance is written off and the amortized cost basis is written down to the security’s fair value; any incremental impairment is reported in earnings. [326-30-35-1 – 35-2, 35-4 – 35-5, 35-10]

As climate risk increases, there may be more circumstances in which an entity may have the intent to sell – or determine that it may be required to sell an available-for-sale debt security in the future.
Example 6.5

Impairment of available-for-sale debt securities due to plan to divest certain oil investments

Bank holds a large portfolio of debt securities classified as available-for-sale for purposes of asset-liability management. As part of Bank’s net-zero commitment, it has announced that it will divest its investments in companies that produce fossil fuels if they don’t have a clear decarbonization plan.

Bank determined that a number of these companies have either no stated decarbonization plan or no clear strategy about the need for decarbonization. Following its own strategy, Bank determines that it has the intent to sell the available-for-sale debt securities held in these companies.

Accordingly, Bank writes off any related allowance for credit losses and the investments’ amortized cost is written down to fair value at the reporting date; any incremental impairment is recognized in earnings.

6.6 Classification of debt securities

Investments in debt securities are classified as trading, available-for-sale or held-to-maturity. Transfers into and out of these categories should be rare.

Except in limited situations, the sale of a held-to-maturity debt security before maturity calls into question an investor’s ability to hold securities that remain in the held-to-maturity category to maturity. One such situation is an event that is isolated, nonrecurring and unusual for the investor, which could not have been reasonably anticipated. [320-10-25]

Other than extremely remote disaster scenarios (e.g. a run on a bank or insurance entity), very few events will meet these conditions. [320-10-25-10]

The following changes in circumstances may cause an entity to change its intent to hold a certain security to maturity without calling into question its intent to hold other debt securities to maturity in the future – i.e. the sale or transfer is not considered inconsistent with its original classification as held-to-maturity. [320-10-25-6]

— Evidence of a significant deterioration in the issuer’s creditworthiness – e.g. downgrade of an issuer’s published credit rating.

— A change in tax law that eliminates or reduces the tax-exempt status of interest on the debt security; but not a change in tax law that revises the marginal tax rates applicable to interest income.

— A major business combination or major disposition (see chapter 10) that necessitates the sale or transfer of held-to-maturity securities to maintain the entity’s’ existing interest rate risk position or credit risk policy.

— A change in statutory or regulatory requirements that significantly modify either what constitutes a permissible investment or the maximum level of investments in certain kinds of securities, thereby causing an entity to dispose of a held-to-maturity security.
— A significant increase by the regulator in the industry’s capital requirements that causes the entity to downsize by selling held-to-maturity securities

— A significant increase in the risk weights of debt securities used for regulatory risk-based capital purposes.

### Example 6.6

**Transfer of held-to-maturity debt securities due to climate risk (regulatory)**

There has been growing pressure from advocacy groups for bank regulators to increase the risk weights in the risk-based capital framework for assets exposed to fossil fuel, so banks have to fund these exposures with more loss-absorbing equity capital and less debt.

If bank regulators significantly increase the risk weights used for regulatory risk-based capital purposes for debt securities, a bank may change its intent to hold certain securities to maturity without calling into question its intent to hold other debt securities to maturity in the future.

### 6.7 Equity securities without a readily determinable fair value

Equity securities without a readily determinable fair value are discussed in-depth in chapter 2 of KPMG Handbook, Financial instruments: Recognition and measurement.

Subsequent to initial recognition, an equity security without a readily determinable fair value may be measured using the ‘measurement alternative’:

- cost less any impairment;
  
  plus or minus

- changes in fair value when there are observable price changes in orderly transactions for the identical or a similar security of the same issuer. When an observable price is identified, the security is remeasured to fair value with changes in fair value recognized in earnings.

An entity makes a qualitative assessment considering impairment indicators to evaluate whether the fair value of the investment is less than its carrying amount. These impairment indicators include, but are not limited to, a significant adverse change in:

- the economic environment of the investee; or

- the general market condition of either the geographical area or the industry in which the investee operates.

Climate risk may increase the potential for the impairment of equity securities without a readily determinable fair value. Example 5.2 includes goodwill impairment indicators that might be relevant in this analysis.
When the qualitative assessment indicates that impairment exists or the entity cannot determine qualitatively that the fair value is less than its carrying amount, the entity measures the fair value of the investment (see chapter 12). If the fair value of the investment is determined to be less than its carrying amount, the entity writes down the investment to its fair value and recognizes the writedown in net income.

Example 6.7
Impairment of equity security without a readily determinable fair value

Manufacturer, a global food company, holds an equity investment in a private company (Investee) that operates coffee farms and roasts coffee beans. Manufacturer measures its investment in Investee using the measurement alternative.

Investee announces that certain of its coffee farms, primarily those in low latitude and low altitude regions, will close operations within five years because of the impact of climate risk. These operations make up approximately 50% of both the assets and revenue of Investee.

Manufacturer evaluates this announcement as part of its qualitative assessment of potential impairment indicators related to its investment in Investee, and concludes that its investment is impaired. The announcement signals a significant deterioration in earnings performance of Investee.

As a result, Manufacturer writes down its investment in Investee to fair value and recognizes an impairment loss.

6.8 Other-than-temporary impairment of equity method investments

The impairment model for equity method investments is explained in-depth in section 5.5 of KPMG Handbook, Equity method of accounting.

An equity method investment is impaired if its fair value is less than its carrying amount. In that case, the investor determines whether the impairment is temporary or other-than-temporary. If it is other-than-temporary, the investor reduces the carrying amount of the investment to its fair value by recognizing a charge to the income statement. [323-10-35-31]

Other-than-temporary impairment does not mean ‘permanent’ and evaluating whether an impairment is temporary requires judgment. Climate risk, including customer preferences, regulatory change and the impact of stranded assets, may result in a decline in value but create uncertainty about the durations of such declines for specific industries and entities. [323-10-35-32]
Example 6.8
Other-than-temporary impairment of equity method investment

Investor, a restaurant holding company, has an equity method investment in a company (Investee) that owns and operates vineyards in Region. Investee experiences significant losses following wildfires that impacted several of its vineyards.

Although the immediate damage from the wildfires will be repaired, based on the concentration of Investee’s business and the general outlook in Region, Investor concludes that its investment in Investee is impaired on an other-than-temporary basis.

6.9 Financial guarantees

The issuer of a financial guarantee (the guarantor) records any contingent losses associated with the guarantee.

— For financial guarantees in the scope of Topic 460 (guarantees) or that meet the definition of a derivative, the non-contingent aspect is measured at fair value.

— The contingent aspect of a financial guarantee is accounted for as follows.
  
  — For a financial guarantee in the scope of Topic 326, it is measured under the expected credit loss model (see section 6.3).
  
  — Other financial guarantees follow the guidance for loss contingencies in section 7.3.

For both types of guarantees, estimating the amount of the contingent loss typically requires the guarantor to make assumptions about both the likelihood of being required to perform under the guarantee and the amount of loss expected if such performance were required.

As climate risk increases, a guarantor might conclude that its performance under the guarantee is more likely, or that its loss upon performance is likely to be greater.

6.10 Hedging

Hedge accounting is explained in-depth in KPMG Handbook, Derivatives and hedging.

An entity may designate a derivative instrument as hedging the exposure to variability in expected future cash flows that is attributable to a particular risk. That exposure may be associated with a forecasted transaction (e.g. a forecasted purchase or sale). A forecasted transaction is eligible for designation as a hedged transaction in a cash flow hedge if the occurrence of the forecasted transaction is probable. [815-20-25-15]
Due to climate risk, an entity may need to reevaluate the probability of certain forecasted transactions occurring. If it is no longer probable that the forecasted transaction will occur, the hedging relationship is discontinued. If it is probable that the forecasted transaction will not occur by the end of the originally specified time period or within two months thereafter, the amounts in accumulated other comprehensive income (OCI) are reclassified to profit or loss. [815-30-40-4]

Example 6.10

Effect of climate-related transition risk on cash flow hedging relationship

Manufacturer has a calendar year-end and makes specialty products for power generation. It hedged the foreign currency risk associated with the sale of a custom-made piece of equipment being developed for an energy producer in Country that was forecasted to occur on March 31, Year 2 and applied hedge accounting.

In September Year 1, before Manufacturer had finished the equipment, Country implemented new climate laws to meet its nationally determined contributions under the Paris agreement. As a result, Manufacturer believes it is probable that the transaction will not occur, and it discontinues hedge accounting.

Therefore, Manufacturer reclassifies amounts related to the hedging relationship from accumulated OCI to earnings as of September Year 1.

Counterparty credit (and own nonperformance) risk

Climate risk may result in increased credit risk. Entities should consider the effects that changes in counterparty credit and their own nonperformance risk have on hedging relationships.

The likelihood of a hedging relationship being significantly affected may differ between entities that have derivative hedging instruments that are exchange-traded or centrally cleared, and those that do not. Derivative instruments that are centrally cleared or exchange-traded are typically considered to have minimal credit (and nonperformance) risk because they generally have variation margin posted daily.

The following are key aspects of hedging relationships that may be affected.

Fair value hedging relationships

Changes in counterparty credit and own nonperformance risk on a derivative instrument’s fair value are not likely to have an offsetting effect on the change in fair value of the hedged item attributable to the hedged risk. As a result, an entity’s assessment of a hedging relationship’s effectiveness may be affected. Also, the extent to which these changes do not perfectly offset is recognized in the income statement. [815-20-35-16]

When the shortcut method is used to assess effectiveness, potential differences in credit risk between the derivative instrument and hedged item

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are generally ignored unless non-default by either party is no longer probable. When non-default is no longer probable, the company discontinues hedge accounting. [815-20-25-103]

**Cash flow hedging relationships**

Counterparty credit risk or an entity’s own nonperformance risk are considered for both the derivative hedging instrument and the forecasted transaction. Changes in fair value of the derivative instrument are recognized in OCI unless a hedging relationship is discontinued. [815-20-25-16(a)]

— **Derivative hedging instrument.** If it is no longer probable that the derivative counterparty or the entity itself will not default, the entity discontinues hedge accounting. Otherwise, changes in counterparty credit risk and an entity’s own nonperformance risk are ignored when assessing effectiveness.

— **Forecasted transaction.** An entity also considers whether changes in counterparty credit or its own nonperformance risk indicate a hedged forecasted transaction is no longer probable. When a hedged forecasted transaction is no longer probable, the entity discontinues hedge accounting.
7. Contingencies and insurance

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   7.2 Environmental remediation liability linked to flooding
7.3 Contingent losses
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   7.3 Contingent loss separate from environmental remediation liability
7.4 Insurance recoveries
   Example
   7.4 Recovery of losses from chemical spillage
7.1 Questions to ask

A contingency arises from an existing condition, situation or circumstance involving uncertainty about the range of possible loss to the entity. [450-20 Glossary]

Climate risk may give rise to both loss contingencies and gain contingencies. This chapter deals with losses related to environmental remediation and other contingencies such as pending or threatened litigation based on the entity’s alleged actions during or in the aftermath of an extreme weather event.

Often contingencies and the related business impacts are insured, and this chapter also discusses insurance recoveries and gain contingencies.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are new environmental regulations changing what assets require environmental remediation or the manner in which remediation is done?</td>
<td>Consider whether new environmental remediation liabilities need to be recognized or existing ones remeasured. Section 7.2 ▶</td>
</tr>
<tr>
<td>Are operations exposed to areas that are becoming high risk for extreme weather events?</td>
<td>Understand the timing of the different accounting entries, which can be in different reporting periods: loss recognition, loss recovery, additional gains. Sections 7.3 and 7.4 ▶</td>
</tr>
<tr>
<td>Is insurance coverage changing?</td>
<td>Understand the implications for financial performance if losses are becoming more likely with shrinking insurance recoveries. Sections 7.2 and 7.3 ▶</td>
</tr>
</tbody>
</table>
7.2 Environmental remediation liabilities

The guidance on environmental remediation liabilities covers pollution arising from past acts. A natural disaster (e.g. a flood, hurricane) may cause environmental contamination (e.g. spillage of hazardous waste), the remediation of which is in scope of Subtopic 410-30. [410-30]

However, the scope of the guidance excludes the following. [410-30-15-3]

— Obligations that both (1) arise from the normal operation of a long-lived asset and (2) are associated with the retirement of that asset. These are AROs, which are discussed in section 3.4.

— Pollution control costs with respect to current operations (a current-period expense) or in accounting for required costs of future site restoration or closure (part of the measurement of an ARO).

— Discretionary actions by management that are not induced by the threat of litigation or of assertion of a claim or an assessment.

The assessment of an entity’s environmental remediation liabilities can be complex, and typically involves consultation with internal and external legal advisors.

The liability is measured based on the incremental direct costs of the clean-up, plus directly attributable employee costs. Projected financial information is discussed in chapter 12. [410-30-30-10]

In addition, a separate asset for any insurance recovery (see section 7.4) or recovery from another responsible party is recognized:

— up to the amount of the recognized loss when receipt is probable and estimable; and

— for any remaining amount(s) when final settlement is reached.

In general, however, there is a rebuttable presumption that receipt of a claim that is subject to litigation is not probable. [410-30-35-9]

Example 7.2

Environmental remediation liability linked to flooding

Flooding at one of Manufacturer’s plants caused a chemical spillage that requires remediation under environmental remediation liability laws. The risk of future flooding is high, and post-remediation monitoring and check-ups will be required.

Manufacturer estimates the following costs related to the clean-up and ongoing monitoring.

<table>
<thead>
<tr>
<th>Clean-up costs: direct, incremental [410-30-30-10(a)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>External fees related to determining the extent of remedial actions required and a remedial investigation-feasibility study</td>
</tr>
</tbody>
</table>
7. Contingencies and insurance

7.3 Contingent losses

The general accounting for contingent losses applies when a loss does not fall in the scope of other guidance – e.g. the requirements for environmental remediation liabilities discussed in section 7.2.

A loss contingency is recognized when: [450-10-20, 450-20-25-2]

— it is ‘probable’ (i.e. likely) that a liability has been incurred; and
— the amount is reasonably estimable.

If the existence of an obligation depends on the future actions of the entity, a liability is generally not recognized until the obligation is unavoidable. Any legal obligations arising from legislation are recognized only when the legislation is enacted. [450-10-55-4, 450-20-25-2, 55-1]

The liability is measured based on the amount of expected loss. If the loss is expected to be within a range and some amount within that range is a better estimate, that amount is recognized. Otherwise, the minimum amount in the range is recognized. [450-20-30-1]
Any expected recovery or reimbursement is recognized separately from the liability (see section 7.4).

**Example 7.3**

**Contingent loss separate from environmental remediation liability**

The following scenarios continue from Example 7.2.

**Scenario 1: Contingent loss separate from environmental remediation liability**

The local town has made a claim against Manufacturer for a loss of tourism revenue caused by the chemical spillage.

Manufacturer concludes that a liability has been incurred and expects to pay somewhere in the range of $5,000 to $7,500. However, Manufacturer is fully insured and therefore does not expect to incur any loss.

Manufacturer recognizes a liability of $5,000 because no other amount in the range is a better estimate. The expectation of an insurance recovery does not reduce the amount of the liability recognized, but may result in recognition of a separate asset (see section 7.4).

**Scenario 2: Cleanup commitment exceeds obligation**

In addition to cleaning up the environmental damage to the standard required, Manufacturer holds a series of town halls to listen to local concerns; subsequently, it publicly commits to install a new structural flood mitigation system to limit future damage.

Manufacturer will capitalize the new system as expenditure is incurred (see section 3.5). It does not recognize a liability in advance of incurring expenditure because it does not have an obligation as a result of a past event. Section 13.6 discusses the disclosure of commitments.

### 7.4 Insurance recoveries

A recovery of a loss or costs incurred (i.e. up to the amount of the loss or costs incurred) with direct linkage to the insured event is recognized when recovery is ‘probable’ (i.e. likely) and reasonably estimable.

The probability-based approach under the loss recovery model may allow entities to recognize a loss recovery up to the costs and losses incurred in the same reporting period that those costs and losses are incurred. The amount is recognized as a separate asset; the right of offset for an insurance recovery and related liability is usually rare.

If an anticipated recovery is not clearly attributable to incurred costs and losses – e.g. lost revenue would not be clearly attributed to costs and losses – an entity delays recognizing the recovery until all contingencies have been resolved (i.e. the claim is settled). In many cases, business interruption and similar
Insurance recoveries are not recognized in the period of the insurable event due to uncertainties about the recovery or the specific losses or costs covered. [450-30-25-1]

**Example 7.4
Recovery of losses from chemical spillage**

Continuing Examples 7.2 and 7.3, Manufacturer has the following pollution liability insurance in place (maximum coverage):

- Clean-up, $7,000 (excludes post-remediation costs)
- Third-party damages, $10,000
- Business interruption, $40,000.

The following is the timeline of events related to the losses and insurance recoveries.

**Year 1**

<table>
<thead>
<tr>
<th>Event</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental remediation liability recognized (Example 7.2)</td>
<td>$ 2,325</td>
</tr>
<tr>
<td>Contingent loss for third-party damages recognized (Example 7.3)</td>
<td>5,000</td>
</tr>
<tr>
<td>Costs incurred from diverting deliveries to other facilities (Year 1)</td>
<td>2,000</td>
</tr>
<tr>
<td>Estimate of lost revenue (Year 1)</td>
<td>12,000</td>
</tr>
<tr>
<td>Estimate of insurance recoveries:</td>
<td></td>
</tr>
<tr>
<td>- Clean-up</td>
<td>3,000</td>
</tr>
<tr>
<td>- Third-party damages</td>
<td>5,000</td>
</tr>
<tr>
<td>- Business interruption (Year 1)</td>
<td>14,000</td>
</tr>
</tbody>
</table>

**Year 2**

<table>
<thead>
<tr>
<th>Event</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual environmental remediation costs incurred</td>
<td>3,500</td>
</tr>
<tr>
<td>Settlement of contingent loss</td>
<td>5,200</td>
</tr>
<tr>
<td>Costs incurred from diverting deliveries to other facilities (Year 2)</td>
<td>2,500</td>
</tr>
<tr>
<td>Estimate of lost revenue (Year 2)</td>
<td>13,000</td>
</tr>
<tr>
<td>Settlement of insurance recoveries:</td>
<td></td>
</tr>
<tr>
<td>- Clean-up</td>
<td>3,500</td>
</tr>
<tr>
<td>- Third-party damages</td>
<td>5,200</td>
</tr>
<tr>
<td>- Business interruption (Years 1 and 2)</td>
<td>29,500</td>
</tr>
</tbody>
</table>

Manufacturer records the following journal entries related to the losses and subsequent recoveries.

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income statement¹</td>
<td>7,325</td>
</tr>
<tr>
<td>Liabilities</td>
<td>7,325</td>
</tr>
</tbody>
</table>

¹ Year 1: To recognize environmental remediation liability and contingent loss.
## Contingencies and insurance

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income statement&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2,000</td>
</tr>
<tr>
<td>Cash</td>
<td>2,000</td>
</tr>
<tr>
<td>Year 1: To recognize incremental operating costs.</td>
<td></td>
</tr>
<tr>
<td>Other asset</td>
<td>9,325</td>
</tr>
<tr>
<td>Income statement&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>9,325</td>
</tr>
<tr>
<td>Year 1: To recognize probable recovery up to amount of loss recognized.</td>
<td></td>
</tr>
<tr>
<td>Receivable</td>
<td>38,200</td>
</tr>
<tr>
<td>Other asset</td>
<td>9,325</td>
</tr>
<tr>
<td>Income statement&lt;sup&gt;2&lt;/sup&gt;</td>
<td>28,875</td>
</tr>
<tr>
<td>Year 2: To recognize full recovery upon settlement with insurer.</td>
<td></td>
</tr>
</tbody>
</table>

### Notes:

1. This example does not illustrate the income statement presentation of the loss and subsequent recovery. The guidance in Topic 220 should be considered and several presentation approaches may be acceptable.

2. Manufacturer recognizes the expected insurance proceeds up to the amount of the recognized loss when receipt is ‘probable’. This estimation does not require settlement with the insurer.

   Manufacturer recognizes the remaining recovery of $3,000 in Year 2 when the settlement is reached; this is when the gain contingency is realized (or realizable). Settlement of the claim in the subsequent events period is a nonrecognized subsequent event that is disclosed. [855-10-25-3]
8. Revenue and inventories

Detailed contents

8.1 Questions to ask
8.2 Emissions reduction targets in revenue contracts
   Example
   8.2 Revenue contract includes emissions targets
8.3 Modifications and terminations
   Example
   8.3 Revenue contract terminated
8.4 Measurement of inventories
8.5 Idle plant capacity, abnormal manufacturing overhead costs and price variances
8.1 Questions to ask

As entities seek to reduce emissions throughout their supply chain, ESG targets (e.g. related to reductions in emissions) may be included in revenue contracts – structured either as an incentive or penalty. A contract may even be cancellable if targets are not met.

In response to climate risk, customers that have entered into long-term contracts with suppliers may seek to adjust terms (or even terminate contracts) to align with their climate-related sustainability objectives.

Climate risk has the potential to impact the valuation of inventory as a result of changes in customer demand and product pricing. Additionally, an entity may experience incremental costs associated with purchase commitments or idled manufacturing capacity.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do revenue contracts include emissions reduction targets?</td>
<td>Understand the implications for revenue recognition. Section 8.2</td>
</tr>
<tr>
<td>Are customers seeking to negotiate modified (or even terminate) contracts?</td>
<td>Understand when a modification results in an adjustment to revenue recognized under the current contract (current period or prospective) versus a separate contract. Section 8.3</td>
</tr>
<tr>
<td>Is climate risk affecting the selling price of inventories?</td>
<td>Review the net realizable (or market) value of inventories. Section 8.4</td>
</tr>
<tr>
<td>Is climate risk affecting the cost of materials used in production?</td>
<td>Reassess what is considered ‘normal’ operating capacity in allocating overhead to inventory. Section 8.5</td>
</tr>
<tr>
<td>Is climate risk affecting the availability of materials used in production?</td>
<td>Understand the accounting for ‘normal’ versus ‘abnormal’ inventory costs. Section 8.5</td>
</tr>
<tr>
<td>Are production facilities located in areas that are becoming high risk for extreme weather events?</td>
<td></td>
</tr>
</tbody>
</table>

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8.2 Emissions reduction targets in revenue contracts

As entities seek to reduce emissions throughout their supply chain, ESG targets (e.g. related to reductions in emissions) may be included in revenue contracts – structured either as an incentive or penalty.

The transaction price includes variable consideration (e.g. rebates, incentives, performance bonuses, performance penalties), based on the estimated amount to which the entity expects to be entitled. [606-10-32-3, 32-6]

An entity includes an estimate of variable consideration to the extent it is ‘probable’ that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. The estimate is updated at each reporting date, with a consequential effect on the transaction price. [606-10-32-11, 32-14]

Variable consideration in a revenue contract is explained in-depth in section 5.3 of KPMG Handbook, Revenue recognition.

Example 8.2

Repayment contract includes emissions targets

Customer has committed to be net-zero by 2030, and is reviewing all of its contracts with suppliers. Service Provider is a logistics company that has committed to be net-zero by 2035 and has set internal milestones to help it meet its commitment. The two companies enter into a five-year contract for Service Provider to provide a variety of logistics services to Customer.

The contract includes annual milestones that relate to Service Provider’s emissions reduction milestones. To the extent that a milestone is not met, the contractual transaction price for that year is reduced by 2%.

As part of determining the transaction price, Service Provider concludes that it is probable it will meet the emissions targets. In reaching this conclusion, Service Provider takes into account the following:

— its net-zero commitment was made two years ago and to date it has met all internal milestones;
— its internal milestones are within its control and are consistent with those specified in the contract with Customer; and
— its internal monitoring of progress toward its net-zero goal indicates that it is probable that its milestones will be met.

Therefore, the transaction price comprises the full contractual amount. Service Provider will review this conclusion at every reporting date for the duration of the contract.
8.3 Modifications and terminations

In response to climate risk, customers that previously entered into long-term contracts with suppliers may seek to adjust terms (or even terminate contracts) to align with their climate-related sustainability objectives.

When determining the transaction price, an entity assumes that the goods or services will be transferred to the customer based on the enforceable rights and obligations in the contract. Therefore, an entity does not consider the possibility of the contract being canceled, renewed or modified, and only accounts for those events when they occur. [606-10-25-10]

Modifications are accounted for when they are approved. [606-10-25-10, 25-12 – 25-13]

— If the modification only adds distinct goods or services at a price commensurate with stand-alone selling price, the modification is accounted for prospectively as a separate contract.

— If the modification is not a separate contract, it is generally accounted for:
  — on a cumulative catch-up basis, if the remaining goods or services are not distinct;
  — prospectively, with a reallocation of remaining revenue under the original contract if the remaining goods or services are distinct; or
  — a combination of cumulative catch-up and prospective when the remaining goods or services are both non-distinct and distinct, respectively.

Aspects of the accounting for contract modifications may be more challenging as climate risk considerations increase, particularly if an entity changes the prices at which it is willing to sell its goods or services due to scarcity in resources, increased costs, or social and environmental awareness.

The accounting for contract modifications as a separate contract depends on the stand-alone selling prices of the additional distinct goods or services at the time of the contract modification. Frequent, inconsistent or rapidly changing prices will make it difficult to determine the stand-alone selling price, including as the market reacts to climate change risk. It may be important to focus on whether there is a past performance issue when the price in the modification is lower than the price in the original contract.

Contract modifications are discussed in chapter 11 of KPMG Handbook, Revenue recognition.

Example 8.3

Revenue contract terminated

Continuing Example 8.2, at the end of Year 3, Customer decides to exercise an early termination clause in the contract with Service Provider and immediately end the contract, for which it will pay a substantive penalty. Although Service Provider met the milestone targets in the contract, Customer has decided to contract with an alternative supplier that is more advanced in reducing its emissions.
The early termination clause did not affect the term of the contract (five years) because the penalty was substantive. Accordingly, the modification (termination) is accounted for when the termination is agreed on.

Note: The effect of termination penalties on the term of the contract is discussed in Questions 3.8.10 and 3.8.20 in KPMG Handbook, Revenue recognition.

8.4 Measurement of inventories

Climate risk has the potential to impact the valuation of inventory as a result of changes in customer demand and product pricing. Additionally, an entity may experience increasing costs of raw materials used in inventory production or idled manufacturing capacity.

In general, inventory is written down to the lower of cost and net realizable value (NRV) at the reporting date, unless there is substantial evidence that market prices will recover before the inventory is sold (e.g. seasonal price fluctuations). NRV is the estimated selling price of the inventory in the ordinary course of business less reasonably predictable costs of completion, disposal and transportation. [330-10-35-1A – 35-1B, 330-10 Glossary]

Inventory measured using last-in, first-out (LIFO) or the retail inventory method is measured by reference to ‘market’ rather than NRV. [330-10-35-1A, 35-1C]

Depending on the inventory turn rate, NRV or ‘market’ may be susceptible to different types of climate risk.

- Extreme weather events can cause inventory to be damaged or destroyed.
- Immediate climate risks can also give rise to generally increasing costs to complete, store and/or transport the inventory. (Abnormal incremental costs are expensed as incurred – e.g. a warehouse is flooded and the entity is unable to move its product until the damage is fixed.)
- Additional risks arise from longer term expectations, and projected financial information is discussed in section 12.4.

8.5 Idle plant capacity, abnormal manufacturing overhead costs and price variances

Costs of production or conversion include all direct costs such as labor, material and direct overheads, and an allocation of fixed and variable production overheads. Production overheads are allocated to inventory based on the normal capacity of the production facilities. [330-10-30-3, 30-8]

Normal capacity reflects planned maintenance and some variation in production levels from period to period and will vary depending on the business and industry. Overhead costs associated with abnormally low production levels are not allocated to inventory and are instead recognized as an expense in the period in which they are incurred. [330-10-30-3, 30-7]
Other items such as abnormal freight, handling costs and amounts of wasted materials (spoilage) are also accounted for as current-period cost of goods sold, not as part of inventory cost. [330-10-30-7]

Physical climate risks, such as from extreme weather events, can result in unplanned downtime and operational disruptions – either because of an event that affected the entity itself, or due to shortages or interruptions to an entity’s materials supply chain.

Conversely, there may be entities in certain industries where the actual level of production is abnormally high – e.g. renewable energy production, wildfire suppressant supplies. In these cases, entities would reduce the amount of fixed overhead allocated to inventories to ensure they are not measured above cost.
9. Compensation and benefits

Detailed contents

9.1 Questions to ask
9.2 Emissions targets in share-based payments
  Example
  9.2 Emissions target in share option awards
9.3 Emissions targets in other compensation arrangements
9.4 Termination benefits
  Example
  9.4 Termination benefits as a result of plant closing
9.1 Questions to ask

It is becoming more common for entities to consider including ESG targets (e.g. related to reductions in emissions) in compensation agreements, especially at the C-suite level. Linking compensation to ESG and strategy was one of the key takeaways from the KPMG Board Leadership Center webcast (replay available) on the 2021 proxy season.

Entities may revise or enter into new compensation arrangements, and evaluate existing compensation arrangements to determine if any specific terms, conditions or estimates have been affected.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will emissions reduction targets be included in stock option awards?</td>
<td>Understand the implications for the recognition of compensation. Section 9.2</td>
</tr>
<tr>
<td>Will emissions reduction targets be included in other compensation</td>
<td>Understand the implications for the recognition of compensation. Section 9.3</td>
</tr>
<tr>
<td>arrangements?</td>
<td></td>
</tr>
<tr>
<td>Will emissions reduction plans result in employees being terminated?</td>
<td>Understand the different types of termination benefits, which have different accounting requirements. Section 9.4</td>
</tr>
<tr>
<td>Will voluntary terminations be offered?</td>
<td>Understand the timing of liability recognition, which is based on ‘acceptance’. Section 9.4</td>
</tr>
<tr>
<td>Will an arrangement for ongoing termination benefits be set up for</td>
<td>Understand the timing of liability recognition, which is based on ‘probability of entitlement’. Section 9.4</td>
</tr>
<tr>
<td>longer term use as your organization carries out its strategy?</td>
<td></td>
</tr>
<tr>
<td>Will a restructuring result in a one-time arrangement under which</td>
<td>Understand the timing of liability recognition, which is based on ‘communication’ date. Section 9.4</td>
</tr>
<tr>
<td>employees will be involuntarily terminated?</td>
<td></td>
</tr>
</tbody>
</table>
9.2 **Emissions targets in share-based payments**

A performance condition is a condition affecting the vesting, exercisability, exercise price, or other pertinent factors used in determining the fair value of an award that relates to both:

- rendering services or delivering goods for an explicit or implicit period of time; and
- achieving a specified performance target that is defined by reference to the grantor’s own operations (or activities) or by reference to the grantee’s performance related to the grantor’s own operations (or activities).

An ESG target (e.g. reduction in emissions) is an example of a performance target.

For awards with performance conditions, compensation cost is recognized when it is probable that the performance condition will be achieved. If the performance condition is not probable, no compensation cost is recognized until it is probable. This assessment is reevaluated at each reporting date to determine if a reversal of compensation expense is required.

If a performance condition is modified, specific accounting requirements apply when either the fair value, vesting conditions or the classification of the award are not the same immediately before or after the modification.

In that case, if the fair value of the grant increases, the incremental fair value of the modified grant is accounted for in addition to the original grant. However, an ‘improbable-to-probable’ modification is accounted for as a new award. Depending on the facts and circumstances, this may result in a lower amount of compensation cost than the grant date fair value of the original award or a greater amount of compensation costs than the sum of the grant date fair value of the original award plus the incremental fair value.

The recognition of compensation cost in a share-based payment award, and subsequent modifications, are discussed in sections 4 and 5 of KPMG Handbook, Share-based payment.

---

**Example 9.2**

**Emissions target in share option awards**

**Scenario 1: New award includes emissions target**

Telco grants share options to senior executives. Vesting occurs if Telco reduces its emissions by 50% at the end of eight years; the base year for measuring reductions is Year 1.

At grant date and at the end of Year 1, Telco determines it is not probable that the ESG target will be met. Accordingly, no compensation cost is recognized.

At the end of Year 2, Telco determines that it is now probable that the ESG target will be met. Accordingly, Telco recognizes compensation cost in Year 2, which includes a catch-up adjustment for Year 1.
Scenario 2: Existing award modified to include emissions target

Continuing Scenario 1, at the end of Year 2, Telco adjusts the emissions target to be net-zero at the end of six years. No other terms are changed.

At the date of modification, Telco determines that it is probable that the original ESG target will be met, and it is also probable that the revised target will be met. In addition, the fair value of the awards has increased since the grant date.

The grant-date fair value constitutes the floor on the compensation cost and continues to be the basis on which compensation cost is recognized. This means that if the senior executives meet the original target but not the revised target, the original calculated compensation cost will be recognized (subject to forfeitures).

However, Telco will recognize incremental compensation cost based on the awards’ fair value at the date of modification.

9.3 Emissions targets in other compensation arrangements

US GAAP contains specific guidance on compensated absences (e.g. vacation accruals) and generally for other non-stock-based compensation arrangements or non-postemployment or non-postretirement plans, normal accrual accounting (probable and estimable) applies. [710-10-25-1, 35-1]

The amount recognized for the period is the best estimate of the amount that the entity expects to pay. If payment is conditional (e.g. on an ESG target being achieved), the conditions and the possibility of forfeiture are considered in measuring the obligation. [712-10-25-4]

9.4 Termination benefits

To align with its sustainability actions in response to climate risk, and entity may execute various programs and actions that result in the termination of employees, such as closure of certain polluting asset facilities, or exit of a product line or type of service (see section 11.4).

The accounting for termination benefits depends on the specific features of the arrangement.

Special termination benefits

Special termination benefits are benefits that are offered to employees for a short period in exchange for voluntary termination. This may arise when an entity makes an operational decision to encourage its employees to voluntarily leave instead of instituting an involuntary reduction in force. It is the employees, and not the entity, who elect to be voluntarily terminated, and they receive the special termination benefit as payment for that voluntary election. [712-20 Glossary]
An entity recognizes a liability for special termination benefits when the employees accept the offer and the amount can be reasonably estimated. [712-10-25-1, 715-10-25-1]

**Contractual termination benefits**

Contractual termination benefits are provided to employees who are involuntarily terminated when a triggering event occurs that is specified in the terms of a plan. A common example is a union contract that includes provisions to pay severance in the event of a plant or office closure. [712-10 Glossary]

Following an event specified in the plan, an entity recognizes a liability for the benefits payable when it is probable that employees will be entitled to benefits and the amount can be reasonably estimated. [712-10-25-2]

**Other postemployment benefits**

Benefits, other than special and contractual termination benefits, are classified as ‘other postemployment benefits’ if they are paid under an ongoing arrangement or substantive plan to: [712-10 Glossary]

— former employees;
— inactive employees – i.e. those not currently rendering services to the entity but who have not been terminated; or
— beneficiaries and covered dependents of former or inactive employees.

If the other postemployment benefit is a vesting or accumulating right, and is probable of being paid and can be reasonably estimated, the expense and liability are recognized as the employee’s service is rendered (i.e. over the service period). [710-10-25-2]

If the other postemployment benefit is not a vesting or accumulating right, the entity applies the loss contingency model (see section 7.3). [712-10-25-5]

**One-time termination benefits**

A different accounting model applies to one-time employee termination benefits. These one-time benefits may be incurred as part of an exit or disposal activity that may be a restructuring. To qualify as one-time termination benefits, they: [420-10 Glossary]

— must be paid to current employees who are being involuntarily terminated; and
— cannot be paid under an ongoing benefit arrangement or an individual deferred compensation contract.

If termination benefits are provided under an ongoing benefit arrangement to employees being involuntarily terminated, they are accounted for either as contractual termination benefits or other postemployment benefits (see above). [420-10-15-6]

A liability (measured at fair value) is generally recognized on the communication date, which is the date the plan of termination for one-time employee termination benefits meets the following recognition criteria and has been communicated to employees: [420-10-25-4, 25-8, 30-1]
— management commits to the plan of termination;
— the plan identifies the number of employees to be terminated, their job classifications or functions and their locations, and the expected completion date;
— the plan establishes the terms of the benefit arrangement in sufficient detail to enable the employees to determine the type and amount of benefits they will receive; and
— actions required to complete the plan indicate it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

### Example 9.4

**Termination benefits as a result of plant closing**

As part of its net-zero strategy, Industrial Manufacturer (IM) is closing one of its older facilities and moving operations to a new state-of-the-art facility in another State.

The following terms are announced on January 31, Year 1.

— Full transition to the new facility will take approximately 12 months.
— All 100 Type I employees are offered voluntary termination and have until the end of February Year 1 to indicate their acceptance of the offer. IM must accept the offer upon submission by the employees, who will each receive $3,000 upon separation on March 15, Year 1.
— Up to 50 Type II employees will be offered voluntary termination and have until the end of February Year 1 to put their names forward. IM will decide in March which 50 employees will be terminated and they will be notified on March 15, Year 1. They will each receive $5,000 upon separation on March 31, Year 1.
— Thereafter, employees who are involuntarily terminated will each receive $2,500 upon separation.

IM recognizes a liability for each type of termination benefit at the following dates.

— **Special termination benefit: Type I employees.** IM recognizes a liability of $3,000 per employee as they accept the offer through the end of February, Year 1.
— **One-time termination benefit: Type II employees.** Although Type II employees are offered voluntary termination, because IM makes the decision to accept or reject, the benefits are not special termination benefits and are instead accounted for as one-time termination benefits. IM recognizes a liability of $5,000 per employee on March 15, Year 1, which is the date of notification to the employees who will be terminated. The criteria to recognize a liability are not met on January 31, Year 1, because the plan does not identify the number of employees who will be affected (‘up to’ 50) and IM is unable to estimate the liability.
— **One-time termination benefit.** IM recognizes a liability of $2,500 per employee as they are involuntarily terminated. For these employees, the
liability is not probable or estimable before this date because IM may or may not involuntarily terminate employees depending on the voluntary acceptance rate.
10. Income taxes

Detailed contents

10.1 Questions to ask
10.2 Valuation allowances
   Example
   10.2 Climate-related negative evidence
10.3 Changes in tax rates
10.4 Investment tax credits
   Example
   10.4 ITC received for climate-related investment in property
10.1 Questions to ask

Taxation is a key tool for policymakers in managing the risks of climate change in the coming years – not simply explicit carbon taxes but also deductions and investment credits, for example.

This chapter discusses certain aspects of income tax accounting that may be relevant in considering climate risk. In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are industry and market conditions changing?</td>
<td>— Understand the external and internal pressure points that affect the recoverability of deferred tax assets.</td>
</tr>
<tr>
<td>Is the legal or regulatory environment changing?</td>
<td>— If a process is set up for monitoring events that might trigger the impairment testing of groups of assets or of goodwill more broadly (see section 5.1), that same process can be used to help assess valuation allowances.</td>
</tr>
<tr>
<td>Are new competitors emerging?</td>
<td>— Section 10.2</td>
</tr>
<tr>
<td>Are costs increasing?</td>
<td>— Section 10.2</td>
</tr>
<tr>
<td>Is financial performance deteriorating?</td>
<td>— Section 10.2</td>
</tr>
<tr>
<td>Are projects essential to your organization’s future strategy struggling to produce results?</td>
<td>— Section 10.2</td>
</tr>
<tr>
<td>Are operations exposed to areas that are becoming high risk for extreme weather events?</td>
<td>— Section 10.2</td>
</tr>
<tr>
<td>Are tax laws changing in jurisdictions in which your organization operates?</td>
<td>Understand the timing of accounting for the effects of changes in tax law or tax rates. Section 10.3</td>
</tr>
<tr>
<td>Will your organization acquire property that qualifies for investment tax credits?</td>
<td>Elect an appropriate accounting policy to be applied consistently to all such credits. Section 10.4</td>
</tr>
</tbody>
</table>

Income tax accounting is discussed in-depth in KPMG Handbook, Accounting for income taxes.
10.2 **Valuation allowances**

A valuation allowance is required for deferred tax assets if, based on available evidence, it is *more likely than not* (i.e., greater than 50% chance) that all or some portion of the asset will not be realized due to the inability to generate sufficient taxable income in the period and/or of the character necessary to use the benefit of the deferred tax asset. [740-10-30-5]

The following possible sources of taxable income may be available to realize the benefit of deferred tax assets: [740-10-30-18]

— future reversals of existing taxable temporary differences;
— future taxable income exclusive of reversing temporary differences and carryforwards;
— taxable income in carryback years if carryback is permitted by the tax law; and
— tax-planning strategies.

In considering evidence about the sources of taxable income, all available evidence, both positive and negative, should be identified and considered when determining whether it is more likely than not that all or some portion of deferred tax assets will not be realized. [740-10-30-23]

As entities formulate strategies for reducing emissions and governments enact policies to mitigate the effects of climate change, this may provide elements of both positive and negative evidence that an entity should consider. However, the following events (not exhaustive) are precluded from being considered when estimating future taxable income to determine whether deferred tax assets are realizable.

— The tax effects of business combinations, including recognition or derecognition of a valuation allowance, are generally recognized and measured at the combination date.
— Changes in tax laws and rates should not be anticipated (see section 10.3).
— Gains or losses from the sale of assets or settlement of a liability resulting from future changes in their fair value should not be anticipated.

The valuation of deferred tax assets is discussed in-depth in section 4 of KPMG Handbook, *Accounting for income taxes.*

---

**Example 10.2**

**Climate-related negative evidence**

The following are possible examples of negative evidence that may arise from climate risk, which should be considered together with all other facts and circumstances.

— Projected increases in costs to comply with enacted environmental regulations.
— Trends, driven by changing customer preferences in favor of low-carbon products, indicate that projected results of operations based on historical results are not reasonable.
Company is developing a new generation of low-carbon products, but does not have a proven record of developing significant and successful new products.

— Loss of a significant customer(s) who switched to a competitor with a lower carbon footprint.

— Company operates in a declining industry that is experiencing negative trends and climate-related stigmatization absent changes in strategy.

— Company’s competitors are reducing emissions at a faster rate, making them more desirable as business partners.

— New competitors are emerging as Company diversifies its service offerings into low-carbon areas.

— Tax-planning strategies that were once seen as prudent and feasible are no longer available because of Company’s climate-related strategy and related operational changes.

### 10.3 Changes in tax rates

Climate-related changes to the tax law or tax rates (e.g. accelerated deductions for investments in low-carbon plant) are one possible incentive for governments to encourage entities to take action in reducing emissions.

The provisions of the applicable tax law may have a significant effect on whether the tax benefits of deductible temporary differences and carryforwards can be realized (see section 10.2). However, expected changes to the tax law or tax rates are not considered before the enactment date – regardless of their likelihood. [740-10-35-4, 55-12, 55-35 – 55-36]

Changes in tax laws, rates or status are discussed in-depth in section 5 of KPMG Handbook, *Accounting for income taxes*.

### 10.4 Investment tax credits

Investment tax credits (ITCs) are another tool that governments use to encourage entities to take action in reducing emissions – e.g. by acquiring qualifying property to facilitate low-carbon projects within communities.

An ITC may be based on a specified percentage of the cost of specified assets and may be used to reduce the amount of income tax payable (subject to certain statutory limitations). The ITC also may result in a reduction in the tax basis of property or may be subject to recapture under certain circumstances.

Assuming the ITC does not fall under other specific accounting requirements, there are two methods of accounting: the deferral method (preferred) and the flow-through method.

— Under the **deferral method**, which is the preferred method, the ITC is reflected in income over the life of the acquired property. The deferred benefit of the ITC is presented either as a reduction of the financial
statement carrying amount of the property acquired (recognized subsequently as a reduction of income tax expense or depreciation expense) or as deferred income (recognized subsequently as a reduction to income tax expense).

— Under the flow-through method, in the year an investment tax credit arises, it is recognized as a reduction in income tax expense.

These methods are discussed from paragraph 10.126 in KPMG Handbook, Accounting for income taxes.

ITCs are different from government grants. The latter generally involve the receipt of cash (or refundable tax credit) by an entity for a past event, and may not depend on current or future taxable income and may not affect the tax basis of the acquired asset.

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**Example 10.4**

**ITC received for climate-related investment in property**

Manufacturer operates in Country X and receives from Country X an ITC for 50% of the purchase price of low-carbon plant that is a qualifying asset. The plant cost $100,000.

The ITC does not result in a reduction in the tax basis of the plant. No valuation allowance is required on deferred tax assets. The tax rate in Country X is 21%.

The plant will be depreciated for both financial statement and tax purposes on a straight-line basis over five years. Manufacturer receives an ITC of $50,000 as a result of the purchase ($100,000 × 50% purchase price). In applying the deferral method, Manufacturer has elected as an accounting policy to record the tax benefit of the credit as a reduction from the carrying amount of the asset.

Manufacturer records the following journal entries upon purchase of the assets.

<table>
<thead>
<tr>
<th></th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td>100,000</td>
</tr>
<tr>
<td>Income taxes payable</td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td>Asset</td>
<td></td>
<td>50,000</td>
</tr>
</tbody>
</table>

Manufacturer also recognizes a deferred tax benefit for the difference between the $50,000 adjusted financial reporting carrying amount and the $100,000 tax basis. In applying the deferral method, Manufacturer has made a policy election to record the corresponding deferred tax benefit as an adjustment to income tax expense instead of further reducing the financial statement carrying amount of the asset.
Manufacturer records the following journal entry.

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred tax asset(^1)</td>
<td>10,500</td>
</tr>
<tr>
<td>Deferred tax benefit</td>
<td>10,500</td>
</tr>
</tbody>
</table>

Note:
1. \(50,000 \times 21\%\).

For the year ended December 31, Year 1, Manufacturer has pretax financial statement income of \(\$50,000\).

Taxable income is \(\$40,000\), which differs from financial statement income due to tax depreciation in excess of financial statement depreciation. Tax depreciation is \(\$20,000\) \((\$100,000 \div 5)\), while book depreciation is \(\$10,000\) \((\$50,000 \div 5)\).

Manufacturer has no other permanent or temporary differences, and records the following journal entries to recognize its Year 1 income tax expense.

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current tax expense(^1)</td>
<td>8,400</td>
</tr>
<tr>
<td>Income taxes payable</td>
<td>8,400</td>
</tr>
<tr>
<td>Deferred tax expense(^2)</td>
<td>2,100</td>
</tr>
<tr>
<td>Deferred tax asset</td>
<td>2,100</td>
</tr>
</tbody>
</table>

Notes:
1. Taxable income of \(\$40,000 \times 21\%\).
2. \$8,400 deferred tax asset at December 31 minus the \$10,500 deferred tax asset at January 1. The ending deferred tax asset of \$8,400 is computed as 21\% times the difference between the \$40,000 financial statement carrying amount of the qualifying asset and its \$80,000 tax basis.
11. Acquisitions and restructuring

Detailed contents

11.1 Questions to ask
11.2 Contingent consideration in a business combination
   Example
   11.2 Contingent consideration in a business combination
11.3 Exit activities related to restructuring
   Example
   11.3 Exit activities – contract termination costs
11.4 Discontinued operations and held-for-sale disposal groups
   Example
   11.4 Climate risk leads to major disposal
11.1 Questions to ask

As ESG issues play a greater role in corporate strategy, acquisitions and restructuring are one way in which entities are seeking new opportunities to gain a competitive advantage. This chapter discusses some of the concepts behind acquisition accounting and disposals.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do contracts to acquire businesses include consideration that is contingent on emissions reduction targets?</td>
<td>Understand the accounting for contingent consideration, as part of the acquisition accounting and subsequently. Section 11.2</td>
</tr>
<tr>
<td>Will operations be restructured?</td>
<td>Understand how to account for the cost of exit activities, including terminating contracts. Section 11.3</td>
</tr>
<tr>
<td>Will your organization dispose of assets as part of its strategy?</td>
<td>Assess the criteria for classifying assets (disposal groups) as held-for-sale, and understand the related measurement. Section 11.4</td>
</tr>
<tr>
<td>Will the disposals represent a significant change in operations?</td>
<td>Assess whether a (planned) disposal rises to the level of a discontinued operation. Section 11.4</td>
</tr>
</tbody>
</table>
11.2 Contingent consideration in a business combination

As part of emissions objectives, an entity may make an acquisition targeted at achieving certain sustainability metrics. Given the defined purpose of the acquisition, the achievement of certain climate-related objectives (e.g. emissions output, green energy certificate generation) could be linked to contingent consideration.

As part of the consideration transferred in a business combination, an acquirer recognizes contingent consideration at fair value at the date of acquisition. Subsequent changes to the fair value of liability-classified contingent consideration are recognized in earnings. In contrast, equity-classified contingent consideration is not remeasured. [805-30-25-5 – 25-6, 35-1]

Contingent consideration in a business combination is explained in-depth in sections 6 and 12 of KPMG Handbook, Business combinations.

Example 11.2 Contingent consideration in a business combination

In January Year 1, Retailer purchased a 70% controlling interest in Target in a business combination for:

— initial cash payment of $1,000; plus
— $500 (cash) to be paid to Seller if Target’s emissions are reduced a specified amount by the end of Year 1.

At the date of acquisition, fair values were as follows:

— contingent payment, $400
— Noncontrolling interests (NCI), $600; for simplicity, the effects of any control premium are ignored.

Retailer records the following journal entries related to the contingent consideration.

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net assets</td>
<td>2,000</td>
</tr>
<tr>
<td>Cash</td>
<td>1,000</td>
</tr>
<tr>
<td>Contingent consideration liability</td>
<td>400</td>
</tr>
<tr>
<td>NCI</td>
<td>600</td>
</tr>
</tbody>
</table>

*Jan Year 1: To recognize contingent consideration (as component of overall entry for the business combination).*
### 11.3 Exit activities related to restructuring

Part of an entity’s plan to reduce emissions may involve restructuring operations, sometimes (but not always) following an acquisition. Examples include selling or terminating a line of business, and ceasing operations in a particular location.  

The guidance on exit costs covers the following costs that might be incurred:

- termination benefits (see section 9.4);
- costs to terminate a contract; and
- costs to consolidate facilities or relocate employees.

A liability for contract termination costs (measured at fair value) is recognized only when the entity:

- terminates the contract – e.g. the entity gives written notice to the counterparty within the notification period specified by the contract; or
- permanently ceases using the rights granted under the contract.

A liability for costs to consolidate facilities or relocate employees (measured at fair value) is recognized when the liability is incurred, which is generally in the period in which the goods or services (e.g. relocation services) are received.

Further, the exit activities may rise to the level of a discontinued operation (see section 11.4).

---

### Example 11.3

**Exit activities – contract termination costs**

In Year 1, Restaurant Co enters into a contract for IT services to develop a system to meet its back-of-house requirements. Under the terms of this multiple-year licensing arrangement, there is a termination payment due if Restaurant Co decides to early terminate the contract, and it must notify the IT provider in writing of its intent three months in advance.
In Q4 Year 2, Restaurant Co decides to terminate the contract and move to another provider that has a net-zero commitment in place. In Q1 Year 3, Restaurant Co formally notifies the IT provider of its intent to terminate the contract. In Q2 Year 3, at the end the notice period, Restaurant Co stops receiving services from the IT provider.

Restaurant Co recognizes the contract termination costs (fair value of the termination penalty) in the period in which it legally terminates the contract (Q1 Year 3). Although the decision is made in Year 2, and services end in Q3 Year 3, notification under the contract occurs in Q1 Year 3.

11.4 Discontinued operations and held-for-sale disposal groups

As an entity implements a plan to reduce emissions, it may give rise to significant changes in the entity’s strategic direction and the make-up of its asset base. Any such changes may result in discontinued operations and assets held-for-sale, which are explained in-depth in KPMG Handbook, Discontinued operations and held-for-sale disposal groups.

Discontinued operations

A discontinued operation is: [205-20-45]

— a ‘component’ of an entity that:
  — has been disposed of (e.g. sold, spun off, abandoned), or meets the criteria to be classified as held-for-sale (see below); and
  — represents a strategic shift that has (or will have) a major effect on an entity’s operations and financial results – i.e. satisfies the strategic shift test; or

— a business or nonprofit activity that, on acquisition, meets the criteria to be classified as held-for-sale.

A ‘component’ of an entity comprises operations and cash flows that can be distinguished clearly, both operationally and for financial reporting purposes, from the rest of the entity. [205-20-20]

The results of discontinued operations are reported separately from continuing operations, as a single amount in the income statement. An analysis of this single amount is presented either on the face of the income statement or in the notes. [205-20-45-3A, 50-5B]
Example 11.4
Climate risk leads to major disposal

Scenario 1: Disposal represents a strategic shift

Food Co manufactures and sells food and beverages that are grouped into four major product lines. Each product line represents an operating segment (see section 13.3).

One of the major product lines is very emissions intensive, and consumer sentiment favoring more sustainable products has been harming Food Co’s overall profitability. Therefore, as part of its net-zero strategy, Food Co decides to sell the product line.

Because the entity is shifting its strategy toward products that are less emissions intensive, and the disposal relates to one of Food Co’s major product lines, the disposal represents a strategic shift that Food Co will report in discontinued operations if and when all other criteria in Subtopic 205-20 are met.

Scenario 2: Disposal does not represent a strategic shift

Bottling Co distributes in North America under one brand name. The operations comprise three individual bottling facilities, all located in North America. Due to changing consumer sentiment favoring more sustainable products, Bottling Co decides to shut down one of its bottling facilities and will run production out of the other two.

Bottling Co determines that the shutdown of its bottling facility will have a major effect on its operations and financial results. However, Bottling Co also determines that the shutdown does not represent a strategic shift because it is not changing the way it is running its business; Bottling Co has not shifted the nature of its operations, nor is it exiting a major geographic area. Therefore, Bottling Co does not report any discontinued operations.

Assets held-for-sale

If an entity decides to dispose of a long-lived asset (or disposal group), it may have to classify the asset (group) as held-for-sale. A long-lived asset (or disposal group) is classified as held-for-sale if the following criteria are met: [360-10-45-9]

— management, having the authority to approve the action, commits to a plan to sell the asset (or disposal group);
— the asset (or disposal group) is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets (or disposal groups);
— an active program to locate a buyer and other actions required to complete the plan to sell the asset (or disposal group) have been initiated;
— the sale of the asset (or disposal group) is probable and transfer of the asset (or disposal group) is expected to qualify for recognition as a completed sale within one year;
— the asset (or disposal group) is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and

— actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Disposal groups that meet the held-for-sale criteria are measured at the lower of carrying amount and fair value less cost to sell. [360-10-35-43]

— Fair value measurement is discussed in chapter 12.
— Costs to sell are the incremental direct costs to transact a sale – the costs that result directly from and are essential to a sale transaction and that would not have been incurred by the entity had the decision to sell not been made.

The disposal group’s long-lived assets are not depreciated or amortized after being classified as held-for-sale. [360-10-35-43]

The assets and liabilities of the disposal group are presented separately on the balance sheet as held-for-sale. The results of the disposal group are reported separately in the income statement as a discontinued operation only if the disposal group is also a component and its sale satisfies the strategic shift test or if it is a business or not-for-profit activity that is classified as held-for-sale on acquisition.
12. Fair value measurement and projections

Detailed contents

12.1 Questions to ask
12.2 Fair value measurement: general principles
12.3 Fair value measurement: income approach
12.4 Entity-specific projections: general principles
12.5 Long-lived assets: recoverability test
12.1 Questions to ask

Fair value measurements and projections are pervasive to financial reporting. Fair value is a market-based concept, whereas projections can be market-based (as one way of measuring fair value) or entity-specific depending on their usage.

Throughout this publication, we refer to climate risk. However, specifically in the context of fair value, both climate risks and opportunities are relevant. For example, an entity that is more advanced in implementing a net-zero strategy may have access to additional markets for its products and services, and have a lower cost of capital.

In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ACTIONS IF ‘YES’ / REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What assets are measured at fair value?</td>
<td>Prepare an inventory of assets measured at fair value. Section 12.2</td>
</tr>
<tr>
<td>Are any liabilities measured at fair value?</td>
<td>Prepare an inventory of liabilities measured at fair value. Section 12.2</td>
</tr>
<tr>
<td>What approach(es) are used to measure fair value?</td>
<td>Map the inventory of assets and liabilities measured at fair value to the approaches used. Sections 12.2 and 12.3</td>
</tr>
<tr>
<td>Has climate risk been considered in measuring fair value using the income approach?</td>
<td>Review the key assumptions in measuring fair value. Section 12.3</td>
</tr>
<tr>
<td>Is climate risk a factor in assessing the recoverability of long-lived assets?</td>
<td>Review the key assumptions in estimating the recoverability of long-lived assets. Section 12.5</td>
</tr>
</tbody>
</table>

Fair value measurement is discussed in-depth in KPMG Handbook, *Fair value measurement*. Projected financial information is discussed in that Handbook to the extent it relates to fair value, or otherwise in the Handbook relevant to the specific topic (see our listing of *US GAAP Handbooks*).
12.2 Fair value measurement: general principles

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is an exit price – e.g. the price to sell an asset instead of the price to buy that asset. An exit price embodies expectations about the future cash inflows and cash outflows associated with an asset or liability from the perspective of a market participant – i.e. based on buyers and sellers who have certain characteristics, such as being independent and knowledgeable about the asset or liability. [820-10 Glossary, 820-10-30-2]

Fair value is a market-based measurement, not an entity-specific measurement, and is measured using assumptions that market participants would use in pricing the asset or liability, including assumptions about risk. As a result, an entity’s intention to hold an asset is not relevant in measuring fair value. [820-10 Glossary, 820-10-35-9]

A fair value measurement is made up of one or more inputs, which are the assumptions that market participants would make in valuing the asset or liability. The most reliable evidence of fair value is a quoted price in an active market. Such values are derived directly from market transactions and therefore any market sentiment toward climate risk and opportunity is inherently incorporated into the valuation. [820-10 Glossary]

When this is not available, an entity uses a valuation approach to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs; the income approach is discussed in section 12.3. [820-10-35-40]

The following are some examples of assets and liabilities that fall in the scope of Topic 820 for the purpose of measurement and/or disclosure.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt securities available-for-sale or held for trading [320, 825]</td>
<td>✓</td>
</tr>
<tr>
<td>Equity securities with a readily determinable fair value (other than equity method investments and consolidated investees) [321, 825]</td>
<td>✓</td>
</tr>
<tr>
<td>Investments of investment companies [946]</td>
<td>✓</td>
</tr>
<tr>
<td>Nonfinancial assets and nonfinancial liabilities initially measured at fair value in a business combination or other new basis event, but not measured at fair value in subsequent periods [806]</td>
<td>✓</td>
</tr>
<tr>
<td>Reporting units measured at fair value as part of the goodwill impairment assessment [350 post-ASU 2017-04]</td>
<td>✓</td>
</tr>
<tr>
<td>Nonfinancial long-lived assets (asset groups) measured at fair value for an impairment assessment [321, 825]</td>
<td>✓</td>
</tr>
</tbody>
</table>
12.3 Fair value measurement: income approach

The income approach converts future cash flows to a current amount on the measurement date. The fair value measurement reflects current market expectations about those future amounts, discounted to their present value. A common valuation technique that falls under the income approach is the discounted cash flow method, which is commonly used in the quantitative impairment test for goodwill. [820-10 Glossary]

The discounted cash flow approach is based on the discounted cash flows derived from future earnings. This requires an entity to make various estimates and judgments that have a significant impact on the fair value estimate. The key drivers of fair value in a discounted cash flow model include:

— the expected future cash flows;
— the forecast period of discrete cash flows;
— the discount rate; and
— if applicable, the derivation of the residual/terminal value.

Each of these assumptions requires management judgment and is determined from a market participant perspective.

The discount rate is based on a market participant’s view of the asset as of the measurement date. It is rare that a discount rate can be observed directly from the market. Therefore, an entity will generally need to build up a market participant discount rate that appropriately reflects the risks associated with the cash flows of the asset being valued.

Within the valuation community, increasing attention is being paid to how climate risk (and opportunity) is factored into the components of the valuation. As valuation practice in this area evolves, we believe the best approach is for management to make inquiries as to whether and how climate risk (and opportunity) has been considered in valuations to be used in the preparation of its financial statements. These inquiries should be informed by the entity’s specific facts and circumstances, including the answers to the questions in section 2.4.

12.4 Entity-specific projections: general principles

Unlike fair value measurements, entity-specific projections (and measurements) are informed by the plans and actions of management instead of being driven by market participant assumptions. However, they are not hypothetical and the relevant standard typically sets specific parameters.

One example that is relevant in considering the effect of climate risk in the financial statements is the recoverability test for the impairment testing of long-lived assets (see section 13.6). The entire measurement is based on entity-specific projections.

In other cases, management’s entity-specific analysis acts as a gating question in determining the appropriate accounting – e.g. in assessing the probability of meeting an emissions reduction target in a revenue contract (see section 8.2),
share-based payment (see section 9.2) or business combination (see section 11.2).

12.5 Long-lived assets: recoverability test

As explained in section 5.3, when an entity concludes that the carrying amounts of one or more long-lived assets may not be recoverable, the first step is to perform a recoverability test.

In performing the recoverability test, the undiscounted expected future cash flows from an asset group (the unit of account) are compared to the asset group’s carrying amount. If the carrying amount exceeds the undiscounted estimated future cash flows, the entity then measures the fair value of the asset group to determine if the carrying amount is impaired.

The recoverability test is discussed in-depth in chapter 7 of KPMG Handbook, Impairment of nonfinancial assets. The following are key points that may be relevant.

**General principles**

The following general principles apply in estimating future cash flows for purposes of the recoverability test.

— **Entity perspective.** The cash flows are based on the entity’s own assumptions about its use of the asset group. [360-10-35-30]

— **Current level of service capacity.** The cash flows are based on the asset group’s current physical output and cash flow generation capacity. [360-10-35-33]

— **From use and disposition.** The cash flows are based on the operation and ultimate disposal of the asset group. The period of operation is based on the useful life of the ‘primary’ asset. [360-10-35-31]

— **Excludes financing.** The cash flows exclude interest charges that will be recognized as an expense when incurred. [360-10-35-29]

— **Undiscounted.** The cash flows are not discounted to a present value.

In addition to the above general principles, there is a specific requirement that the cash outflows related to a recognized ARO be excluded from the recoverability test. [360-10-35-18(a)]

**Assumptions**

The assumptions underlying the estimates of future cash flows must be consistent with the assumptions underpinning other information prepared by the entity, regardless of whether that information has been communicated publicly. Examples include internal budgets and projections, accruals related to incentive compensation plans and MD&A. [360-10-35-30]

The SEC staff has reinforced that the assumptions used to develop cash flows for purposes of applying Topic 360 must be consistent with other financial
statement calculations and disclosures, including disclosures in MD&A and other public communications. [360-10-S99-2]

We do not believe that the Topic 360 or SEC staff guidance literally requires an entity to use the same amounts of cash flows from one estimate to another. However, cash flows used in the recoverability test should be reconcilable to internal forecasts and budgets and the cash flows used in other financial statement measurements.

**Single best estimate vs probability-weighted cash flows**

The general requirement in Topic 360 is for the entity to consider all available evidence, and for the underlying assumptions to be consistent with those used for other estimates.

There are two reasons why probability-weighted cash flows might make sense in considering the effects of climate risk for a particular asset group.

— To comply with the specific requirement to consider the likelihood of the different outcomes if: [360-10-35-30]
  
  - the entity is considering alternative courses of action for the operation or disposition of the asset group; and/or
  - there is a range of possible future cash flows.

— As the environment becomes less certain as a result of climate risk and the range of possible future cash flows widens, entities are more likely to base their recoverability test on probability-weighted cash flows.
13. Presentation and disclosure

Detailed contents

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### 13.1 Questions to ask

This chapter discusses financial statement presentation and disclosure topics that are separate from those required for the topics covered in other chapters (e.g., discontinued operations in section 11.4). In addition to the general questions in section 2.4, the following are example questions specific to the accounting topics discussed in this chapter (not exhaustive).

<table>
<thead>
<tr>
<th>Question</th>
<th>Actions if 'yes' / Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do conditions and events related to climate risk raise substantial doubt about your organization’s ability to continue as a going concern?</td>
<td>Understand the steps required in management’s assessment of whether it is probable the entity will be unable to meet its obligations over a period of one year from the date the entity’s financial statements are issued (or available to be issued). Section 13.2</td>
</tr>
<tr>
<td>Are operations being reorganized, either physically or in terms of reporting?</td>
<td>Consider whether there is a change in operating segments or reportable segments. Section 13.3</td>
</tr>
<tr>
<td>Does your organization have climate-related contingencies that do not meet the criteria to be recognized?</td>
<td>Assess the disclosures being made, particularly in light of SEC staff concerns about the robustness of disclosures. Section 13.4</td>
</tr>
<tr>
<td>Is your organization subject to climate-related risks and uncertainties that could affect estimates in the financial statements in the near term?</td>
<td>Assess the quality of the disclosures being made. Section 13.5</td>
</tr>
<tr>
<td>Does your organization have significant concentrations (e.g. through its supply chain or customer base) that create exposure as a result of climate risk?</td>
<td></td>
</tr>
<tr>
<td>Has your organization made purchase commitments as a result of its emissions reduction strategy that require disclosure?</td>
<td>Assess purchase contracts and determine if they fall within the scope of disclosures for commitments. Section 13.6</td>
</tr>
</tbody>
</table>
13.2 Going concern

Each reporting period, following a two-step process, management assesses whether it is probable the entity will be unable to meet its obligations over a defined period. In extreme cases, climate risks may threaten an entity’s near-term existence as a going concern, or exacerbate existing conditions such that it is no longer a going concern.

The going concern assessment and the appropriate disclosures are explained in-depth in KPMG Handbook, Going concern.

Step 1: Assess whether substantial doubt is raised

Substantial doubt about an entity’s ability to continue as a going concern is raised when it is probable the entity will not be able to meet its obligations during the ‘look-forward period’. The look-forward period spans one year from the assessment date – i.e. the date the entity’s financial statements are issued (or available to be issued). [205-40-50-1, ASU 2014-15.BC24]

Under Step 1, management determines whether there are conditions and events that, considered in the aggregate, raise substantial doubt about the entity’s ability to continue as a going concern. Management can make this determination by breaking the process into smaller steps that collectively identify what the entity has, owes and needs to continue to operate throughout the look-forward period. Step 1 notably requires a thorough analysis of the entity’s debt arrangements and detailed cash flow forecasts. [205-40-50-1 – 50-5]

Climate risk can create or exacerbate such conditions or events, e.g. a supplier or customer renegotiating a contract, a change in customer behaviors, the loss of an operating license, or scarce resources becoming unavailable.

If management determines substantial doubt is not raised, it concludes its going concern assessment with no disclosure or other action. Otherwise, management proceeds to Step 2 to determine whether substantial doubt exists and which disclosures to provide.

Step 2: Assess whether substantial doubt exists

Substantial doubt about an entity’s ability to continue as a going concern exists when such doubt is raised and is not alleviated by management’s plans. Management may implement a variety of mitigation plans, such as disposing of assets or a business, borrowing money, restructuring debt, reducing or delaying expenditures or increasing ownership equity. [205-40-55-3]

Under Step 2, management determines whether these plans alleviate the substantial doubt that is raised in Step 1. For its plans to alleviate the substantial doubt, management must establish that it is probable the plans will: [205-40-50-6 – 50-7]

— be timely implemented – i.e. they are approved and feasible; and
— successfully mitigate the conditions and events that raise the substantial doubt.

This demonstration may prove challenging when key elements of the plan are beyond management’s control. We believe a plan is typically beyond
management’s control when the outcome of critical elements of the plan depends on:
- action from at least one external counterparty; or
- uncontrollable external market forces.

**Disclosures**

There are three potential disclosure outcomes from management’s going concern assessment.

- **No disclosure.** No disclosure is required if management concludes under Step 1 that substantial doubt has not been raised.

- **Disclosures when substantial doubt raised but alleviated.** Even when management’s plans alleviate substantial doubt (Step 2), the entity needs to disclose certain information about its conclusions regarding the going concern assessment.

- **Disclosures when substantial doubt exists.** When management’s plans do not alleviate substantial doubt, the entity needs to disclose that substantial doubt exists

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**Example 13.2**

**Going concern threatened by climate-related customer boycott**

During COVID-19 lock-down measures, the business of Consumer Products Co (CP) was negatively affected by changes in consumer preferences. Sales were reduced, but sufficient to keep Retailer in business thanks to its loyal customer base.

However, brand influencers recently called out CP’s lack of commitment to reduce emissions through its supply chain, and a consumer campaign to boycott its products became an unexpected viral success. As a result, sales have been further reduced and management has concluded that its current situation may raise substantial doubt about CP’s ability to continue as a going concern.

**Step 1: Assess whether substantial doubt is raised**

Absent mitigation measures, at the assessment date, management forecasts that CP’s liquidity situation will deteriorate and it will not be able to meet its obligations in six months.

CP has approved a plan to permanently close half of its stores and sever all corresponding employees, including store back-office clerks and managers, representing half of its workforce. The decision has been announced but has not yet been executed.

In addition, CP plans to negotiate with suppliers to modify and/or terminate certain supply contracts, and will seek to enter into new contracts with suppliers that are committed to reducing emissions.
Because these plans are not fully implemented at the assessment date, their mitigation effect is only considered as part of Step 2. Therefore, management concludes that substantial doubt is raised under Step 1 and then evaluates in Step 2 whether the plans alleviate the substantial doubt.

**Step 2: Assess whether substantial doubt exists**

Management concludes it is probable that its cost-saving measures – i.e. the store closures and its workforce reduction (which is within its control) – will be effectively implemented.

However, the effect of the boycott and management’s plan to adjust CP’s supply chain is not within its control and will take at least a year to implement. Management has commenced discussions with existing and potential suppliers, but agreements have not yet been signed.

Management prepares detailed forecasts and scenario analyses that weigh its cost-saving measures and readily available liquidity resources against the effects of the boycott and brand rehabilitation, and the time needed for CP’s supply chain to be adjusted. After thorough evaluation, management concludes it is probable that its plans alleviate the substantial doubt raised in Step 1, and therefore substantial doubt does not exist.

**Note:** When a plan is beyond management’s control, we believe it is more challenging to demonstrate that it is probable that the plan will be effectively implemented; and generally management will not be able to conclude that it is probable that the plan will be implemented.

**Disclosure**

CP’s financial statements include the following disclosures: [205-40-50-12]

— the principal conditions or events that raised the substantial doubt (before consideration of management’s plans);
— management’s assessment of the significance of those conditions or events in relation to the entity’s ability to meet its obligations; and
— management’s plans to alleviate the substantial doubt.

### 13.3 Segment reporting

Topic 280 requires public entities to disclose segment information in the notes to their financial statements. Entities that are not required to adopt Topic 280, but elect to adopt it, are required to adopt it in its entirety. [280-10-15]

In general, an entity discloses information about ‘operating segments’ that meet quantitative thresholds. An operating segment that meets these thresholds is called a reportable segment. [280-10-50-10]

An operating segment is a component of the entity that: [280-10-50-1]

— engages in business activities;
— has operating results that are regularly reviewed by the entity’s ‘chief operating decision maker’ (CODM) to make decisions about resources to be allocated to the segment and assess its performance; and
— for which its discrete financial information is available.
Once an entity identifies its operating segments, it may aggregate those that meet certain criteria. The purpose of aggregation is to treat operating segments with similar economic characteristics as a single operating segment. However, if operating segments do not meet all of the criteria, in general they are not aggregated. [280-10-50-11]

In response to climate risk, an entity may undergo changes to its overall organization to align with sustainability or net-zero targets, which may include realignments of operations, closures of existing or creation of new facilities or operations. Any reallocation of resources and changes in operations may impact the entity’s reporting structure, including the information provided to the CODM responsible for resource allocation and performance assessment.

If there is a change in the composition of operating segments or in reportable segments, segment information for comparative periods is restated in current-period financial statements to conform to the current-period presentation. [280-10-50-34]

Segment reporting is explained in-depth in KPMG Handbook, Segment reporting.

**Example 13.3**

Resegmentation following implementation of net-zero strategy

O&G Co’s historical business model has been to operate under two separate divisions: upstream and downstream.

Following the hiring of a new CEO to guide its net-zero strategy, O&G Co makes a strategic shift to focus on products that support a low-carbon economy, which it believes will be key to its future success.

As a result, O&G Co combines the two legacy divisions (‘traditional’) and creates two new divisions: renewables and transportation. O&G Co also eliminates the role of the segment managers who have historically been responsible for operating activities, financial results and forecasts for oversight of the legacy divisions.

O&G Co has historically identified two operating segments, which have been based on the two legacy divisions. The CODM historically has been the CEO. But through the development of this new strategy and operating model, O&G Co no longer organizes its sales, operations and management teams under the previous reporting structure. O&G Co has also stopped creating the legacy division level financial data because it believes this data is no longer meaningful, and this information is also no longer discussed in earnings releases or presentations to the board of directors or audit committee.

O&G Co concludes that the new CEO is the CODM because the CEO continues to review the operating results to assess performance and allocate resources. O&G Co also concludes that it has three operating segments: traditional, renewables and transportation.
13.4 Unrecognized contingencies

Contingencies are discussed in chapter 7. A loss contingency is recognized if a loss is probable and it can be reasonably estimated, and specific disclosures are required. [450-20-25-2]

If these criteria are not met, or the potential loss is greater than the amount recognized, the entity discloses the nature of the contingency and an estimate of the possible loss or range of loss (or a statement that an estimate cannot be made). [450-20-50-3 – 50-4]

To the extent that climate risk increases the potential for noncompliance with new environmental laws and regulations, and the threat of litigation increases, these disclosures may be particularly relevant.

Over the years, the SEC staff has expressed concern that many registrants’ disclosures about loss contingencies do not comply with the requirements of Topic 450. These concerns remain relevant not just for SEC registrants, but for all entities applying Topic 450.

— Registrants often do not disclose ranges of reasonably possible losses when known or do not disclose the fact that an estimate of the range of a reasonably possible loss cannot be made. The SEC staff has reminded registrants that:
  - neither precision nor confidence is included in the relevant standards; and
  - registrants should ensure that they attempt an estimate by undertaking a thorough process to determine an estimate of the possible loss or range of loss before concluding that such an estimate cannot be made.

— Disclosures about a specific loss contingency may not have been updated with the passage of time. The SEC staff is skeptical if a range of reasonably possible losses cannot be estimated years after the contingency arose.

— The SEC staff does not believe the requirements in Topic 450 are satisfied by disclosing:
  - a general statement indicating that the eventual outcome of the actions against the registrant will not have a material adverse effect on the financial position or results of operations; or
  - that in the event of unexpected future developments, it is possible that the ultimate resolution of those matters, if unfavorable, may be material to the registrant’s results of operations.

— A liability has been recognized, but registrants have not disclosed:
  - the amount of the accrual when such disclosure may be necessary for the financial statements not to be misleading; or
  - that there is an exposure to loss in excess of the amount accrued and what the additional loss may be for each particular loss contingency.

— Some registrants may have inappropriately recorded loss reserves in immaterial increments over successive periods leading up to a material settlement. With the announcement of a material legal settlement, the SEC staff may review prior period disclosures to:
— assess whether appropriate disclosure was made if the contingent loss was reasonably possible as of previous reporting dates; and
— consider whether related accruals were appropriately recognized (and disclosed in MD&A if necessary) in the period the contingent loss became probable.

The SEC staff has noted that Topic 450 requires registrants to consider all facts and circumstances each reporting period. Discussions with a regulator, calculations of potential damages or settlement offers may provide evidence that there is a reasonable possibility that a loss will be incurred and that disclosure is necessary. Failure to recognize or disclose loss contingencies timely may result in a material error, violation of SEC rules and substantial fines.

13.5 Risks and uncertainties

Topic 275 requires disclosure about risks and uncertainties that could significantly affect the amounts reported in the financial statements in the near term (i.e. within one year of the balance sheet date). This includes disclosures addressing certain estimates and significant concentrations in the entity’s operations. [275-10-05-02]

Estimates

Estimates disclosures are required when, based on known information available before the financial statements are issued (or available to be issued): [275-10-50-8]

— it is reasonably possible that the estimate will change in the near term; and
— the effect of the change will be material.

An entity discloses the nature of the uncertainty and an indication that it is at least reasonably possible that a change in the estimate will occur in the near term. [275-10-50-9]

At the 2019 AICPA National Conference on Current SEC and PCAOB Developments, the SEC staff pointed to the SEC’s 2010 guidance on how disclosure requirements may apply to climate-related issues. See the related discussion in KPMG Defining Issues, SEC to focus on climate-related disclosures, and the latest SEC developments in About this publication.

Although this discussion was in the context of MD&A disclosures, an entity should consider whether additional disclosures should be provided in the financial statements. For example, an entity might conclude that its financial statements should include additional information about how an environment of changing emissions legislation may affect its estimates of AROs, environmental remediation liabilities and/or the useful life of assets affected by efforts to reduce GHG emissions, etc.

Significant concentrations

Vulnerability from concentrations may arise when an entity is exposed to risk of loss greater than it would have been had it mitigated its risk through
diversification. This may be the case when an entity’s supply chain, workforce or customer base depends on a particular geography or market.

Such concentrations are disclosed if they exist at the reporting date and it is reasonably possible that they could have a severe impact in the near term. The assessment also takes into consideration known information available before the financial statements are issued (or available to be issued). [275-10-50-16]

13.6 Commitments

Topic 440 requires disclosure about certain purchase commitments and unconditional purchase obligations.

— The purchase commitments in the scope of Topic 440 include a commitment for plant acquisition (see section 3.5) and related to leases (see chapter 4). [440-10-50-1]

— Unconditional purchase obligations include take-or-pay and throughput contracts, but exclude product financing arrangements in the scope of Topic 470 (debt) and repurchase agreements in the scope of Topic 606 (revenue). [440-10-15-3 – 15-4]

For unrecognized commitments, an entity discloses: [440-10-50-4]

— the nature and term of the obligation(s);
— in aggregate, the fixed and determinable portion of the obligation(s) at the reporting date and, if determinable, for each of the five succeeding fiscal years;
— the nature of any variable components of the obligation(s)
— the amounts purchased under the obligation(s) for each period for which an income statement is presented.

These disclosures do not apply to a mere intent or goal of purchasing items in the scope of Topic 440. Therefore, an entity’s commitment to be net-zero by 2050, for example, does not trigger these disclosures absent other actions.
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- Bankruptcies
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- Climate risk in the financial statements
- Consolidation
- Debt and equity financing
- Derivatives and hedging
- Discontinued operations and held-for-sale disposal groups
- Earnings per share
- Equity method of accounting
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