4.7 CLIMATE-RELATED TRANSITION RISKS

Case study 4: Technology-related risks

Important notice
This unit is part of a package of learning materials designed to support understanding of foundational concepts relating to climate-related financial disclosures. These learning materials do not constitute application or regulatory guidance for the preparation of climate-related financial disclosures and are not intended to represent legal or professional advice. We encourage you to seek your own professional advice to find out how the *Corporations Act 2001* (Corporations Act) and other relevant laws may apply to you and your circumstances, as it is your responsibility to determine your obligations and comply with them.

The company featured in this case study is entirely fictional and presented for illustrative purposes only. It is not intended to represent any real business, past or present. Any resemblance to actual entities is purely coincidental. Different entities have different climate-related risks and opportunities, and so this scenario may not be relevant for your entity.

Key topics

- Climate-related transition risks for entities – technology-related
- Impacts on entities' strategy and operations

Relevance for climate-related disclosures

This unit's case study will help you to understand how climate-related transition risks, in this case, a technology-related risk, can impact entities.

Overview

This unit explores a case study designed to illustrate key concepts related to climate-related transition risks, specifically technology-related risks. It is a hypothetical example involving a small manufacturing business, grounded in real-world developments in clean energy and electrification. It may give you practical insights into:

- understanding technology-related transition risks
- assessing operational and financial exposure to new technology adoption
- identifying the implications of falling behind sector innovation trends, and
- considering response strategies.

Introduction

This case study may help you reflect on how similar technology-related risks could affect the operations and financial performance of your entity. The scenario is intended to prompt consideration of potential vulnerabilities and resilience strategies. This scenario does not describe real events or a real entity but is grounded in realistic conditions where emerging low-carbon technologies may disrupt industries or value chains, and potential response strategies.

Sector: Manufacturing - metal fabrication

ASIC Australian Securities & Investments Commission
Australian Government Australian Accounting Standards Board
UTS STUDIO THREE LEARNING

Business: Small parts manufacturer for construction and agriculture
Location: South Australia
Transition risk type: Technology-related

What is the scenario?

ForgeFab Engineering Pty Ltd is a manufacturer that supplies precision metal parts to machinery manufacturers in construction and agriculture. The company's fabrication process uses high-temperature gas-fired furnaces and cutting systems that are emissions- and energy-intensive.
By 2025, several of ForgeFab's major clients introduce low-carbon procurement targets, shift procurement policies towards lower emission providers and request that suppliers support emissions reductions across their supply chains. At the same time, industry competitors begin to invest in electric induction furnaces and automated laser cutting systems. These technologies reduce emissions and operational energy costs and align with the expectations of downstream customers and financiers.
ForgeFab, however, has not yet begun the transition. Its aging machinery is harder to service, less efficient and produces higher emissions. Retrofitting or replacing equipment would require significant upfront capital, which the business is reluctant to take on without knowing what the returns might look like in future years.
As clients begin favouring suppliers that can help reduce emissions, ForgeFab is at risk of being left behind.

What are some potential business impacts?

Financial

- Exposure to rising energy costs due to inefficient systems
- Lost revenue from clients shifting to lower-emissions suppliers
- High capital investment required for equipment upgrades
- Opportunity to reduce long-term operating costs and attract climate-conscious clients through investment in energy-efficient technologies

Operational

- Maintenance delays and downtime from aging technology
- Difficulty sourcing parts or servicing for older machinery
- Limited internal capability to assess or deploy new technologies
- Increased need for training to deploy and operate new technologies
- Opportunity to improve productivity and operations through modernised systems, digital monitoring, and upskilled technical staff

Strategic

- Pressure to modernise or exit key markets
- Opportunity to strengthen ForgeFab's competitive positioning by transitioning to cleaner technologies and targeting emerging low-carbon market segments

Governance

- Review of capital planning, asset lifecycle and procurement policies
- Increased oversight of innovation policies
- Opportunity to enhance governance by integrating climate and technology considerations into capital planning and strategic investment decisions.

What is the response strategy?

ForgeFab commissions an energy and technology audit to assess upgrade options and align with procurement trends. It investigates finance options and begins discussions with an equipment provider.

ASIC Australian Securities & Investments Commission
Australian Government Australian Accounting Standards Board
UTS STUDIO THREE LEARNING