

## Chapter 3

### Frameworks for reporting carbon risk in Australia

3.1 There is no single framework governing the disclosure of carbon risk in Australia. Some mandatory reporting requirements are established in corporations legislation and regulations. For certain firms, these provisions are supplemented by rules set by supervisory bodies such as the Australian Prudential regulation Authority (APRA) and the Australian Securities Exchange (ASX). Many firms also choose to sign up for voluntary disclosure frameworks. This chapter sets out these respective frameworks, before considering the position in other jurisdictions, as well as multilateral efforts to conclude a standardised framework for reporting carbon risk.

#### Mandatory reporting

##### *Generally applicable provisions*

##### *The National Greenhouse and Energy Reporting Scheme*

3.2 As part of its environment policy, the Australian Government has, since 2007, under the National Greenhouse and Energy Reporting Scheme (NGERS), required disclosure by entities producing high quantities of carbon emissions of a range of information including greenhouse gas emissions and energy production and consumption. Administered by the Clean Energy Regulator, NGERS requires reporting of emissions from activities under the operational control of the entity— Scope 1 or direct emissions and Scope 2 or indirect emissions such as those from consuming purchased energy or heat. Reporting of Scope 3 emissions, indirect emissions from such activities as transport not controlled by the company or from outsourced activities or waste disposal, is not required.<sup>1</sup>

3.3 Disclosure of greenhouse emissions is primarily designed to inform government policy and international reporting rather than to inform investors or ensure financial stability. Nonetheless this information can assist investors to gauge for themselves the degree of direct carbon risk the company is exposed to.

##### *Annual reports*

3.4 The *Corporations Act 2001* contains general disclosure provisions for the contents of annual reports that arguably require disclosure of carbon risks.

3.5 Section 299(1) requires entities to prepare an annual financial report and a directors' report:

The directors' report for a financial year must:

---

1 Clean Energy Regulator, National Greenhouse and Energy Reporting Scheme, 'Assess your obligations', <http://www.cleanenergyregulator.gov.au/NGER/Reporting-cycle/Assess-your-obligations> (accessed 6 March 2017); the different categories of emissions are described in Investor Group on Climate Change, *Submission 28*, p. 7.

- a) contain a review of operations during the year of the entity reported on and the results of those operations; and
- b) give details of any significant changes in the entity's state of affairs during the year; and
- c) state the entity's principal activities during the year and any significant changes in the nature of those activities during the year; and
- d) give details of any matter or circumstance that has arisen since the end of the year that has significantly affected, or may significantly affect:
  - i. the entity's operations in future financial years; or
  - ii. the results of those operations in future financial years; or
  - iii. the entity's state of affairs in future financial years; and
- e) refer to likely developments in the entity's operations in future financial years and the expected results of those operations; and
- f) if the entity's operations are subject to any particular and significant environmental regulation under a law of the Commonwealth or of a State or Territory—give details of the entity's performance in relation to environmental regulation.

3.6 This requirement is added to for listed entities by Section 299A(1), which provides for an operating and financial review (OFR):

(1) The directors' report for a financial year for a company, registered scheme or disclosing entity that is listed must also contain information that members of the listed entity would reasonably require to make an informed assessment of:

- a) the operations of the entity reported on; and
- b) the financial position of the entity reported on; and
- c) the business strategies, and prospects for future financial years, of the entity reported on.<sup>2</sup>

3.7 As the relevant regulator, the Australian Securities and Investments Commission (ASIC) is responsible for providing guidance as to the operation of these provisions. The evidence to the committee was that in the case of carbon risk disclosure, this guidance was limited.

3.8 ASIC's Report 469, for example, included the following, with a reference to Regulatory Guide 247:

We note the recent international focus on environmental and sustainability reporting and the increasing focus on integrated reporting. We would like to remind companies of the importance of including considered risk disclosure

---

2 *Corporations Act 2001*, available at <https://www.legislation.gov.au/Details/C2016C00922/Download> (accessed 20 April 2017).

in the operating and financial review (OFR) of a directors' report, including about environmental, social and governance issues.<sup>3</sup>

3.9 Regulatory Guide 247 (paragraph 63) says:

An OFR should include a discussion of environmental and other sustainability risks where those risks could affect the entity's achievement of its financial performance or outcomes disclosed, taking into account the nature and business of the entity and its business strategy.

3.10 However, the paragraph goes on to say

For example, environmental risks that may affect an entity's achievement of its financial prospects would be more likely for an industrial entity than for a financial services entity.<sup>4</sup>

*Directors' duties*

3.11 Company directors have broad duties arising under the *Corporations Act 2001* and general law. A recent legal opinion by Noel Hutley SC and Sebastian Hartford-Davis, obtained by the Centre for Policy Development, found that company directors who fail to consider and disclose foreseeable carbon risks to their business could be held to be in breach of their duty of due care and diligence.<sup>5</sup>

3.12 The opinion concluded:

There is certainly no legal obstacle to Australian directors taking into account climate changes and other sustainability risks where those risks are, or may be, material to the interests of the company.<sup>6</sup>

***Provisions applicable to particular types of companies***

*Prudential regulation*

3.13 Banks and other financial bodies, superannuation funds and insurance providers are also subject to supervision by APRA. These entities are arguably the ones most exposed to transition risks.

3.14 In a recent speech, an Executive Board Member of APRA, Mr Geoff Summerhayes, noted that some climate risks are financial in nature, and that many

---

3 ASIC, *ASIC regulation of corporate finance: July to December 2015*, Report 469, February 2016, p. 32, [http://www.asic.gov.au/media/3547422/rep469-published-26-february-2016.pdf?utm\\_source=landingpage&utm\\_medium=pdfdownloads&utm\\_campaign=rep469](http://www.asic.gov.au/media/3547422/rep469-published-26-february-2016.pdf?utm_source=landingpage&utm_medium=pdfdownloads&utm_campaign=rep469) (accessed 16 March 2017).

4 ASIC, Regulatory Guide 247, *Effective disclosure in an operating and financial review*, March 2013, p. 19, <http://download.asic.gov.au/media/1247147/rg247.pdf> (accessed 16 March 2017).

5 The opinion is attached to Centre for Policy Development, *Submission 34*.

6 Centre for Policy Development, *Submission 34*, [p. 26].

such risks are 'foreseeable, material and actionable now'.<sup>7</sup> Further, they have potential system wide implications. Mr Summerhayes said that a comprehensive understanding of system-wide risks can only be made if entities are disclosing their own risks. Investors and markets require disclosure in order to respond appropriately to risk. Climate risks would become a more important and explicit part of APRA's thinking.

3.15 In testimony before the committee, Mr Summerhayes explained the rationale for the speech:

As relates to risks that APRA regulated entities face, it is absolutely in APRA's role to highlight those risks and ensure those conversations and assessments are happening within entities. That was the primary purpose of the speech some weeks ago—to put a marker down and flag that we expect entities to be having those conversations. What I would not want to represent is that APRA is about to roll out any additional prudential frameworks or guidance around climate related exposures. We see that our existing risk management frameworks, notably CPS 220, have been the appropriate lens through which these risks can be assessed. That particular standard calls about six specific risks: credit risks, market investment risks, liquidity risks, insurance risks, operational risks, and strategic objectives and business plans. Climate risks potentially impact every one of those...<sup>8</sup>

3.16 Mr Summerhayes also explained how APRA perceived its role in regulating compliance with frameworks such as CPS 220:

APRA is predominantly a supervisory biased regulator, so while we absolutely put out prudential frameworks and standards, the majority of what we do is supervise entities through reviews of those entities, conversations with boards of those entities and with senior executives, and then we do thematic reviews on specific issues in those entities. So, if we went into an entity, as we do on a regular basis, and were to do a risk review on that entity, we would want to see, as it relates to climate, if we thought that was something appropriate for that entity—that that entity had in fact considered those risks as part of their broader risk management framework.<sup>9</sup>

### *ASX Rules*

3.17 Listed entities are also subject to additional requirements by the ASX. The Australian Stock Exchange Corporate Governance Principles and Recommendations say:

---

7 Mr Geoff Summerhayes, Executive Board Member, Australian Prudential Regulatory Authority, *Australia's New Horizon: Climate Change Challenges and Prudential Risk*, Speech to the Insurance Council of Australia Annual Forum 2017, 17 February 2017, <http://www.apra.gov.au/Speeches/Documents/ICA%20Speech%20Geoff%20Summerhayes%2017%20February%202017.pdf> (accessed 16 March 2017).

8 Mr Geoff Summerhayes, Member, APRA, *Committee Hansard*, 8 March 2017, p. 40.

9 Mr Geoff Summerhayes, Member, APRA, *Committee Hansard*, 8 March 2017, p. 40.

---

A listed entity should disclose whether it has any material exposure to economic, environmental and social sustainability risks and, if it does, how it manages or intends to manage those risks.<sup>10</sup>

### **Voluntary reporting**

3.18 There is a large variety of voluntary reporting frameworks. These frameworks are used to varying degrees by Australian companies. Although most are international in origin, a few are locally founded, for instance the Asset Owners Disclosure Project. There are other local initiatives such as the Australian Portfolio Carbon Working Group, an informal collaboration of the four major Australian banks.

3.19 A number of these voluntary reporting frameworks are set out below.

#### ***The Carbon Disclosure Project***

3.20 The most widely used reporting framework now is that of CDP. It was formerly the Carbon Disclosure Project, and is a UK based firm which requests information from companies. It has been operating since 2000, with the initial goal of reducing emissions and therefore climate risk. In 2015 CDP collected data on 5500 companies, 300 cities and 40 sub-national governments. As well as collecting data, it scores and benchmarks the companies' performance. It works on behalf of institutional investors and large purchasing companies, who need the information to make efficient decisions.<sup>11</sup>

3.21 CDP requests information by way of a standardised questionnaire. It collects data on emissions, on performance in reducing emissions, and on climate change related risks and opportunities that could change a business's operations, revenue or expenditure. It also asks whether the risks and opportunities are physical risks, or related to changes in regulation or other climate-related developments.<sup>12</sup>

3.22 It has been estimated that CDP's data covers nearly 60 per cent of global market capitalisation and 25 per cent of global emissions.<sup>13</sup>

#### ***Other international frameworks***

3.23 The Global Reporting Initiative developed the G4 Sustainability Reporting Guidelines which are used by 9000 organisations.<sup>14</sup>

3.24 The Climate Disclosure Standards Board works to standardise climate risk reporting and helps organisations to evaluate the impacts of climate change on their

---

10 Australian Stock Exchange, *Corporate Governance Principles and Recommendations*, 3<sup>rd</sup> Edition, Recommendation 7.4, p. 30, <http://www.asx.com.au/documents/asx-compliance/cgc-principles-temp.pdf> (accessed 16 March 2017).

11 CDP and Climate Disclosure Standards Board, *Submission 22*, p. 3.

12 CDP and Climate Disclosure Standards Board, *Submission 22*, p. 12.

13 Professor Jacqueline Peel, Dr Anita Foerster, Professor Hari Osofsky and Professor Brett McDonnell, *Submission 14*, p. 5.

14 Investor Group on Climate Change, *Submission 28*, p. 7.

operations and to incorporate them in their mainstream reporting. It is a consortium of business and environmental groups formed at the World Economic Forum in 2007.

3.25 The Greenhouse Gas Protocol, convened in 1998 by the World Resources Institute and the World Business Council for Sustainable Development, brings together industry, governments and non-government organisations to develop reporting frameworks and standards. It is still the default standard in countries that have not developed their own accounting systems for greenhouse gases.<sup>15</sup>

3.26 The United Nations Principles for Responsible Investment or PRI, launched in 2006, refers both to the principles and to the network of 300 asset owners and 1000 investment managers who are signatories to the principles.<sup>16</sup>

3.27 A part of the PRI work program is the development of assessment methodologies and reports. However, the assessments are not public.<sup>17</sup> PRI, along with the United Nations Environment Programme Finance Initiative (UNEPFI), has developed a global statement on investor obligations and duties and a series of 'roadmaps' of Fiduciary Duty in the 21st century.<sup>18</sup> PRI has also developed a Global Guide to Responsible Investment Regulation.<sup>19</sup>

3.28 PRI and UNEPFI have sponsored the Montreal Pledge, a framework for voluntary reporting under which the 120 signatories—asset owners and investment managers managing \$10 trillion in assets—measure and publicly disclose the carbon footprint of their investment portfolios.

3.29 The Asset Owners Disclosure Project works with major investors such as pension funds, insurance companies, sovereign wealth funds and universities to improve the level of disclosure in order to protect long term investments including retirement savings.<sup>20</sup>

3.30 The International Integrated Reporting Council has developed a reporting framework which aims to integrate sustainability factors into financial reporting.<sup>21</sup>

### ***Other international approaches***

3.31 Some other countries have adopted a more comprehensive approach towards regulating for the disclosure of carbon risks.

---

15 Investor Group on Climate Change, *Submission 28*, p. 7.

16 UNPRI, 'About the PRI', <https://www.unpri.org/about> (accessed 8 February 2017).

17 'PRI Work Programme 2016', p. 5, available at <https://www.unpri.org/about> (accessed 8 February 2017).

18 Available at <https://www.unpri.org/explore/?q=fiduciary+duty+in+the+21st+century> (accessed 8 February 2017).

19 Available at <https://www.unpri.org/page/responsible-investment-regulation> (accessed 8 February 2017).

20 CDP and Climate Disclosure Standards Board, *Submission 22*, p. 17.

21 Investor Group on Climate Change, *Submission 28*, p. 7.

---

### *The United States*

3.32 The United States Securities and Exchange Commission issued guidance in 2010 on how its existing general disclosure requirements should apply to climate change matters.<sup>22</sup> The status quo was that disclosure was required for material matters, and the standard for materiality was 'if there is a substantial likelihood that a reasonable investor would consider it important in deciding how to vote or make an investment decision'. This was already taken to include the costs of complying with environmental laws and any impending environmental litigation, and to include disclosure of risks.<sup>23</sup> The 2010 guidance makes explicit that the costs of complying with local and overseas regulation should be disclosed, and includes not only those directly affected but also users of the products of those companies, the prices of which might rise. It also points to changes in markets, which may present new risks and opportunities; reputational risk; and the risk of actual physical damage.<sup>24</sup> These provisions apply to public companies.

### *France*

3.33 The Energy and Ecology Transition Law of 2015 requires listed companies and institutional investors to disclose not only their carbon emissions but also their exposure to carbon risk. The legislation sets emissions targets, and listed companies have to include in their annual reports the impact on climate change of their activities and the impact the consumption or use of their products will have, and their exposure to transitional risks, for example in their supply chains or changes in international regulation. Institutional investors have to report on their contribution to meeting French and international emissions targets, which may include changes in their activities or divestment of certain assets. They also have to report on the exposure of their assets to carbon risk, both physical and transitional, and detail the stress testing they have undertaken to assess their portfolio risk.<sup>25</sup>

### *The United Kingdom*

3.34 In 2013 new regulations under the Companies Act provided for large and medium-sized listed companies to publish a strategic report which reports, to the extent necessary for an understanding of the company's operations, on environmental matters (among others), including the impact of the company's operations on the environment.<sup>26</sup> It also requires a directors' report which includes disclosure of

---

22 Securities and Exchange Commission (SEC), *Commission Guidance Regarding Disclosure Related to Climate Change*, <https://www.sec.gov/rules/interp/2010/33-9106.pdf> (accessed 9 February 2017).

23 SEC, *Commission Guidance Regarding Disclosure Related to Climate Change*, pp. 11, 13–14.

24 SEC, *Commission Guidance Regarding Disclosure Related to Climate Change*, pp. 22–27.

25 Professor Jacqueline Peel and others, *Submission 14*, pp. 8–9; CDP and Climate Disclosure Standards Board, *Submission 22*, p. 15; Investor Group on Climate Change, *Submission 28*, p. 10.

26 Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013, section 414C, <http://www.legislation.gov.uk/ukdsi/2013/9780111540169> (accessed 10 February 2017).

greenhouse emissions including emissions from both direct activities and the purchase of electricity, heat, steam or cooling. As well as describing the methodologies used, the report 'must state at least one ratio which expresses the quoted company's annual emissions in relation to a quantifiable factor associated with the company's activities'—that is, it must give some basis for comparison of emissions intensity.<sup>27</sup>

### *The European Union*

3.35 In 2014 the European Parliament strengthened the disclosure requirements applying to companies and other 'public interest entities' with 500 or more employees. They are now required to disclose policies, risks and outcomes related to environmental matters including greenhouse gas emissions (among other social and governance matters).<sup>28</sup> National governments are required to put in place regulatory regimes to ensure consistent reporting requirements.<sup>29</sup>

### **The Task Force on Climate-related Financial Disclosures**

3.36 In April 2015 the G20 group of nations requested the Financial Stability Board to review how the financial sector can take account of climate-related issues.

3.37 The Financial Stability Board is an international organisation whose goal is to promote world financial stability. It works with financial authorities and standard-setting bodies to achieve strong supervisory and regulatory policies and consistent implementation of those policies. In response to the G20's request, it identified the need for better information to support informed investment, lending and insurance underwriting decisions.<sup>30</sup>

3.38 In late 2015, it established a Task Force on Climate-related Financial Disclosures (the Task Force):

The Task Force will consider the physical, liability and transition risks associated with climate change and what constitutes effective financial disclosures in this area. It will seek to develop a set of recommendations for consistent, comparable, reliable, clear and efficient climate-related disclosures.<sup>31</sup>

---

27 Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013, Part 7, 'Disclosures Concerning Greenhouse Emissions'.

28 Investor Group on Climate Change, *Submission 28*, p. 10.

29 Directive 2014/95/EU of the European Parliament and of the Council, 22 October 2014, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095>, (accessed 10 February 2017).

30 Task Force on Climate-related Financial Disclosures, *Recommendations of the Task Force on Climate-related Financial Disclosures*, p. iii, [https://www.fsb-tcfd.org/wp-content/uploads/2016/12/16\\_1221\\_TCFD\\_Report\\_Letter.pdf](https://www.fsb-tcfd.org/wp-content/uploads/2016/12/16_1221_TCFD_Report_Letter.pdf) (accessed 17 February 2017).

31 Financial Stability Board, 'FSB to establish Task Force on Climate-related Financial Disclosures', press release, 4 December 2015, <http://www.fsb.org/wp-content/uploads/Climate-change-task-force-press-release.pdf> (accessed 16 February 2017).

3.39 The Task Force was chaired by Michael R Bloomberg, chief executive of a global financial services company. Its membership comprised:

- four vice-chairs, respectively from a bank, an insurance company, a manufacturer and a stock exchange;
- 12 'data users', from the investment industry including banks and pension funds;
- seven 'data preparers', from companies with significant environmental impacts;
- seven 'other experts', from consulting companies and ratings agencies; and
- a 'special advisor' from HSBC.<sup>32</sup>

3.40 The audience for the Task Force's work is companies who need to know what information is wanted by interested parties, including investors, lenders and insurers, in order to make good decisions. The Task Force aimed to make recommendations that all organisations would be able to respond to. It should be possible to incorporate the recommended disclosures in company financial reporting. The information the recommendations elicited would be 'decision-useful' and forward looking. There would be a strong focus on risks and opportunities presented by the transition to a low-carbon economy.<sup>33</sup>

### ***Recommendations of the Task Force on Climate-related Financial Disclosure***

3.41 The Task Force published its Recommendations Report in December 2016. The format of the recommendations is four general recommendations, each of which is followed by a list of recommended disclosures.

3.42 The general recommendation on **Governance** is: Disclose the organisation's governance around climate-related risks and opportunities. The recommended disclosures of governance are:

- describe the board's oversight of climate-related risks and opportunities; and
- describe management's role in assessing and managing climate-related risks and opportunities.

3.43 The general recommendation on **Strategy** is: Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning. The recommended disclosures of strategy are:

- describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term;

---

32 Task Force on Climate-related Financial Disclosures, 'Task Force Overview', <https://www.fsb-tcfd.org/about/#> (accessed 16 February 2017).

33 Task Force on Climate-related Financial Disclosures, *Recommendations of the Task Force on Climate-related Financial Disclosures*, p. iii, [https://www.fsb-tcfd.org/wp-content/uploads/2016/12/16\\_1221\\_TCFD\\_Report\\_Letter.pdf](https://www.fsb-tcfd.org/wp-content/uploads/2016/12/16_1221_TCFD_Report_Letter.pdf) (accessed 17 February 2017).

- describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning; and
- describe the potential impact of different scenarios, including a 2°C scenario, on the organisation's businesses, strategy, and financial planning.

3.44 The general recommendation on **Risk Management** is: Disclose how the organisation identifies, assesses, and manages climate-related risks. The recommended disclosures of risk management are:

- describe the organisation's processes for identifying and assessing climate-related risks;
- describe the organisation's processes for managing climate-related risks; and
- describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

3.45 The general recommendation on **Metrics and Targets** is: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities. The recommended disclosures of metrics and targets are:

- disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process;
- disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks; and
- describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.<sup>34</sup>

3.46 These recommendations are probably not controversial among those who have been involved in carbon risk disclosure. The real value of the Task Force may be in 'awareness-raising for climate-related topics among investors, government organisations and businesses.'<sup>35</sup>

3.47 The Recommendations Report recommends voluntary reporting. However, if these requirements were included in rules such as stock exchanges' listing rules, they would in effect become mandatory.

3.48 The Recommendations Report is explicit that the recommendations are not a final answer:

The Task Force's recommendations provide a foundation for climate-related financial disclosures and aim to be ambitious, but also practical for near-term adoption. The Task Force expects that reporting of climate-related risks and opportunities will evolve over time as organizations, investors,

---

34 Task Force on Climate-related Financial Disclosures, *Recommendations of the Task Force on Climate-related Financial Disclosures*, p. 16, [https://www.fsb-tcf.org/wp-content/uploads/2016/12/16\\_1221\\_TCFD\\_Report\\_Letter.pdf](https://www.fsb-tcf.org/wp-content/uploads/2016/12/16_1221_TCFD_Report_Letter.pdf) (accessed 17 February 2017).

35 Chartered Accountants Australia and New Zealand, *Submission 12*, p. 3.

---

and others contribute to the quality and consistency of the information disclosed.<sup>36</sup>

### ***The Task Force on Climate-related Financial Disclosures and scenario analysis***

3.49 A section of the Recommendations Report of the Task Force on Climate-related Financial Disclosures is devoted to scenario analysis.<sup>37</sup> As well as the section in the main report, there is a Technical Supplement which gives more detail.<sup>38</sup>

3.50 In particular, the report suggests that organisations should model what might happen to them in the circumstances where action is taken to limit global temperature rise to 2°C, that is, the less challenging of the Paris Agreement goals.

3.51 While the report says that it is important that all organisations consider 'a basic level of scenario analysis in their strategic planning and risk management processes', it also suggests different types of analysis depending on the kind of exposure and the level of experience in scenario analysis. Resource intensive organisations with high greenhouse gas emissions should model their transition risks because of their exposure to policy actions, subsidies or taxes, and market changes aimed at energy efficiency. Similarly, organisations exposed to climate change because they have long-lived fixed assets located in climate sensitive regions or relying on water supply (or with parts of their value chains so exposed) would do well to model physical risks. Organisations that are new to scenario analysis may begin with a qualitative discussion of how the organisation's strategies might change under various scenarios.<sup>39</sup>

3.52 The report suggests that scenario analysis—including a description of how and why the scenarios have been chosen and developed—should be reported in the organisation's mainstream financial reporting. This would be a change from most current reporting practice, which focuses on past performance and short term forecasts.

---

36 Task Force on Climate-related Financial Disclosures, *Recommendations of the Task Force on Climate-related Financial Disclosures*, p. 4.

37 Task Force on Climate-related Financial Disclosures, *Recommendations of the Task Force on Climate-related Financial Disclosures*, pp. 26–32.

38 Task Force on Climate-related Financial Disclosures, *The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities*, 14 December 2016, <https://www.fsb-tcfd.org/wp-content/uploads/2016/11/TCFD-Technical-Supplement-A4-14-Dec-2016.pdf> (accessed 20 February 2017).

39 Task Force on Climate-related Financial Disclosures, *Recommendations of the Task Force on Climate-related Financial Disclosures*, pp. 28–31.

