

**DIRECTORS' DUTIES IN THE ANTHROPOCENE**  
**LIABILITY FOR CORPORATE HARM DUE TO INACTION ON**  
**CLIMATE CHANGE**

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## ***Anthropocene***

Pronunciation: /ˈænθrəpəˌsiːn/

*adjective*

relating to or denoting the current geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment.

Angus Stevenson (ed), *Oxford Dictionary of English* (Oxford University Press, 3<sup>rd</sup> ed, 2012).

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*A new term has emerged in recent years to describe our modern era – the Anthropocene. It rightly implies that in this age humans became the dominant force shaping our physical environment. It is evident that an economy that extracts resources at increasing rates without consideration for the environment in which it operates, without consideration for our natural planetary boundaries, cannot continue indefinitely. In a world of soon to be nine billion consumers who are actively buying manufactured goods, this approach will hamper companies and undermine economies. We need a new way of doing business.*

**Paul Polman, Executive Director and Chief Executive Officer, Unilever LLC**

Forward to Ellen MacArthur Foundation, *Towards the Circular Economy 2: Opportunity for the Consumer Goods Sector*, Cowes, January 2013, 1.



# DIRECTORS' DUTIES IN THE ANTHROPOCENE

SARAH BARKER\*

## ABSTRACT

*The science relating to anthropogenic climate change is no longer in credible dispute. With its physical and economic impacts increasingly observed, the attention of legal commentators has begun to broaden from responsibility for emissions mitigation to liability for climate change-induced harms.*

*At the same time, Courts are demanding higher standards of proactivity and engagement from corporate boards in order to satisfy their statutory directors' duties.*

*This paper combines, and extends, those two areas of scholarship by examining whether common corporate governance approaches to climate change may contravene directors' primary duties under Chapter 2D of the Corporations Act.*

*It concludes that, even where directors' subjective bona fides are not in question, passivity, reactivity or inactivity on climate change governance is increasingly likely to contravene the duty of care and diligence under section 180(1) of the Corporations Act, and increasingly unlikely to satisfy the 'business judgment rule' defence under section 180(2). This includes governance strategies that emanate from climate change denial, a failure to consider its impacts due to ignorance or unreflective assumption, paralysis caused by the inherent uncertainty of its magnitude and timing, or a default to a base set by regulators or industry peers. In addition, even considered decisions to prevail with 'business as usual' are increasingly unlikely to satisfy the duty (or the business judgment rule defence) - particularly if they are the product of a conventional methodology that fails to recognise the unprecedented challenges presented by an erratically changing climate. In addition, whilst unorthodox, it is reasonably arguable that a failure to actively consider the impacts of climate change may also breach the duty to act in good faith in the best interests of the corporation under section 181.*

*Accordingly, directors who do not proactively respond to the commercial risks and opportunities of climate change, now, may be held to account under the Corporations Act if corporate value becomes impaired into the future.*

# INTRODUCTION

Like the long-tail effect of greenhouse gas emissions, legal claims may be slow to gestate. But the law has a long memory, so courts of the future will reflect on the state of knowledge currently at hand to determine whether decision-makers of today did enough to avoid or minimise the worst exposures to climate change.<sup>1</sup>

Commercial corporations are legal constructs established to manage the generation of wealth. Whilst ‘owned’ by shareholders, they are separately governed by a board of directors. Directors’ core functions include the supervision of performance in pursuit of the wealth-maximisation objective. In practice, this requires oversight of corporate policy, risk and strategy. In discharging their functions, directors owe a number of duties to their firm, including those set out under Chapter 2D of the *Corporations Act 2001* (Cth) (*Corporations Act*).

The scientific basis of one material corporate risk, anthropogenic climate change, is no longer in credible dispute. Its biophysical impacts - from gradual increases in average global temperatures and sea levels, to more frequent extreme weather events - present unparalleled economic risks and opportunities. Corporations who do not proactively adapt face increasing competitive disadvantage, bringing with it the prospect of value impairment and, in some cases, insolvency.<sup>2</sup>

Despite this, there remains a significant disconnect between the *recognition* of climate change impacts and the corporate governance *response*.<sup>3</sup>

With the impacts of climate change already being observed, the attention of legal and management scholars has broadened from responsibility for emissions mitigation, to liability for climate change-induced harms. However, examination of the question of *directors’* liability for such damage remains embryonic. This paper extends the liability debate in Australia by applying directors’ primary statutory duties under the *Corporations Act* to common governance responses to climate change. It contends that, even where a director’s subjective bona fides are not in question, boardroom passivity, inactivity or reactivity on the risks and opportunities presented by climate change is likely to contravene the duty of due care and diligence under section 180(1) of the *Corporations Act*, and unlikely to satisfy the business judgment rule defence in section 180(2) (**Business Judgment Rule**). In addition, whilst an unorthodox application of the law, such conduct may contravene the director’s duty to act in good faith in the best interests of the firm under section 181. Accordingly, this paper

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<sup>1</sup> Jan McDonald, ‘A Risky Climate for Decision-Making: The Liability of Development Authorities for Climate Change Impacts’ (2007) 24 *Environmental and Planning Law Journal* 407, 409.

<sup>2</sup> Murray Hogarth and Andrew Tovey, *The Phoenix Effect: New Frontiers for Sustainability and the Economy*, report prepared for Green Capital and the Total Environment Centre, Sydney, July 2013; David A Lubin and Daniel C Etsy, ‘The Sustainability Imperative: lessons for leaders for previous game-changing megatrends’, *Harvard Business Review*, May 2010, 42.

<sup>3</sup> See, eg Shardul Agrawala, Maëlis Carraro, Nicholas Kingsmill, Elisa Lanzi, Michael Mullan and Guillaume Prudent-Richard, ‘Private Sector Engagement in Adaptation to Climate Change: Approaches to Managing Climate Risks’, OECD Environmental Working Papers, No. 39, OECD Publishing, revised February 2013; Lupin. <<http://dx.doi.org/10.1787/5kg221jkf1g7-en>>, 41; Baker & McKenzie, *Pension and Superannuation Trustees and Climate Change Report*, Sydney, 2012, 16; Øyvind Ihlen, ‘Business and climate change: the climate response of the world’s 30 largest corporations’ (2009) 3(2) *Environmental Communication: A Journal of Nature and Culture* 244; Barton Loechel, Jane Hodgkinson and Kieran Moffat, ‘Climate Change Adaptation in Australian Mining Communities: comparing mining company and local government views and activities’ (2013) 119 *Climate Change* 465; PriceWaterhouseCoopers, *Business resilience in an uncertain, resource-constrained world: CDP Global 500 Climate Change Report 2012*, report prepared for the Carbon Disclosure Project, London, 2012; United Nations Global Compact (UN Global Compact), *Adapting for a Green Economy: Companies, Communities and Climate Change*, A Caring for Climate Report for the UN Global Compact, UNEP, Oxfam and the World Resources Institute, New York, June 2011, 5, 6.

demonstrates that directors who do not proactively govern for the commercial risks and opportunities of climate change, *now*, may be exposed to liability under the *Corporations Act* if corporate value becomes impaired into the future.

## Structure, scope and method of analysis

The analysis in this paper is structured as follows. **Chapter One – Climate Change and the Law** examines the nature of anthropogenic climate change, and surveys the prevailing legal approach to its relationship with corporate governance. **Chapter Two – The Role and Duties of Directors** examines the core functions of directors, and the primary statutory duties they must observe. **Chapter Three – Climate Change Science and Corporate Implications** provides the scientific and economic context for the legal analysis. It summarises the current peer-reviewed science on observed, expected and potential impacts of climate change, and considers its implications for corporate risk, strategy and wealth maximisation. **Chapter Four – Directors’ Duties and Climate Change in Practice** applies the conclusions of the foregoing Chapters to give specificity to the content of directors’ duties in governing for the corporate risks and opportunities presented by climate change. It critically evaluates common explanations for governance inaction - from denialism and ignorance to uncertainty and regulatory compliance - in the context of prevailing case law directors’ primary statutory duties under the *Corporations Act*. **Chapter Five – Conclusion** offers conclusions from the analysis for both legal theory and corporate governance practice.

The analysis in this paper hypothesises a non-executive director of a solvent, for-profit corporation, acting in good faith and without a conflict of interest. It examines arguments that may be raised to prosecute their *current* governance conduct as a breach of duty, should the corporation suffer future damage due to the impacts of climate change.

Whilst directors are subject to duties under statute, common law and/or equity,<sup>4</sup> the analysis is confined to the two primary duties under the *Corporations Act* – that to exercise due care and diligence (subject to the Business Judgment Rule) under section 180, and to act in good faith in the best interests of the corporation and for a proper purpose under section 181. These duties are owed to the corporation,<sup>5</sup> and are enforceable by the Australian Securities and Investments Commission (ASIC), the corporation itself (or its liquidators), or by shareholders under a derivative action. In particular, this paper does not consider potential liability under:

- section 182 of the *Corporations Act* (the duty not to improperly use their position) or section 183 (the duty not to improperly use information obtained in their role), nor related conflict of interest and/or misappropriation provisions under sections 191-195 and Chapter 2E; or
- the broader liability of directors (under the *Corporations Act* or otherwise) where the corporate response (or lack thereof) to the risks presented by climate change causes damage to a *third party* (such as a neighbouring landholder).

At the outset, it must be emphasised that the mere fact that a corporation sustains loss – even catastrophic loss – will not be sufficient to establish misconduct or enliven the personal liability of its

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<sup>4</sup> For a general discussion of directors’ duties in Australia see Robert P Austin and Ian M Ramsay, LexisNexis, *Ford’s Principles of Corporations Law* (at September 2013), Chapter 8 (hereafter **Ford**); Robert P Baxt, *Duties and Responsibilities of Directors and Officers* (Australian Institute of Company Directors, 20<sup>th</sup> revised ed, 2012).

<sup>5</sup> See for example *Bell Group Ltd (in liq) v Westpac Banking Corporation (No 9)* (2008) 39 WAR 1, 533-4 [20.3.2] (**Bell Group Trial**).

directors. At issue is the point at which a director's failure to adequately govern corporate risk and strategy is so egregious as to comprise a breach of their duties to their firm. The underlying policy tension is that between the desirability to hold directors accountable for their failures, and the Courts' reluctance to second-guess decisions made in good faith within directors' commercial remit – which inherently involve judgments about risk and strategy.<sup>6</sup> Similarly, this paper does not suggest that directors will automatically breach their duties because the passage of time and/or benefit of hindsight reveals a particular decision to be poor. Rather, the relevant examination is of the conduct of directors in the *context* of that governance decision – deficiencies in the information systems applied, methods of evaluation or quality of monitoring and oversight – that may bring into question their competence and/or bona fides.

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<sup>6</sup> See eg *Australian Securities and Investments Commission (ASIC) v Maxwell* (2006) 59 ACSR 373, 397 [102] (*ASIC v Maxwell*); *ASIC v Lindberg* (2012) 91 ACSR 640, 654 [72] (*ASIC v Lindberg*).

# 1 CLIMATE CHANGE AND THE LAW

*The impacts of climate change are already being observed, and the scale and speed of responses required to avoid catastrophic future impacts are intensifying. Commentators have therefore begun to actively consider the question of liability for climate change-induced harms. This paper extends the emerging scholarship by considering whether directors may be liable for a breach of statutory duty in the event that their corporation suffers damage due to climate change.*

## 1.1 What is anthropogenic climate change?

‘Climate change’ is:

[A] change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.<sup>7</sup>

Its primary cause is the emission of carbon dioxide and other ‘greenhouse gases’,<sup>8</sup> such as methane and nitrogen, from industrial activity.<sup>9</sup> These gases accumulate in the atmosphere and, in simple terms, act to trap heat that would otherwise radiate into space.

The ecological consequences of anthropogenic climate change are stark. They include both:

- (a) *gradual onset* impacts, such as an increase in global average temperatures, rising sea levels due to water expansion and ice melt, and alteration of regional precipitation patterns. These impacts, in turn, can cause inundation of coastal and estuarine areas, regional droughts, ocean acidification, shifts in productive and habitable lands, and extinction of species of flora and fauna; and
- (b) *catastrophic events* caused by increased variability and extremity in weather patterns (including in the frequency, distribution and duration of ‘extreme weather’<sup>10</sup> events).<sup>11</sup>

<sup>7</sup> Conference of the Parties, United Nations Framework Convention on Climate Change (UNFCCC), *Report of the Conference of the Parties on its Sixteenth Session, Held in Cancun, Mexico from 29 November – 10 December 2010*, UN Doc FCCC/CP/2010/7/Add.1 (15 March 2011).

<sup>8</sup> ‘Carbon’ is used in this paper as shorthand for the six types of greenhouse gases identified in the Kyoto Protocol: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Emissions of each of these gases can be measured in tonnes of carbon dioxide equivalent (t CO<sub>2</sub>-e).

<sup>9</sup> See especially Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2013: The Physical Science Basis - Approved Summary for Policymakers*, Working Group I Contribution to the IPCC Fifth Assessment Report (IPCC, 27 September 2013).

<sup>10</sup> The IPCC defines an ‘extreme weather’ event as ‘an occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values for the variable’: IPCC, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change, Field, CB, V Barros, TF Stocker, D Qin, DJ Dokken, KL Ebi, MD Mastrandrea, KJ Mach, GK Plattner, SK Allen, M Tignor, and PM Midgley (eds), (Cambridge University Press, 2012), 5.

<sup>11</sup> IPCC, above n 9, 2-14. See also IPCC, *Climate Change 2013: The Physical Science Basis - Headline Statements from the Summary for Policymakers*, Working Group I Contribution to the IPCC Fifth Assessment Report (IPCC, 27 September 2013); IPCC, *Climate Change 2007: Synthesis Report*, Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Rajendra K Pachauri and Andy Reisinger (eds) (IPCC, 2007); Will Steffen and Lesley Hughes, *The Critical Decade – Climate Change Science, Risks and Responses*, report for the Climate Commission Secretariat, Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, Commonwealth of Australia, Canberra, June 2013; World Meteorological Organisation (WMO), *A Summary of Current Climate Change Findings and Figures*, WMO Information Note, March 2013, <<http://www.wmo.int/pages/mediacentre/factsheet/documents/ClimateChangeInfoSheet2013-03final.pdf>>.



In practice, even *gradual* climatic change is unlikely to be linear, predictable or (ironically) gradual. Rather, given the complexity of the Earth's systems, it is likely to occur at scale and with speed, in 'step changes', as ecological tipping points are reached.<sup>12</sup>

## 1.2 Climate change mitigation and adaptation

The impacts of climate change are already being observed, and the scale and speed of responses required to avoid catastrophic future impacts are intensifying.<sup>13</sup> Accordingly, calls from the scientific community and economic institutions to sharply decrease the economy's carbon emissions intensity (emissions '**mitigation**') have become more earnest.<sup>14</sup> Corporations who fail to **mitigate** their emissions are increasingly exposed to significant commercial risks. These risks include loss of competitiveness due to reputational damage and/or higher energy costs, legal risks from emissions regulation and private litigation, an inability to transfer risk (via mechanisms such as insurance), and market risks as investors and credit providers limit their own exposures to emissions-intensive sectors.<sup>15</sup>

**Adaptation** to the impacts of climate change (that is, undertaking deliberate actions to moderate its actual or expected harms, or exploit beneficial opportunities)<sup>16</sup> was historically resisted by some commentators due to its potential distraction from the need to mitigate.<sup>17</sup> However, scientists have recently recognised that a certain degree of climate change is now *committed* (or unavoidable) as a result of past emissions.<sup>18</sup> Accordingly, the need for concurrent adaptation is no longer debateable.<sup>19</sup> Unlike mitigation measures, which operate to reduce all impacts of climate change, adaptation can be

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<sup>12</sup> See eg Robin K Craig, "'Stationarity is Dead' – Long Live Transformation: Five Principles for Climate Change Adaptation Law" (2010) 24 *Harvard Environmental Law Review* 10, 22 *et seq*; IPCC, above n 10, 122; Steffen and Hughes, above n 11, 39; Liam Phelan, 'Managing climate risk: extreme weather events and the future of insurance in a climate-changed world' (2011) 18(4) *Journal of Environmental Management*, 223, 227; Productivity Commission, *Barriers to Effective Adaptation to Climate Change*, Inquiry Report, Commonwealth of Australia, Canberra, September 2012; Katherine Richardson, Will Steffen and Diana Liverman, *Climate change: global risks, challenges and decisions* (Cambridge University Press, 2011); WMO, above n 11; Celeste K Young and Roger N Jones, *Building Bridges: Supporting Adaptation in Industry*, VCCAR Think Tank Policy Paper, Victorian Centre for Climate Change Adaptation Research, Melbourne, September 2013, 4.

<sup>13</sup> See eg IPCC, *Climate Change 2013*, above n 9.

<sup>14</sup> See eg IPCC, *Climate Change 2013*, above n 9; Joeri Rogelj, David L McCollum, Brian C O'Neill and Keywan Riahi, '2020 emission levels required to limit warming to below 2C' (2013) 3 *Nature Climate Change*, April 2013, 405; Steffen and Hughes, above n 11; Richard Garnaut, *The Garnaut Review 2011 – Australia in the Global Response to Climate Change* (Cambridge University Press, 2011); United Nations Environment Program (UNEP), *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication – A Synthesis for Policy Makers* [www.unep.org/greeneconomy](http://www.unep.org/greeneconomy), February 2011; Lisa Vanhala and Chris Hilson, 'Climate Change Litigation, Symposium Introduction' (2013) 35(3) *Law & Policy* 141; WMO, above n 11.

<sup>15</sup> See for example Garnaut, above n 14; IPCC *Climate Change 2007*, above n 11; United Nations Global Compact (UN Global Compact), *Adapting for a Green Economy: Companies, Communities and Climate Change*, A Caring for Climate Report for the UN Global Compact, UNEP, Oxfam and the World Resources Institute, New York, June 2011, 15.

<sup>16</sup> International Energy Agency (IEA), *World Energy Outlook Special Report – Redrawing the Energy-Climate Map* (OECD/IEA, 10 June 2013), 85; Sir Nicholas Stern (2006), *Stern Review Report on the Economics of Climate Change*, report Commissioned by HM Treasury, United Kingdom Government, October 2006, 458; UNFCCC, above n 7. See also Godden, Lee, Francine Rochford, Jacqueline Peel, Lisa Caripis and Rachel Carter, 'Law, Governance and Risk: Deconstructing the Public-Private Divide in Climate Change Adaptation' (2013) 36(1) *UNSW Law Journal* 224, 225; Zahar, Alexander, Jacqueline Peel and Lee Godden, *Australian Climate Law in a Global Context* (Cambridge University Press eBook, December 2012), 373.

<sup>17</sup> See eg discussion in Justice Brian J Preston, 'Climate Change in the Courts' (2010) 36(1) *Monash University Law Review* 15, 19; Paul E Waggoner, 'Now, Think of Adaptation' (1992) 9 *Arizona Journal of International and Comparative Law* 137, 138-9.

<sup>18</sup> See eg Godden et al, above n 16, 225; IPCC, above n 9, 12-13; Steffen and Hughes, above n 10; Stern, above n 16, 458; World Bank (2013), *Turn Down the Heat: Climate Extremes, Regional Impacts and the Case for Resilience*, Report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics, Washington DC, June 2013; Young and Jones, above n 12, 2.

<sup>19</sup> See for example Zahar, Peel and Godden, above n 16, 374.

targeted and selective, and is largely decentralised.<sup>20</sup> Its advantages are tangible, immediate and primarily *accrue to the adaptor* (viz here, the corporation). Accordingly, whilst mitigation and adaptation initiatives can often be interdependent, '[a]daptation for the corporate sector is a key strategic issue, unlike mitigation and corporate social responsibility, as it benefits the corporate primarily'.<sup>21</sup>

Corporations who fail to **adapt** to the physical impacts of climate change face significant risks due to their inherent vulnerability, and lack of resilience, to both the 'gradual' impacts of climate change and 'catastrophic' extreme weather events. These exposures include business interruption, supply chain insecurity, damage to plant and infrastructure, and water scarcity.<sup>22</sup>

Although conceptually distinct, in practice the line delineating 'mitigation' and 'adaptation' responses is broad and blurred.<sup>23</sup> For example, a substantive emissions mitigation strategy is actually necessary for effective adaptation, to minimise vulnerability to external shocks and to maximise corporate resilience. Accordingly, references to climate change 'adaptation' responses in this paper should be read as incorporating appropriate emissions *mitigation* initiatives.

### 1.3 Climate change and directors' duties – prevailing literature and extensions offered by this paper

A survey of the significant bodies of law and scholarship on (a) climate change and (b) directors' *liability* for a breach of duty reveals relatively little analysis of the latter in the context of the former.

To date, 'climate change' legislation in Australia has largely been confined three broad areas: taxation (including carbon taxes and trading schemes),<sup>24</sup> the environment (including emissions standards and disclosures)<sup>25</sup> and planning.<sup>26</sup> Associated litigation has primarily arisen in a planning and environment context, with applications for judicial or merits review of development approvals granted for high-emitting, or vulnerable, projects.<sup>27</sup> Both the legislation and case law expressly recognise the

<sup>20</sup> Godden et al, above n 16, 233; IEA, above n 16; IPCC, *Managing the Risks of Extreme Events*, above n 10; Preston, 'Climate Change in the Courts', above n 17, 20; UNFCCC, above n 7, 1.

<sup>21</sup> Gareth Johnston, Donovan Burton and Mark Baker-Jones, *Climate Change Adaptation in the Boardroom*, final report for National Climate Change Adaptation Research Facility, Gold Coast, 2013, v. See also IPCC above n 10; Productivity Commission, above n 12; Swiss Re, *Building a Sustainable Energy Future: Risks and Opportunities*, Zurich, January 2013, 13.

<sup>22</sup> See eg Accenture, *Reducing Risk and Driving Business Value: CDP Supply Chain Report 2012-13*, Report for the Carbon Disclosure Project, London, January 2013, 9; Carbon Disclosure Project (CDP), *Insights into Climate Change Adaptation by UK Companies*, Report to DEFRA (March 2012) <<https://www.cdproject.net/CDPResults/insights-into-climate-change-adaptation-by-uk-companies.pdf>>, 10.

<sup>23</sup> See eg Productivity Commission, above n 12, 58; Zahar, Peel and Godden, above n 16, 373.

<sup>24</sup> The new Coalition Federal Government has proposed to replace the emissions trading scheme under the *Clean Energy Act 2001* (Cth) with a 'direct action' plan, the details of which remain to be finalized as at the date of this paper.

<sup>25</sup> See for example corporate emissions disclosures required under the *National Energy and Greenhouse Reporting Act 2007* (Cth) for major emitters (>25kt per annum of CO<sub>2</sub>-e per facility; or >50kt CO<sub>2</sub>-e per annum for corporate groups).

<sup>26</sup> For example, amendments were made to the Victorian Planning Policy Framework under the *Planning and Environment Act 1987* (Vic) in December 2008 to give effect to the *Victorian Coastal Strategy*. One objective of this strategy is to 'plan for and manage the potential coastal impacts of climate change', with directions to 'plan for a sea level rise of not less than 0.8 metres by 2100, and allow for the combined effects of storms, tidal surges coastal processes and local conditions, such as topography and geology when assessing risks and impacts associated with climate change'.

<sup>27</sup> See for example *Gippsland Coastal Board v South Gippsland Shire Council* [No 2] [2008] VCAT 1545, unreported, Gibson DP and Member Potts, 29 July 2008; *Gray v Minister for Planning* [2006] NSWLEC 720 (the *Anvil Hill* case); *Leatch v National Parks and Wildlife Service* (1993) 81 LGERA 270; *Perry v Hepburn Shire Council* (2007) 154 LGERA 182; *Ronchi v Wellington SC* [2009] VCAT 1206; *Rozen v Macedon Ranges Shire Council & Anor* [2010] VSC 583. *Dual Gas Pty Ltd & Ors v Environment Protection Authority* [2012] VCAT 308; *Taip v East Gippsland Shire Council* [2010] VCAT 1222 (28 July 2010) (*Taip*); *Xstrata Coal Queensland Pty Ltd & Ors v Friends of the Earth – Brisbane Co-op Ltd & Ors and Department of Environmental and Resource Management* [2012] QLC 01. For a general overview of climate change-related litigation (and that relating to 'ecologically-sustainable development' more generally) in Australia see Lee

phenomenon of anthropogenic climate change, and the risks of both the failure to mitigate emissions and adapt to its observed, expected and potential impacts.

The question of 'liability' for climate change has, to date, largely revolved around responsibility for *mitigation* and its costs.<sup>28</sup> In contrast, the issue of liability for *damage* caused by climate change *impacts* remains at an 'embryonic stage'.<sup>29</sup> The State, Federal and international legislative instruments (such as the United Nations Framework Convention on Climate Change and the Kyoto Protocol) are silent on point, leaving the question of responsibility for harms to be resolved under the common law.<sup>30</sup> Australian Courts have yet to consider such a case,<sup>31</sup> although a number of claims have been pursued in the United States – primarily under the torts of negligence and nuisance.<sup>32</sup> Those cases largely focus on alleged damage caused by the defendant's failure to take reasonable precautions against the *emission* of greenhouse gases. None have yet been successful, or even proceeded to a substantive hearing.<sup>33</sup> Plaintiffs have found *duty* and *causation* (or, in a climate change

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Godden and Jacqueline Peel, *Environmental Law: scientific, policy and regulatory dimensions* (Oxford University Press, 2010); Joline Lin, 'Climate Change and the Courts' (2012) 32 *Legal Studies* 35, 41ff; Hari M Osofsky and Jacqueline Peel, 'The role of litigation in multilevel climate change governance': Possibilities for a lower carbon future?', 30(4) *Environmental and Planning Law Journal* 303; Jacqueline Peel, 'Issues in Climate Change Litigation' (2011) 5(1) *Carbon and Climate Law Review* 15; Jacqueline Peel and Hari M Osofsky, 'Climate Change Litigation's Regulatory Pathways: A Comparative Analysis of the United States and Australia' (2013) 35(3) *Law & Policy* 150; Preston, 'Climate Change in the Courts', above n 17; Justice Brian J Preston 'Climate Change Litigation (Part 1)' (2011) 5(1) *Carbon & Climate Law Review* 3; Justice Brian J Preston, 'Climate Change Litigation (Part 2)' (2011) 5(2) *Carbon & Climate Law Review* 244; Justice Brian J Preston, 'The Influence of Climate Change Litigation on Governments and the Private Sector' (2011) 2 *Climate Law* 485; Alice Skipper, 'Australia's Response to Climate Change: A Legal Perspective', in *Addressing Climate Change* (World Jurist Association, 2010) 125.

<sup>28</sup> Jan McDonald, 'The role of law in adapting to climate change' (2011) 2(2) *Wiley Interdisciplinary Reviews: Climate Change* 283; Susan Shearing, 'Climate Change Governance and Corporations: Changing the Way 'Business Does Business'?', in Robyn Lyster (ed), *In the Wilds of Climate Law* (Australian Associated Press, 2010) 175.

<sup>29</sup> Nicola Durrant, *Legal Responses to Climate Change* (The Federation Press, 2010), 300. See also generally McDonald, above n 28; Peel, above n 27; Preston, 'The Influence of Climate Change Litigation on Governments and the Private Sector', above n 27.

<sup>30</sup> Durrant, above n 29, 267.

<sup>31</sup> Peel and Osofsky, above n 27; Preston, 'Climate Change Litigation (Part 1)', above n 27.

<sup>32</sup> See eg *Connecticut et al v American Power Company et al* 2009 WL 2996729 (2<sup>nd</sup> Circuit, 21 September 2009); *Comer et al v Murphy Oil USA et al* 2009 WL 3321493 (5<sup>th</sup> Circuit, 16 October 2009) and, more recently, *Washington Environmental Council; Sierra Club, Washington State Chapter v Bellon* (9<sup>th</sup> Circuit, 17 October 2013).

<sup>33</sup> See eg discussion in Ross Abbs, Peter Cashman and Tim Stephens, 'Australia', in Richard Lord, Silke Goldberg, Lavanya Rajamani and Jutta Brunnee (eds), *Climate Change Liability: Transnational Law and Practice*, (Cambridge University Press, 2012) 67; Robert Agnew, 'The End of the World as We Know It: the Advance of Climate Change from a Criminological Perspective', in R White (ed), *Climate Change from a Criminological Perspective* (Springer 2012); Maxine Burkett, 'Litigating Climate Change Adaptation: Theory, Practice and Corrective (Climate) Justice' (2012) 42 *Environmental Law Reporter* 11144; Durrant, above n 29; Elizabeth Fisher, 'Climate Change Litigation, Obsession and Expertise: Reflecting on the Scholarly Response to *Massachusetts v EPA*' (2013) 35(3) *Law & Policy* 236; Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011); Michael Gerrard and Gregory E Wannier, 'United States', in Richard Lord, Silke Goldberg, Lavanya Rajamani and Jutta Brunnee (eds), *Climate Change Liability: Transnational Law and Practice* (Cambridge University Press, 2012); Gierdre Kaminskaitė-Salters, 'Climate change litigation in the UK: its feasibility and prospects', in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 165; Elena Kosolapova, 'Liability for climate-change related damage in domestic courts: claims for compensation in the USA', in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 189; Lin, above n 27; Lord, Richard, Silke Goldberg, Lavanya Rajamani and Jutta Brunnee (eds), *Climate Change Liability: Transnational Law and Practice* (Cambridge University Press, 2012); McDonald, above n 28; Peel, above n 27; Peel and Osofsky, above n 26; Osofsky and Peel, above n 27; Preston, 'The Influence of Climate Change Litigation', above n 27; Chris Van Dijk, 'Civil liability for global warming in the Netherlands', in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 206; Vanhala and Hilson, above n 14. In the United States, some climate change cases have been held to be non-justiciable on the basis that they are *political*, rather than legal, questions (and thus beyond the Court's power under Article III of the US Constitution) – see for example *California v General Motors Corporation et al*, Case No. C06-05755 MJJ, Order granting Defendants' Motion to Dismiss (N.D. Cal. 2007), p.2 and *Native Village of Kivalina v ExxonMobil Corp., et al*, 2009 WL 3326113 (N.D. Cal.) (*Kavilina*). – cf the appeal in *Comer et al v Murphy Oil USA Inc et al*, Third Amended Complaint, Case No., 1:05-CV-436 LTD-RHW, (2006 WL 1066645 (S.D. Miss. 2006)) (*Comer*) and *Connecticut, et al. v American Electric Power Company Inc., et al*, 2009 WL 2996729 (C.A.2 (N.Y.)).

context, *'attribution'*) to be near 'insurmountable' evidentiary hurdles.<sup>34</sup> This is primarily due to the disconnect between the *global* nature of emissions and their collective, cumulative effect, versus the *localised* nature of their impacts.

Against this background, it is perhaps unsurprising that the climate change jurisprudence and commentary has largely failed to examine the role of *directors' duties* as a potential regulatory response to climate change. Instead, scholarly analysis of the intersection between 'environmental issues' and directors' duties has remained the province of the broader debate on 'corporate social responsibility' (CSR). That debate focuses on the *scope* of directors' duties and *to whom* they are owed; specifically, whether the 'best interests of the corporation' for which a director must govern are limited to profit and shareholder wealth maximisation (to which social or environmental concerns are peripheral) ('shareholder primacy' theory),<sup>35</sup> or whether directors' duties are owed not only to shareholders, but to other stakeholders whose interests are impacted by corporate activities ('stakeholder theory').<sup>36</sup> Following vigorous debate, a *qualified* shareholder primacy theory of 'enlightened self-interest' is now relatively settled under Australian law.<sup>37</sup> This qualified theory holds that the duty to act 'in the best interests' of the company *permits* consideration of non-shareholder stakeholders *to the extent* that those 'extraneous' interests are consistent with the wealth maximisation interests of shareholders.<sup>38</sup> However, *all* schools of CSR theory characterise climate change as an 'environmental interest': an 'external stakeholder' whose interests are subservient to, and often inconsistent with, the financial objectives pursued by the firm. Even though more recent, progressive expositions of the theory (such as those of Andrew Keay) explicitly recognise that 'ethical' or 'sustainable' governance is consistent with the wealth-maximisation objective,<sup>39</sup> the focus remains limited on the extent to which directors are *permitted* to consider climate change within the scope of their duties, rather than where they may be liable for a failure to do so.<sup>40</sup>

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<sup>34</sup> See for example the obiter comments of the District Court on the merits of the plaintiff's claim in *Comer* (2006 WL 1066645 (S.D. Miss. 2006)) and those of the Court in *Kivalina* (2009 WL 3326113 (N.D. Cal.)), 8: '[T]he harm from global warming involves a series of events disconnected from the discharge itself. In a global warming scenario, emitted greenhouse gases combine with other gases in the atmosphere which in turn results in the planet retaining heat, which in turn causes the ice caps to melt and the oceans to rise, which in turn causes the Arctic sea ice to melt, which in turn allegedly renders Kivalina vulnerable to erosion and deterioration resulting from winter storms'. See also Kaminskaitė-Salters, above n 32; Zahar, Peel and Godden, above n 16. For a discussion of the issues in climate change-related litigation in Australia and the United States generally, see Peel, above n 27; Peel and Osofsky, above n 26.

<sup>35</sup> Advocated by neoclassical economists such as Milton Friedman, *Capitalism and Freedom* (University of Chicago Press, 1962). See generally discussion in Shelley Marshall and Ian Ramsay, 'Stakeholders and Directors' Duties: Law, Theory and Evidence' (2012) 35(1) *UNSW Law Journal* 291.

<sup>36</sup> See for example R Edward Freeman, *Strategic Management: A Stakeholder Approach* (Pittman, 1984) 31-42; R Edward Freeman, *Stakeholder Theory: State of the Art* (Cambridge University Press, 2010) 235; Michael C Jensen, 'Value Maximisation, Stakeholder Theory and Corporate Objective Function' (2001), *Journal of Applied Corporate Finance* 8, 9. See generally discussion in Marshall and Ramsay, above n 35.

<sup>37</sup> See for example Corporations and Markets Advisory Committee (CAMAC), Parliament of Australia, *The Social Responsibility of Corporations* (2006); Andrew Keay, *The Enlightened Shareholder Value Principle and Corporate Governance* (Routledge 2013); Marshall and Ramsay, above n 35; Parliamentary Joint Committee on Corporate and Social Responsibility (PJC), Parliament of Australia, *Corporate Responsibility: Managing Risk and Creating Value* (2006).

<sup>38</sup> The authorities reviewed (see below n 61) below support the view advanced in this paper that the interests of non-shareholder stakeholders can be taken into account by directors to the extent that their interests are consistent with the long-term financial interests of the shareholders as a whole.

<sup>39</sup> See for example Andrew Keay, 'Ascertaining the Corporate Objective: An Entity Maximisation and Sustainability Model' (2008) 71(5) *The Modern Law Review* 663; Andrew Keay, *The Corporate Objective* (Edward Elgar, 2011); Michael E Porter, Michael E and Mark R Kramer, 'Creating Shared Value: How to reinvent capitalism - and unleash a wave of innovation and growth', *Harvard Business Review*, January-February 2011, 62. Whilst Keay's variation on the 'enlightened shareholder value' theory, the 'entity maximisation and sustainability model' is acknowledged, he uses the term 'sustainability' as a reference to 'continuing financial solvency' rather than in the context of the natural environment.

<sup>40</sup> Shearing, 'Climate Change Governance', above n 28, 180. See also previous discussion of CSR by this author in: Sarah Barker, *Do directors' legal duties create a barrier to adoption of the 'new' sustainability paradigm?* (Master of Environment, SPM MULT90004, University of Melbourne, 26 May 2011).

In contrast, this paper posits climate change as a squarely *financial* concern: not only consistent with, but *prerequisite to*, the maximisation of wealth, and therefore imperative to directors' oversight of risk and strategy. It does not, therefore, purport to engage in the 'CSR' debate, and in fact takes a somewhat antithetical perspective on the intersection between 'the environment' and its relationship with the pursuit of corporate wealth.

This analysis also remains distinct from Porter and Kramer's proposed reworking of CSR, 'Creating Shared Value'. That theory recognises societal and corporate needs as 'dual ends'. It proposes that the objective of the corporation be *redefined* beyond its own wealth-maximisation interests, to the creation of economic value in a way that also creates value for society.<sup>41</sup> The potential corollaries of this analysis for the extensive scholarship on CSR, and its recent variations, are deserving of further, specific research beyond the confines of this paper.

As the impacts of climate change continue to intensify, so too does the likelihood that corporations who are not strategically positioned to manage them will be placed at a significant competitive disadvantage. This undermines the maximisation of corporate wealth or value and, in some cases, may raise the prospect of insolvency. In such circumstances ASIC, the regulator charged with maintaining the integrity of the market, may hold directors to account for any breach of the corporate governance laws. And shareholders and creditors may look to recover their losses from directors and their deep-pocketed insurers.<sup>42</sup>

Accordingly, early commentators such as Lorenz,<sup>43</sup> Troiano<sup>44</sup> and Shearing,<sup>45</sup> and more recently Fischer Kuh,<sup>46</sup> Hecht,<sup>47</sup> Godden et al.,<sup>48</sup> Johnston, Burton and Baker-Jones<sup>49</sup> and West and Brereton,<sup>50</sup> have begun to recognise the potential relevance of climate change mitigation and adaptation to company directors in discharging their duties.<sup>51</sup> However, none have gone further to apply the relevant corporate governance laws in detail, nor to investigate the practical circumstances in which

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<sup>41</sup> Porter and Kramer, above n 39, 64.

<sup>42</sup> See for example Jeffrey A Smith A and Matthew Morreale, 'The Fiduciary Duties of Directors and Officers', in Michael B Gerrard (ed), *Global Climate Change and U.S. Law* (American Bar Association, 2007) 497.

<sup>43</sup> Donna Lorenz, 'Prudence, profit and the perfect storm: climate change risk and fiduciary duty of directors', in Bernd Hanjürgens and Ralf Antes (eds), *Economics and Management of Climate Change: Risks, Mitigation and Adaptation* (Springer, 2008) 271.

<sup>44</sup> Riccardo Troiano, 'Climate change: Corporate liability, disclosure requirements and shareholders' remedies' (2008) 26 *Company & Securities Law Journal* 418.

<sup>45</sup> Shearing, 'Climate Change Governance', above n 28; explored subsequently in Susan Shearing, 'Raising the boardroom temperature? Climate change and shareholder activism in Australia' (2012) 29(6) *Environmental and Planning Law Journal* 479.

<sup>46</sup> Katrina Fischer Kuh, 'Impact Review, Disclosure and Planning', in Michael B Gerrard and Katrina Fischer Kuh (eds), *The Law of Adaptation to Climate Change – US and International Aspects* (American Bar Association, 2012) 543.

<sup>47</sup> Sean B Hecht, 'Insurance', in Michael B Gerrard and Katrina Fischer Kuh (eds), *The Law of Adaptation to Climate Change – US and International Aspects* (American Bar Association, 2012) 511.

<sup>48</sup> Godden et al, above n 16, 236.

<sup>49</sup> Johnston, Burton and Baker-Jones, above n 21.

<sup>50</sup> Jason West and David Brereton, D, *Climate Change Adaptation in Industry and Business: A Framework for Best Practice in Financial Risk Assessment, Governance and Disclosure*, report for National Climate Change Adaptation Research Facility, Gold Coast, 2013, 68.

<sup>51</sup> Early tentative examinations on the topic of directors' duties in relation to climate change – in a US context by Cosman (Brian Cosman, 'Green Derivatives: Extorting Reductions in Greenhouse Gas Emissions via Shareholder Derivative Suits' (2008) 40 *Arizona State Law Journal* 743), Healy and Tapick (Kevin J Healy and Jeffrey M Tapick, 'Climate Change: It's Not Just a Policy issue for Corporate Counsel – it's a Legal Problem' (2004) 29(1) *Columbia Journal of Environmental Law* 89) and Wallace (Perry E Wallace, 'Climate Change, Corporate Strategy and Corporate Law Duties' (2009) 44(3) *Wake Forest Law Review* 757), and an Australian context by McConvill and Joy (James McConvill and Martin Joy, 'The interaction of directors' duties and sustainable development in Australia: setting off on the uncharted road' (2003) 27 *Melbourne University Law Review*, 4), focussed mainly on duties arising from corporate *mitigation* failures, and have been surpassed by developments in both the climate change science and corporate governance law.

liability is likely to be enlivened. This paper advances the scholarship by applying recent case law on the scope of directors' primary statutory duties to common governance practice in response to the risks and opportunities of climate change.

In doing so, it also advances the literature regarding the application of the 'Business Judgment Rule', which has been infrequently litigated – and even less frequently satisfied by defendant directors.<sup>52</sup> That defence focuses on a seminal tension in corporate governance law: that between the desirability to hold directors accountable for their failures, and judicial reluctance to second-guess commercial decisions made in good faith.<sup>53</sup>

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<sup>52</sup> The author is not aware of any case in which a director has been found to have breached their duty of care and diligence under section 180(1), but been able to successfully enliven the Business Judgment Rule defence. There are, however, at least two cases where the defendant was found to have satisfied the elements of the defence, but its application was not determinative of the outcome in the case as there was no breach of the substantive duty under section 180(1). First, in the seminal case on the Business Judgment Rule, *ASIC v Rich* (2009) 75 ACSR 1, Austin J held that an executive director's assessment that creditors would accept late payment of their debts, in circumstances where the corporation had insufficient cash to pay debts enforced on their contractual terms, in accordance with a business growth plan approved by the board, would have received the benefit of the section 180(2) defence. However, Austin J determined that the director's conduct did not contravene his substantive duty of care under section 180(1), such that the application of the defence (whilst discussed at length at [7248]-[7295]) was not determinative of his liability. Secondly, in *Deangrove Pty Ltd (recs and mgrs apptd) v Buckby* (2006) 56 ACSR 630, where the Federal Court of Australia found that the decision of a receiver (an 'officer' to whom the provision applies within the meaning of section 9 of the *Corporations Act*) to reject an offer to purchase residential units was a 'business judgment' that satisfied the requirements of section 180(2), where the plaintiff had relied on both section 180 and 402A of the *Corporations Act* (see Branson J, [68-69]). Reported cases in which the defence was unsuccessfully raised by the defendant director include *HIH Insurance Ltd and HIH Casualty and General Insurance Ltd, Re; ASIC v Adler* (2002) 41 ACSR 72 (*ASIC v Adler*), *ASIC v Fortescue Metals Group Ltd & Anor* (2011) 274 ALR 731 (*ASIC v Fortescue*) (overturned on appeal to the High Court of Australia on grounds relating to the substantive breach, such that it was unnecessary to consider the Business Judgment Rule: *Forrest & Anor v ASIC* [2012] HCA 39 (*Forrest v ASIC*)) and *ASIC v MacDonald (No.11)* [2009] NSWSC 287 (*ASIC v MacDonald*).

<sup>53</sup> This paper adds to the literature on the *application* of the Business Judgment Rule in Australia, but does not purport to enter the debate on the *merits* of, or potential extensions to, that provision (see generally discussion in Ford, above n 4, [8.310]).

## 2 THE ROLE AND DUTIES OF DIRECTORS

*Commercial corporations pursue an objective to maximise value (or wealth). Corporations are governed by a board of directors. Central to the board's role is the supervision of business performance, via the oversight of corporate risk and strategy.*

*In discharging their functions, directors must observe a number of duties to their firm. Primary amongst these are the duties to exercise of due care and diligence, and to act in good faith in the best interests of the corporation, under Chapter 2D of the Corporations Act. Recent case law indicates that directors must demonstrate proactive inquiry and critical evaluation in order to satisfy those duties.*

### 2.1 The functions and duties of corporate directors

Corporations are 'legal constructs' incorporated to 'manage the generation of wealth'.<sup>54</sup> They are 'owned' by shareholders, who have a residual claim over assets and profits,<sup>55</sup> but managed by, or under the direction of, a board of directors.<sup>56</sup> In practice, the board is responsible for both the oversight of corporate performance, and for the monitoring and supervision of its compliance (or 'conformance').<sup>57</sup>

The separate legal personality of the corporation and its incorporators has given rise to one of the most vexed issues in corporate law:<sup>58</sup> that of in *whose* interests (and for what interests) directors must govern.<sup>59</sup> However, that debate is not determinative of the issues raised in this paper. What *is* relevant for the present analysis is that (subject to any Constitutional or legislative gloss):

- (a) the nature of the relevant 'interest' is wealth maximization; and, in pursuing that interest, directors

<sup>54</sup> Anam, Ahmed, 'A critical analysis of the UK company law corporate objective: purposive, practical and possible: Longitudinal corporate objective to remedy the enlightened shareholder value approach of the *Companies Act 2006*', unpublished, SSRN (28 June 2012) <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2117591](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117591)>, 9.

<sup>55</sup> Shareholders claim to the residual assets and profits of the corporation remains privileged so long as the corporation is solvent. In the case of insolvency, creditors may also have residual claim – see for example Frank Easterbrook and Daniel Fischel, *The Economic Structure of Corporate Law* (Harvard University Press, 1991); Anil Hargovan and Jason Harris, 'For Whom the Bell Tolls: Directors' Duties to Creditors after *Bell*' (2013) 35 *Sydney Law Review* 433, 436.

<sup>56</sup> Section 198A(1) *Corporations Act*.

<sup>57</sup> See for example Amado, Jean-Christophe and Peter Adams, *Value Chain Climate Resilience: A Guide to Managing Climate Impacts on Companies and Communities*, Report prepared for Partnership for Resilience and Environmental Preparedness (PREP), Montreal, July 2012, 11; Stephen M Bainbridge, *Corporate Governance After the Financial Crisis* (Oxford University Press, 2012), 1-3, 43.

<sup>58</sup> See for example discussion in Ford, above n 4, [8.090 *et seq*]; Hargovan and Harris, above n 55, 434; Marshall and Ramsay, above n 35.

<sup>59</sup> The debate relates to whether the relevant interests are those of *the company* as a commercial entity (which exists, in perpetuity, distinct from its incorporators (ie the shareholders)) (*Darvall v North Sydney Brick and Tile Co Ltd* (1989) 16 NSWLR 260 (*Darvall*); *Dawson International Plc v Coats Paton Plc* [1989] BCLC 233), or those of *its members* (*shareholders*) *as a collective* (see for example *Ngurli Ltd v McCann* (1953) 90 CLR 425 at 438; discussion in Thomas Clarke, *International Corporate Governance: A Comparative Approach* (Routledge, 2007), 67-69, 279-285; PJC, above n 37, 52). If it is the interests of members that are relevant, a secondary question arises whether directors must govern in the interests of the *existing members* (for which future interests are inherently relevant – particularly to institutional shareholders), or for *both existing and future members* (see for example *Provident International Corp v International Leasing Corp Ltd* [1969] 1 NSW 424 at 440; *Vines v ASIC* (2007) 25 ACLC 448 per Santow JA. See generally discussion in Baxt, above n 4; Ford, above n 4, [8.095.6]). What *is* clear, however, is that there is no support for the proposition that the 'best interests' of the company are limited to the current interests of its current shareholders.

(b) cannot disregard the longer term time horizon, nor privilege the interests of any group of shareholders over another.<sup>60</sup>

Accordingly, this paper takes the view that the ‘best interests’ of the corporation for which the directors must govern are those to **maximise corporate value (or wealth)**, with regard to the **long-term time horizon**.<sup>61</sup>

In discharging their governance functions, directors owe a number of statutory, fiduciary and common law duties to the firm.<sup>62</sup> In Australia, the primary statutory duties are those (a) to exercise due care and diligence, and (b) to act in good faith in the best interests of the corporation, and for a proper purpose.

### *Duty of care and diligence*

A director’s core duty of competence (or performance) is that to exercise due **care and diligence** under section 180(1) *Corporations Act*. It provides that a director must:

[E]xercise their powers and discharge their duties with the degree of care and diligence that a **reasonable person** would exercise if they:

(a) were a director or officer of a corporation in the corporation's circumstances; and

(b) occupied the office held by, and had the same responsibilities within the corporation as, the director or officer. (*emphasis added*)

The content of this duty has been examined in a number of recent high-profile cases, including those against directors of Centro,<sup>63</sup> James Hardie,<sup>64</sup> the Australian Wheat Board,<sup>65</sup> HIH,<sup>66</sup> OneTel<sup>67</sup> and Fortescue Metals.<sup>68</sup> These cases reinforce the following propositions:<sup>69</sup>

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<sup>60</sup> This is not to suggest that the strategic objective of a particular *shareholder* may not be to maximise short-term returns (eg to make a profit on a short sale), or even of the corporation itself in particular circumstances (eg to maximise profits in the period in which a sale price multiple is to be applied). However, this paper focuses on the objective of a solvent corporation in in the ordinary course of its business.

<sup>61</sup> *ASIC v Maxwell* (2006) 59 ACSR 373, [102]; *ASIC v Lindberg* (2012) 91 ACSR 640, [72]; *Darvall* (1989) 16 NSWLR 260; *Whitehouse v Carlton Hotels Pty Ltd* (1987) 162 CLR 285 at 291. See also Adeyeye, Adefolake, ‘The limitations of corporate governance in the CSR agenda’ (2010), 31(4) *Company Lawyer* 114, 115; Bainbridge, above n 57, 1-4; CAMAC, above n 37, 84; American Bar Association, *Delineation of Governance Roles and Responsibilities*, Report of the Corporate Governance Committee on Corporate Laws, Section of Business Law (2009)

<<http://apps.americanbar.org/buslaw/committees/CL260000pub/materials/20090801/delineation-final.pdf>>, 24-25; Ford, above n 4, [8.095]; Nadelle Grossman, ‘The Duty to Think Strategically’ (2013) 73(2) *Louisiana Law Review* 449; John Kay, *The Kay Review of UK Equity Markets and Long-Term Decision Making*, Final Report to Secretary of State for Business, Innovation and Skills UK, London, July 2012; Marshall and Ramsay, above n 35; PJC, above n 37, 52-53.

<sup>62</sup> As a general principle, directors owe their duties to the company as a whole. See for example *ASIC v Maxwell* (2006) 59 ACSR 373, [102]. An exception exists when a corporation is approaching insolvency (whereby the directors may be required to take the interests of creditors into account in insurance of the discharge of their duty to act in the best interests of the corporation) - see for example discussion in *Bell Group Trial* (2008) 70 ACSR 1 (*Bell Group Trial*) and *Westpac Banking Corporation v The Bell Group Ltd (in liq)* [No 3] [2012] WASCA 157 (*Bell Group Appeal*) (collectively, the *Bell Group Cases*); Hargovan and Harris, above n 55.

<sup>63</sup> *ASIC v Healey & Ors* [2011] FCA 717 (hereafter *Centro*).

<sup>64</sup> Including *ASIC v Hellicar* [2012] HCA 17, *Shafroon v ASIC* (2012) 286 ALR 612, *Morely v ASIC* [2010] NSWCA 331 and *ASIC v MacDonald* [2009] NSWSC 287 (collectively, the *James Hardie cases*).

<sup>65</sup> *ASIC v Ingleby* (2012) 91 ACSR 66; *ASIC v Lindberg* (2012) 91 ACSR 640.

<sup>66</sup> *ASIC v Adler* (2002) 41 ACSR 72.

<sup>67</sup> *ASIC v Rich* (2009) 75 ACSR 1.

<sup>68</sup> *ASIC v Fortescue* (2011) 274 ALR 731; *Forrest v ASIC* [2012] HCA 39.

<sup>69</sup> See generally Robert P Austin and Ashley Black, *Annotated Corporations Act* (at 30 January 2013), [2D.180]; Ford, above n 4, Part III, Chapter 8.



- (a) The statutory duty of care is broadly analogous to the common law duty to avoid negligence (*viz.*, generally, to take reasonable precautions against reasonably foreseeable risks of injury).<sup>70</sup> It can be purposively restated as a duty to take ‘*all reasonable steps to be in a position to guide and manage the company*’.<sup>71</sup> In determining whether ‘all reasonable steps’ have been taken, the Courts balance the *magnitude* of the risk (its gravity, frequency and imminence)<sup>72</sup> and the *probability* that it will crystallise, against the *expense, difficulty and inconvenience of any countermeasures*, and the defendant’s *conflicting responsibilities*.<sup>73</sup>
- (b) The standard of care and diligence has an *objective* baseline: assessed against what a (hypothetical) *reasonable* director would do in the circumstances. However, in determining what is objectively ‘reasonable’, the *subjective characteristics* of the particular corporation, and the director themselves, are applied.<sup>74</sup> The higher the director’s office, degree of skill and/or responsibility, the higher the standard to which they will be held.<sup>75</sup> However, all directors are expected to observe certain *minimum* standards to satisfy their duty, including the proactive acquisition and maintenance of relevant knowledge, active monitoring of the corporation’s affairs and an independent and critical evaluation of the matters for which they are responsible.<sup>76</sup> In this regard, the director’s duty of care ‘*is not...limited by the director’s knowledge and experience or ignorance and inaction*’.<sup>77</sup>

### ***The ‘Business Judgment Rule’***

The duty of care and diligence does not render directors liable for every mistake or error of judgment. Courts are reluctant to second-guess the merits of commercial decisions that are made in good faith, which inherently involve the exercise of judgment as to how the best interests of the corporation can be served, and the taking of calculated risks.<sup>78</sup> In Australia, this principle has been codified in the ‘Business Judgment Rule’ under section 180(2) of the *Corporations Act*. This rule is intended to provide directors a ‘safe harbour’ from personal liability against section 180 (and its common law

<sup>70</sup> The statutory duty ‘reflects, and to some extent refines’ the duty of care and diligence under the common law: (*Centro*, [2011] FCA 717, [164]; *ASIC v Maxwell* (2006) 59 ACSR 373, [99].

<sup>71</sup> *Centro* [2011] FCA 717, [16], [143] and [162].

<sup>72</sup> *Mercer v Commissioner for Road Transport and Tramways (NSW)* (1936) 56 CLR 580, 601 per Dixon J; applied in *Vines v ASIC* (2007) 73 NSWLR 451, 461.

<sup>73</sup> This test largely reflects the common law negligence ‘Shirt Calculus’, articulated by Mason J in *Wyong Shire Council v Shirt* (1980) 146 CLR 40 at 47. See for example *ASIC v Rich* (2009) 75 ACSR 1, 622; *Vines v ASIC* (2007) 25 ACLC 448; *ASIC v Ingleby* (2012) 91 ASCR 66, 69.

<sup>74</sup> These factors include the type of company involved, the size and nature of its business or businesses, its constitution, the composition of the board and its reserved powers, and whether the company is public or private – see *ASIC v Rich* (2009) 75 ACSR 1, [7201], citing *Commonwealth Bank of Australia v Friedrich* (1991) 5 ACSR 15, 123; *Daniels v Anderson* (1995) 37 NSWLR 438, 505; *ASIC v Rich* (2003) 44 ACSR 341, [35]; *ASIC v Vines* (2005) 55 ACSR 617, [1067].

<sup>75</sup> *Centro* [2011] FCA 717, 619.

<sup>76</sup> *Ibid.*

<sup>77</sup> *Daniels v Anderson* (1995) 37 NSWLR 438, 502, applied in *Centro* [2011] FCA 717, 646, [125]. Similarly, the director’s conduct will be judged in the context of their *actual* responsibilities within the organisation in addition to their statutory responsibilities and those formalised in the company constitution or by board resolution: *Shafron v ASIC* (2012) 286 ALR 612; *ASIC v Rich* (2009) 75 ACSR 1, 614.

<sup>78</sup> *ASIC v Lindberg* (2012) 91 ACSR 640; *Harlowe’s Nominees Pty Ltd v Woodside (Lakes Entrance) Oil Co NL* (1968) 121 CLR 483, 493, per Barwick CJ, McTiernan and Kitto JJ: ‘*Directors in whom are vested the right and duty of deciding where the company’s interests lie and how they are to be served may be concerned with a wide range of practical considerations, and their judgment, if exercised in good faith and not for irrelevant purposes, is not open to review in the courts.*’ See also *Howard Smith Ltd v Ampol Petroleum Ltd* [1974] AC 821 at 832, where the Privy Council held: ‘*There is no appeal on merits from management decisions to courts of law: nor will courts of law assume to act as a kind of supervisory board over decisions within the powers of management honestly arrived at.*’

equivalents) in relation to honest, informed and rational decisions relating to the corporation's business.<sup>79</sup>

The defence is only available where a director can demonstrate that they:<sup>80</sup>

- (a) made the judgment in **good faith for a proper purpose**; and
- (b) did **not** have a **material personal interest** in the subject matter of the judgment; and
- (c) **informed themselves** about the subject matter of the judgment **to the extent they reasonably believed to be appropriate**; and
- (d) **rationaly believed** that the judgment was in the **best interests of the corporation**.

Of course, the content of the duty of care and diligence (and the application of the Business Judgment Rule) must have regard to the objective to which the directors' efforts are directed: that being to promote the wealth interests of the shareholder corpus.

### *Good faith in the best interests of the corporation*

Section 181 of the *Corporations Act* requires directors to act in **good faith in the best interests of the corporation**, and for a **proper purpose**. As discussed above, a corporation's 'best interests' generally coincide with the maximisation of value (or wealth), with regard to the long-term time horizon.

Actions for a breach of the duty to act in good faith ordinarily arise in relation to questions of directorial *loyalty* (ie. conflicts and/or self-interest).<sup>81</sup> Accordingly, in exploring that duty's potential application, this paper acknowledges the limitations of its application to governance failures that have caused an impairment of corporate value (ie. relating to *performance*), which would ordinarily be prosecuted as a breach of the duty of care and diligence. This issue is explored in further detail in Chapter 4.2, below.

## **2.2 Risk management and strategy as critical determinants of value**

The directorial role to supervise corporate performance inherently demands the oversight of corporate **risk management and strategy**.<sup>82</sup>

Put simply, 'risk' is '*the effect of uncertainty on objectives*'.<sup>83</sup> It is clear that risk management and strategy are interrelated, and that the governance of both is critical to the creation of corporate value.<sup>84</sup>

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<sup>79</sup> Explanatory Memorandum, *Corporate Law Economic Reform Bill 1999*, [6.1], [6.4].

<sup>80</sup> The burden of proving each element of the business judgment rule lies with the defendant director: see for example *ASIC v Rich* (2009) 75 ACSR 1, 8; *ASIC v Fortescue* (2011) 81 ACSR 563, [197].

<sup>81</sup> See for example discussion in Ford, above n 4, [8.070]: where the director is acting with subjective honesty, allegations of a failure to act in good faith in the best interests of the corporation arise more commonly where: '*circumstances induce directors to believe that the company's interests correspond with their own interests or with the interests of some other person. Making that unreflective assumption, they then act in the company's affairs without considering its interests as a separate entity with its own shareholders and creditors.*'

<sup>82</sup> See for example Australian Institute of Company Directors (AICD), *Role of Board*, Director Q&A (31 January 2013) <<http://www.companydirectors.com.au/Director-Resource-Centre/Director-QA/Roles-Duties-and-Responsibilities/Role-of-the-Board>>; see generally *ASIC v MacDonald* [2009] NSWSC 287, Part 2.11; *AWA v Daniels* (1992) 7 ACSR 759, 867; *Centro* [2011] FCA 717; Australian Stock Exchange Corporate Governance Council (ASXCGC), *Corporate Governance Principles and Recommendations* (ASX, 2010); Bainbridge, above n 57; Baxt, above n 4; Grossman, above n 61; Norman T Sheehan, 'Making risk pay: the board's role' (2009) 30(1) *Journal of Business Strategy* 33.

<sup>83</sup> Standards Australia, *Australian/New Zealand Standard: Risk Management, Principles and Guidelines*, AS/NZS ISO 31000:2009, 1.

<sup>84</sup> Grossman, above n 61.

This is reflected in the Australian Stock Exchange's Corporate Governance Principles, which define risk management by reference to both potential adversity and *opportunity*, viz:

Risk management is the culture, processes and structures that are directed towards **taking advantage of potential opportunities while managing potential adverse effects**...Risk management can enhance the environment for identifying and capitalising on opportunities to **create value and protect established value**.<sup>85</sup>

The following Chapter demonstrates that the scientific basis of one material corporate risk, anthropogenic climate change, is no longer in credible dispute, and sets out the unparalleled economic exposures (and strategic opportunities) that it presents.

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<sup>85</sup> ASXCGC, above n 82, 33, emphasis added.

## 3 CLIMATE CHANGE SCIENCE

*The science relating to anthropogenic climate change has solidified. The need to mitigate greenhouse gas emissions has become critically urgent, and adaptation is now necessary to manage the committed impacts of past emissions. Climate change presents not only unprecedented ecological and socio-economic risks, but significant opportunities to strategically-placed corporations. It can no longer be treated as an environmental 'externality', but as a material determinant of corporate wealth.*

### 3.1 The physical impacts of climate change

This paper does not seek to verify or restate the scholarship on climate change. Nor does it assert that directors should be aware of the breadth of, and detail within, the technical literature on point. It is, however, relevant to summarise the current mainstream science on climate change published by leading scientific, governmental and economic institutions. Chief among these institutions is the Intergovernmental Panel on Climate Change (the **IPCC**), a body formed by the United Nations Environment Program and the World Meteorological Organisation to provide rigorous and independent analysis on the scientific evidence on climate change and its socio-economic impacts. The analysis in this Chapter informs the *magnitude* and *probability* of the relevant exposures which, as outlined in Chapter 2 above, are key determinants of the standards to which current-day directors will be held.

#### *Observed and committed climate change: adaptation is unavoidable*

- **The science is 'in'. Climate change, and its anthropogenic causes, are no longer in credible dispute.**<sup>86</sup> The most recent report of the IPCC's Working Group I on the 'Physical Science Basis' of climate change concludes that:

[W]arming of the climate system is unequivocal...The atmosphere and oceans have warmed, the amount of snow and ice has diminished, sea level has risen, and the concentrations of greenhouse gas have increased<sup>87</sup> ...

...

It is extremely likely (confidence >95%) that human influence has been the dominant cause of the observed warming since the mid-20<sup>th</sup> century.<sup>88</sup>

- **The dominant driver of climate change is the increase in atmospheric CO<sub>2</sub> from industrial activity** - primarily in the combustion of fossil fuels, deforestation and agricultural practices.<sup>89</sup> Two-thirds of total industrial emissions are attributable to the energy sector.<sup>90</sup>
- **The impacts of climate change are already observable.** Globally, average land and ocean

<sup>86</sup> See eg discussion in Steffen and Hughes, above n 11; IPCC, *Climate Change 2007*, above n 11; IPCC, *Managing the Risks*, above n 10; IPCC, *Climate Change 2013*, above n 9; WMO, above n 11; World Bank, above n 18.

<sup>87</sup> IPCC, *Climate Change 2013*, above n 9, 3.

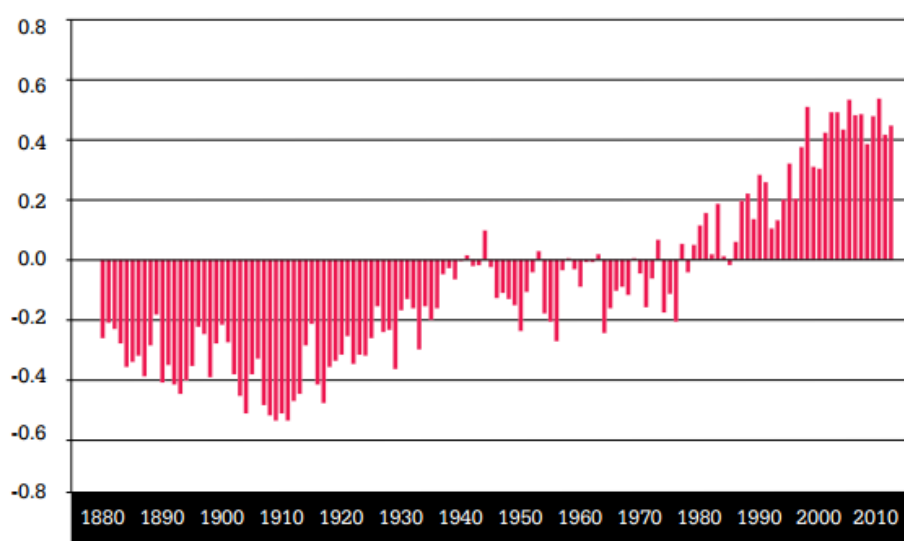
<sup>88</sup> Ibid, 12.

<sup>89</sup> Steffen and Hughes, above n 5, 11, 16; IPCC, above n 9, 8; IEA, above n 16, 9; IPCC, *Climate Change 2013 – Headlines*, above n 11, 1; WMO, above n 11.

<sup>90</sup> IEA above n 16, 9.

surface temperatures have risen by 0.6-1.06°C since 1880 (see **Figure 1**, below).<sup>91</sup> In Australia, average air surface temperatures have increased by around 0.9°C since 1910.<sup>92</sup> Sea levels have risen by approximately 0.19m over a similar period.<sup>93</sup> Oceans continue to warm and acidify, and ice-sheets melt, at an increasing rate.<sup>94</sup> Regional precipitation patterns have shifted.<sup>95</sup> The life cycles and distribution of many species of flora and fauna – both terrestrial and marine - have been altered.<sup>96</sup> There has been a statistical shift in the frequency and variability in extreme weather events such as hurricanes, storms, heat waves, cold snaps, droughts and floods in many regions.<sup>97</sup> In Australia, for example, Lewis and Karoly conclude that the ‘Angry Summer’ of 2012-2013, in which 130 climate records were broken, was *five times more likely* to have occurred due to anthropogenic climate change than under natural variations (such as El Nino) alone.<sup>98</sup>

**Figure 1 – Climate change – observed: global surface air temperatures from 1880 to 2012**



*Reproduced from Steffen and Hughes, above n 11, 20.*

- **The international community generally supports a target of limiting global average temperature increases to <2°C above pre-industrial levels, as a proxy value to avoid catastrophic anthropogenic interference with the climate system.**<sup>99</sup> The projected ecological

<sup>91</sup> IPCC, *Climate Change 2013*, above n 9, 2.

<sup>92</sup> Steffen and Hughes, above n 11, 20; IEA, above n 16, 13.

<sup>93</sup> IPCC, *Climate Change 2013*, above n 9, 6. See also discussion in Steffen and Hughes, above n 11, 4; IPCC, *Managing the Risks of Extreme Events*, above n 10; IEA, above n 16, 14.

<sup>94</sup> IPCC, *Climate Change 2013*, above n 9, 4-5; IPCC, *Managing the Risks of Extreme Events*, above n 10; WMO, above n 11; World Bank, above n 18, ix.

<sup>95</sup> IPCC, *Managing the Risks of Extreme Events*, above n 10; IPCC, *Climate Change 2013 – Headlines*, above n 11, 2; WMO, above n 11.

<sup>96</sup> See for example Steffen and Hughes, above n 11; Craig, above n 10; WMO, above n 11.

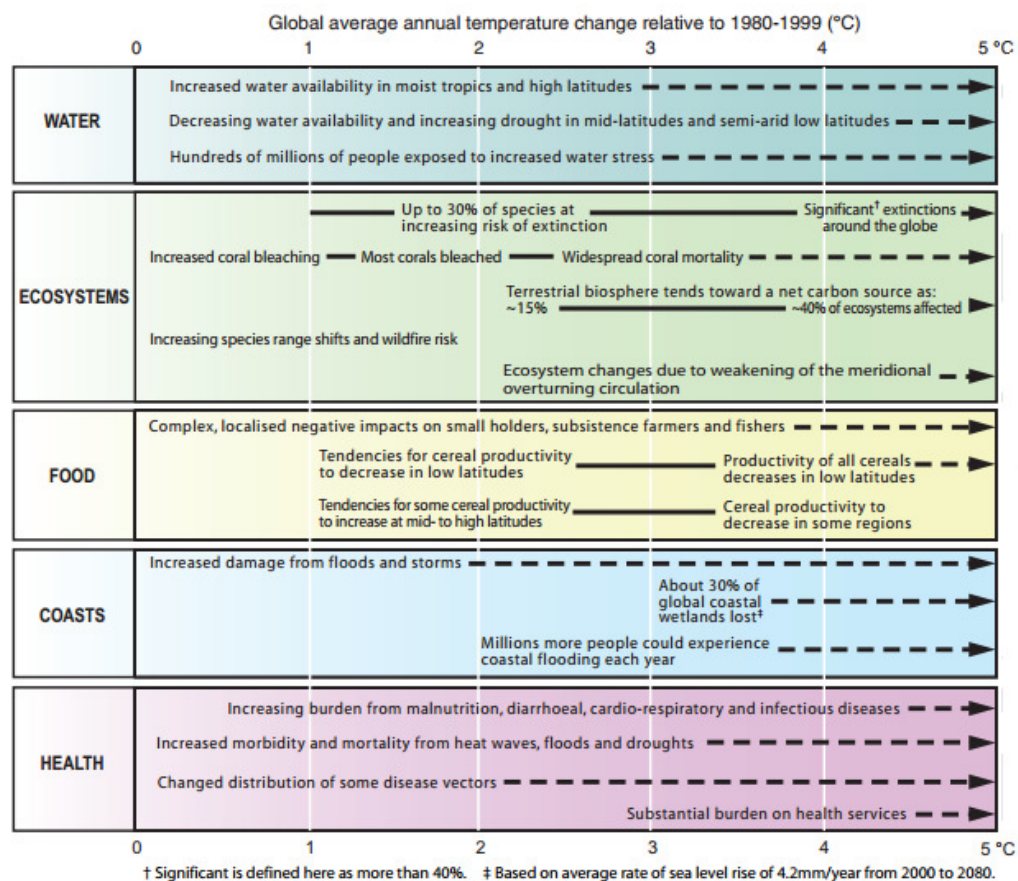
<sup>97</sup> Johnston, Burton and Baker-Jones, above n 21, vi; IPCC, *Managing the Risks of Extreme Events*, above n 10, 8-9, 111 *et seq*; IPCC, *Climate Change 2013*, above n 9, 13; Sophie Lewis and David Karoly, ‘Anthropogenic contributions to Australia’s record summer temperatures of 2013’, 40(14) *Geophysical Research Letters* 3705; Thomas C Peterson, Martin P Hoerling, Peter A Stott and Stephanie C Herring (eds), ‘Explaining Extreme Events of 2012 from a Climate Perspective’ (2013) 94(1) *Bulletin of the American Meteorological Society*, Special Supplement, September 2013; Steffen and Hughes, above n 11; WMO, above n 11.

<sup>98</sup> Lewis and Karoly, above n 97.

<sup>99</sup> See for example Richardson, Steffen and Liverman, above n 12; Joeri Rogelj, William Hare, Jason Lowe, Detlef P van Vuuren, Keywan Riahi, Ben Matthews, Tatsuya Hanaoka, Kejun Jiang, Malte Meinshausen, ‘Emission pathways consistent with a 2C global temperature limit’ (2011) 1 *Nature Climate Change*, November 2011, 413; Rogelj et al, above n 14; Steffen

and social consequences of climate change at and above this threshold are illustrated in **Figure 2**, below.

**Figure 2 – IPCC Projections of Ecological and Social Consequences of Increases in Global Average Temperatures At or Above 2°C**



*Reproduced from IPCC, Climate Change 2007, above n 11,51.*

- **Even if anthropogenic emissions were to abruptly cease, a certain amount of future climate change is already locked in (or ‘committed’) as a result of past emissions**, due to inertia in climatic systems. **Adaptation to both observed and committed impacts of climate change has therefore become unavoidable.** At a minimum, the global mean surface temperature change is projected to reach 1.14-1.19°C above pre-industrial levels by 2030,<sup>100</sup> reflecting an increase of 0.3°C-0.7°C for the period 2016-2035 relative to 1986-2005.<sup>101</sup> Once they accumulate in the atmosphere, greenhouse gases remain latent for centuries.<sup>102</sup>

and Hughes, above n 11; UNFCCC, above n 7; World Bank, above n 18, 1. It is noted that recent scientific assessments warn that the 2C limit may actually be higher than the threshold above which climate change can be considered ‘dangerous’ - see for example Steffen and Hughes, above n 11, 80.

<sup>100</sup> CDP, above n 22; IEA, above n 16, 96-97; IPCC, *Climate Change 2007*, above n 11; IPCC, *Managing the Risks of Extreme Events*, above n 10; Steffen and Hughes, above n 11, 31.

<sup>101</sup> IPCC, *Climate Change 2013*, above n 11, 15.

<sup>102</sup> CDP, above n 22, 5; IPCC, *Climate Change 2007*, above n 11; IPCC, *Climate Change 2013*, above n 9, 19- 20; Glen P Peters, Robbie M Andrew, Tom Boden, Josep G Canadell, Phillipe Ciais, Corrine Le Quéré, Gregg Marland, Michael R Raupach and Charlie Wilson, ‘The challenge to keep global warming below 2C’ (2013) 3 *Nature Climate Change* 4, 4; Rogelj et al, ‘Emission pathways consistent’, above n 99, 413; Steffen and Hughes, above n 11, 80-81.

### *Potential climate change: mitigation is necessary*

- **Whilst the fact of climate change is certain, there remains a ‘cascade of uncertainties’<sup>103</sup> regarding its scope, timing and impacts.** These turn on future variables including:
  - **geophysical responses** to cumulative emissions (including non-linear climate forcings and self-reinforcing biospheric ‘feedbacks’), and the capacity of the climate system to store such energy;
  - **technology** (particularly supply-side emissions mitigation options);
  - **society** (including economic growth rates, population, standards of living and energy efficiency, which in turn determine future energy demands); and, significantly
  - **politics** (including the scope and timing of global mitigation efforts).<sup>104</sup>

Indeed, uncertainty is inescapable given the uniquely complex, non-linear relationship between emissions, climate change and its impacts. This does not, however, mean that future impacts cannot reasonably be expected to be ‘*pervasive and diverse*’.<sup>105</sup> Nor are they ‘*entirely unpredictable*’, with scientific projections of the range of plausible emission trajectories.<sup>106</sup> And what *is* certain is that:

- the climate has warmed, is warming and will continue to warm even under the most optimistic mitigation scenarios;
  - the weather will become more variable, and extreme; and
  - significant mitigation of emissions must occur, at scale and at speed, to avoid catastrophic average global warming above 2°C.
- **In contrast, ‘business as usual’ emissions significantly exceed the trajectory required to limit the global average temperature rise to 2°C, even if current international mitigation pledges are under the Cancun Accord are met.**<sup>107</sup>

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<sup>103</sup> Stephen Schneider, ‘Can we Estimate the Likelihood of Climatic Changes at 2100?’ (2002) 52 *Climatic Change* 441, 443. See also Miriam Haritz, ‘Liability *with* and liability *from* the precautionary principle in climate change cases’, in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 15; IPCC, *Managing the Risks of Extreme Events*, above n 10, 111 *et seq.*

<sup>104</sup> See for example Steve Hatfield-Dodds, ‘All in the timing’ (2013) 493(3) *Nature* 35, 36; IEA, above n 16; IPCC, *Managing the Risks of Extreme Events*, above n 10, 111 *et seq.*; IPCC, *Climate Change 2013*, above n 9, 11; Adriana Keating and John Handmer, *Future potential losses from extremes under climate change: the case of Victoria, Australia*, Working Paper for the Victorian Centre for Climate Change Adaptation Research, August 2013, 13; Joeri Rogelj, David L McCollum, Andy Reisinger, Malte Meinshausen and Keywan Riahi, ‘Probabilistic cost estimates for climate change mitigation’ (2013) 493 *Nature*, January 2013, 79; Luke Skinner, ‘A Long View on Climate Sensitivity’ (2012) 337 *Science* 917; Steffen and Hughes, above n 11, 40; Mark C Trexler and Laura H Kosloff, *The Changing Profile of Corporate Climate Change Risk* (Do Sustainability, 2012) (Kindle Edition); Swiss Re, above n 21; WMO, above n 11.

<sup>105</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2001: Synthesis Report*, Contribution of Working Groups I, II and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Robert T Watson (ed) (Cambridge University Press, 2001), 1.2.2. See also IPCC, *Climate Change 2013*, above n 9.

<sup>106</sup> IPCC, *Climate Change 2001*, above n 105, 1.2.2; IPCC, *Climate Change 2013*, above n 9; Trexler and Kosloff, above n 104.

<sup>107</sup> See for example Richardson, Steffen and Liverman, above n 12; Rogelj et al, ‘2020 emission levels’, above n 14; Rogelj et al, ‘Emissions pathways consistent’, above n 99; Steffen and Hughes, above n 11; UNFCCC, above n 7; World Bank, above n 18,1.

The most recent analysis by the IPCC applies four ‘Representative Concentration Pathways’ (RCP’s) to model the consequences of a range of climate policies on future emission scenarios.<sup>108</sup> It concludes that only one pathway, the low-emissions RCP 2.6, is likely to result in temperature increases within the critical 2°C threshold.<sup>109</sup> The RCP 2.6 model presumes that industrial emissions will decrease, at scale and with speed, such that atmospheric CO<sub>2</sub> concentrations stabilise at 421 parts per million (ppm).<sup>110</sup> With atmospheric emissions concentrations already having increased from 315ppm in 1958 to 400ppm this year,<sup>111</sup> Peters et al conclude that achievement of this scenario would require:

[S]ustained global CO<sub>2</sub> mitigation rates of around 3% per year, if global emissions are to peak by 2020. A delay in starting mitigation activities will lead to higher mitigation rates, higher costs, and the target of remaining below 2°C may become unfeasible...<sup>112</sup>

On current mitigation trajectories, fossil fuel -based energy sources are likely to remain at around 75-80% of global energy supply into the 2030’s.<sup>113</sup> This translates to emissions between 60-65 GtCO<sub>2</sub>-e per annum, and implies a stabilisation of atmospheric greenhouse gas concentrations between 650-900ppm. Such emission trajectories are more consistent with the IPCC’s RCP 6.0 and RCP 8.5 scenarios, which are projected to cause a global average temperature increase of up to 4.8°C above the pre-industrial baseline by 2100.<sup>114</sup> The consequences are stated bluntly by Rogelj et al: ‘*In the absence of serious mitigation efforts... the likelihood of limiting warming to less than 2°C is essentially zero*’.<sup>115</sup>

Despite recent and current emission trends, the scientific literature *does* support the view that deep emissions cuts (to a level 50% below 2000 levels by 2050) are both geophysically feasible and technologically achievable.<sup>116</sup> It is the political and economic will that is absent.

### *The scientific ‘debate’*

But what of the supposed on-going ‘debate’ on the science of climate change? At their highest, any ongoing disputes may be viewed as *strategic* rather than scientific.<sup>117</sup> There is simply *no* peer-

<sup>108</sup> IPCC, *Climate Change 2013*, above n 9, 22.

<sup>109</sup> Under RCP 2.6 global average temperature increases are projected in the range of 0.4-1.6C by 2046-2065, and up to 1.7C by 2081-2100, with sea level rise of 0.17 to 0.32 by 2046-2065 and 0.26 to 0.55 by 2081-2100 – IPCC, *Climate Change 2013*, above n 9, 22.

<sup>110</sup> Which equates to CO<sub>2</sub>-e at 475ppm, *ibid*.

<sup>111</sup> As of May 2013, the concentration of carbon dioxide in the atmosphere exceeded 400ppm for the first time in several hundred millennia (compared to 315ppm when contemporaneous record-keeping began in 1958) – see IEA, above n 16, 9, 15; Pieter Tans and Ralph F Keeling, *Trends in Atmospheric Carbon Dioxide*, Earth System Research Laboratory, <<http://www.esrl.noaa.gov/gmd/ccgg/trends/>>, 10 July 2013.

<sup>112</sup> Peters et al, above n 102, 5.

<sup>113</sup> Mattia Romani, James Rydger and Nicholas Stern, ‘*Recklessly slow or a rapid transition to a low-carbon economy? Time to decide*’, Centre for Climate Change Economics and Policy, Grantham Research Institute on Climate Change and the Environment, December 2012, 6.

<sup>114</sup> IPCC, *Climate Change 2013*, above n 9, 25. This is similar to recent projections of 3.6°C-5.3°C by the International Energy Agency: see IEA, above n 16, 246-247.

<sup>115</sup> Rogelj et al, ‘Probabilistic cost estimates’, above n 104, 79.

<sup>116</sup> See for example CDP, above n 22; IEA, above n 16, 25; OECD 2012; Joeri Rogelj, Malte Meinshausen and Reto Knutti, ‘Global warming under old and new scenarios using IPCC climate sensitivity range estimates’ (2012) 2 *Nature Climate Change*, April 2012, 248; World Bank, above n 18, 9, 169-170; WWF and CDP, *The 3% Solution: Driving Profits Through Carbon Reduction*, joint special report of the World Wildlife Fund and the Carbon Disclosure Project, 2013.

<sup>117</sup> Peter Rampling, ‘Corporate Governance in a Carbon Constrained World’, *unpublished*, 7 December 2011, available at <<http://ssrn.com/abstract=1969276>>, 5. See also Michael Hulme, *Why We Disagree About Climate Change: Understanding*



reviewed science that continues to dispute the existence of climate change, or its anthropogenic causes. Director of the White House Office of Science and Technology Policy, and former Harvard University Professor, Dr John Holdren, notes that:

A credible sceptic would need to provide an alternative cause to the observed changes and a theory on how greenhouse gases are **not** having the effects that all current scientific knowledge indicates, and no sceptic has ever achieved either.<sup>118</sup>

Other stakeholders contend that climate change is a ‘non-issue’ on the basis that future technological innovations will alleviate the necessity to curtail emissions, or will make vulnerable developments less susceptible to its impacts (such as large-scale carbon sequestration or global geoengineering).<sup>119</sup> However, such a view is simply not supportable on the basis of the prevailing evidence. First, in relation to geoengineering, the IPCC is blunt about the paucity of evidence about its the potential to reduce emissions, its inability to offset many of the impacts of climate change (including ocean acidification) and its significant potential side-effects (such as modification of the global water cycle).<sup>120</sup> Secondly, whilst prototype technology exists that permits sequestration of greenhouse gases, it has not yet been deployed at any meaningful scale.<sup>121</sup> And even if projects currently proposed were fully implemented, it would not provide sufficient capacity to sequester enough carbon to remain within the 2°C emissions budget limit. The International Energy Agency does the sums:

Carbon capture and storage (CCS) technology can, in principle, reduce full life-cycle CO<sub>2</sub> emissions from fossil-fuel combustion at stationary sources, such as power stations and industrial sites, by 65-85%. However, the operational capacity of large scale integrated CCS projects...so far provides for the capture of only 6 million tonnes (Mt) of CO<sub>2</sub> per year, with provisions for a further 13 Mt CO<sub>2</sub> under construction...**If all planned capacity were to be constructed, this would take the total to around 90 Mt CO<sub>2</sub>, still equivalent to less than 1% of power sector CO<sub>2</sub> emissions in 2012.** While the technology is available today, projects need to be scaled-up significantly from existing levels in order to demonstrate carbon capture and storage from a typical coal-fired power plant...Ultimately, a huge scale-up in CCS capacity is required if it is to make a meaningful impact on global emissions.<sup>122</sup>

Accordingly, whilst such technologies are likely to form at least part of the multifarious solution, their potential to ‘neutralise’ or ‘remedy’ the impacts of climate change *in an otherwise high-emissions economy* must currently be considered speculative at best.<sup>123</sup>

Simply, the *existence* of anthropogenic climate change is certain. What is *uncertain* is its future magnitude, distribution, timing, consequences and interrelationships. But the longer the global economy perseveres with ‘business as usual’, the greater the chance of climatic variability and unpredictability, with rapid ‘step-changes’ that limit the potential for effective corporate adaptation.

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*Controversy, Inaction and Opportunity* (Cambridge University Press, 2009); Naomi Oreskes and Erik M Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (Bloomsbury Press, 2010).

<sup>118</sup> Quoted in Lorenz, above n 43, 277.

<sup>119</sup> See eg discussion in Andrea Ross, *Sustainable Development Law in the UK: From Rhetoric to Reality?* (Earthscan Publications, 2012); Rogelj et al, ‘Emission pathways consistent’, above n 99; Romani, Rydger and Stern, above, n 113; Steffen and Hughes, above n 11.

<sup>120</sup> IPCC, *Climate Change 2013*, above n 9, 21.

<sup>121</sup> Carbon Tracker and the Grantham Research Institute, *Unburnable carbon 2013: Wasted capital and stranded assets* (2013) <<http://www.lse.ac.uk/GranthamInstitute/publications/Policy/docs/PB-unburnable-carbon-2013-wasted-capital-stranded-assets.pdf>>; Rogelj et al, ‘Emission pathways consistent’, above n 99, 416; Romani, Rydger and Stern, above, n 113, 8; Steffen and Hughes, above n 11, 5, 84, 86.

<sup>122</sup> IEA, above n 16, 25 (internal citations omitted).

<sup>123</sup> Romani, Rydger and Stern, above, n 113, 9.

### 3.2 The inevitability of economic transformation: change or be changed

The corollary of the scientific evidence on climate change is that transformation to a low carbon (or carbon *negative*) economy is *inevitable* in the medium-long term. Although uncertainty about the magnitude and timing of its impacts remains an inherent challenge, the ‘poles’ of the possible economic futures can be generalised as follows.

**At one extreme, the global economy will 'voluntarily' transform, at scale and with speed,** to reduce emissions to an ecologically-sustainable level (for example, to an emissions pathway consistent with a temperature increase of <2°C to the pre-industrial average, or the IPCC's RCP 2.6). This scenario is referred to by Mercer and the International Finance Corporation as ‘**Stern Action**’.<sup>124</sup> It requires severe emissions cuts – ‘*to nearly zero by 2050*’,<sup>125</sup> with the likelihood of net negative emissions across the economy.<sup>126</sup> This in turn requires a fundamental shift in industrial dependence on fossil fuels for energy.<sup>127</sup> The International Energy Agency estimates that the combustion of current reserves of fossil fuels alone would emit *five times* the ‘budget’ than that necessary to retain a good chance of remaining within the 2°C limit.<sup>128</sup> At the current rate of emissions our ‘allowable’ budget will be exhausted by 2028, at which point the global economy would need to be immediately and completely decarbonised to avoid climate catastrophe.<sup>129</sup> Romani, Rydge and Stern are blunt:

[E]ither the development and deployment of carbon capture and storage on scale must be very rapid or 70% of these resources must stay in the ground or the 2°C target will be greatly exceeded. The world is not facing up to this basic logic. It is not possible to believe two things (i) the declared 2°C target can be achieved (ii) the current fossil fuel reserves have the value attributed to them, unless there is an expansion of carbon capture and storage at a pace which currently seems implausible.<sup>130</sup>

And even if emissions *are* stabilised in the near term under Stern Action, business will still need to adapt to *committed* climate change, as outlined in Chapter 3.1 above.

**At the other pole, ‘business as usual’ will continue.** This pole is referred to by Mercer and the International Finance Corporation as ‘**Climate Breakdown**’.<sup>131</sup> As outlined in Chapter 3.1 above, the climate will warm by up to 4.8°C by 2100, presenting an imminent threat ‘*so severe that [it] will challenge the existence of our society as we know it today*’.<sup>132</sup> Romani, Rydge and Stern are equally frank: ‘*Any attempt at a high-carbon path will, before long, destroy itself through the hostile environment it creates*’.<sup>133</sup> Business will be *forced* to transform to a carbon-neutral (if not carbon-

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<sup>124</sup> Mercer, *Climate Change Scenarios – Implications for Strategic Asset Allocation*, report prepared for the Carbon Trust and International Finance Corporation, London, 2011, 9. See also Swiss Re, above n 21, 10.

<sup>125</sup> Steffen and Hughes, above n 11, 5.

<sup>126</sup> Rogelj et al, ‘Emission pathways consistent’, above n 99, 416.

<sup>127</sup> PriceWaterhouseCoopers, above 3, 19; Swiss Re, above n 21, 5.

<sup>128</sup> IEA, above n 16. See also Steffen and Hughes, above n 11, 5.

<sup>129</sup> Steffen and Hughes, above n 11, 83.

<sup>130</sup> Romani, Rydge and Stern, above, n 113, 9. See also Steffen and Hughes, above n 11, 4.

<sup>131</sup> Mercer, above n 124. See also Swiss Re, above n 21, 10.

<sup>132</sup> Steffen and Hughes, above n 11, 5. See also Ban, Ki-Moon, ‘Twentieth-century model ‘a global suicide pact’’ (Transcript of remarks to the World Economic Forum session on redefining sustainable development, Davos, Switzerland, 28 January 2011), 1.

<sup>133</sup> Romani, Rydge and Stern, above, n 113, 3. See also Paul Gilding, *The Great Disruption* (Bloomsbury Press, 2011); Johan Rockstrom, Will Steffen, Kevin Noone, Åsa Persson, F. Stuart Chapin III, Eric F Lambin, Timothy M Lenton, Marten Scheffer, Carl Folke, Hans Joachim Schellnhuber, Björn Nykvist, Cynthia A de Wit, Terry Hughes, Sander van der Leeuw, Henning Rodhe, Sverker Sörlin, Peter K Snyder, Robert Costanza, Uno Svedin, Malin Falkenmark, Louise Karlberg, Robert W Corell, Victoria J Fabry, James Hansen, Brian Walker, Diana Liverman, Katherine Richardson, Paul Crutzen and Jonathan A Foley, ‘A safe operating space for humanity’ (2009) 461 *Nature* 472; Ross, above n 119, 290.

negative) norm - sharply and with limited strategic discretion,<sup>134</sup> ‘under public sector regulation rather than private sector innovation’<sup>135</sup> or due to the physical dictates of the Earth.<sup>136</sup>

The consequences for the global economy are stark. **It is clear that in *any* scenario at or between the two poles, ‘business as usual’ under prevailing industrial paradigms will not be a viable commercial option in the long-term.**<sup>137</sup> This is not a philosophical or ethical position, but an inevitability of physics and economics. There is now an urgent imperative to fundamentally realign energy production and consumption paradigms, and to decouple economic growth from emissions intensity.<sup>138</sup> Such a shift cannot be incremental, but must be systemic, rapid and transformative.<sup>139</sup>

The physical impacts of climate change described above have significant socio-economic consequences that present potentially unparalleled commercial exposures, in turn, materially impact on corporate wealth and value.<sup>140</sup> But how do these impacts translate into corporate risks and opportunities, in practice?

### 3.3 Corporate risk and strategy in a changing climate

*‘The [impacts of climate change] will only emerge erratically over the coming years and decades, but they require action now. For the business sector, this means managing those risks and discovering new opportunities, to maintain a competitive edge. Forward planning rather than reacting to extreme weather events as they occur is essential. This process of adjusting to the changes in our climate is called adaptation and should be part of any strategy on climate change. There are three elements of adaptation: to reduce exposure to the risk of damage; to develop the capacity to cope with unavoidable damages; to take advantage of new opportunities. Effective adaptation to climate change requires sound risk management and strengthening business resilience.’*

*UK Department of Environment, Food & Rural Affairs*<sup>141</sup>

In the light of the scientific and economic evidence discussed in Chapters 3.1 and 3.2 above, it is hardly surprising that the World Economic Forum rates climate change as one of the most significant risks currently facing the global economy. In its 2013 Global Risks Report, ‘rising greenhouse gas emissions’ was nominated as one of the three risks most likely to manifest in the next 10 years, with

<sup>134</sup> Swiss Re, above n 21, 10; Trexler and Kosloff, above n 104, 47-48.

<sup>135</sup> Mercer, above n 124, 9; Trexler and Kosloff, above n 104, 20.

<sup>136</sup> WWF and CDP, above n 116, 5.

<sup>137</sup> See for example PriceWaterhouseCoopers, above n 3; Tim Jackson, *Prosperity without growth? The transition to a sustainable economy*, report for the Sustainable Development Commission UK, London, March 2009; Lloyds (2009), *Climate Change and Security: Risk and Opportunities for Business*, London, April 2009; Rampling, above n 117; Steffen and Hughes above n 11; World Economic Forum (WEF) (in conjunction with Deloitte), *The Consumption Dilemma – Leverage Points for Accelerating Sustainable Growth*, January 2011.

<sup>138</sup> See eg Commissioner for Environmental Sustainability Victoria, *Climate Change Victoria: the science, our people and our state of play*, Foundation One, State of the Environment Report 2013 (2012); PriceWaterhouseCoopers, above n 22; Jackson, above n 137; Kahn, Bruce M and Marc Fox, *Linking Climate Engagement to Investment Performance: An Investor’s Perspective*, report for Sustainable Insight Capital Management and CDP, London, September 2013, 4; Romani, Rydge and Stern, above n 113; UNEP, *Decoupling natural resource use and environmental impacts from economic growth*, Report of the Working Group on Decoupling to the International Resource Panel, New York, March 2011; WEF, above n 137 2011. See also previous discussion by this author in Barker, above n 40.

<sup>139</sup> Kahn and Fox, above n 138, 4; World Economic Forum (WEF) (in conjunction with Deloitte), *Redesigning Business Value: A Roadmap for Sustainable Consumption*, January 2010; WEF, *The Consumption Dilemma*, above n 137.

<sup>140</sup> See for example CDP, above n 22, 11; IPCC, *Managing the Risks of Extreme Events*, above n 10; WWF and CDP 2013, above n 116; Shearing, above n 2840; Trexler and Kosloff, above n 104.

<sup>141</sup> UK Department of Environment, Food & Rural Affairs, *Environmental Reporting Guidelines: Including Mandatory Greenhouse Gas Emissions Reporting Guidance*, June 2013, 19, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/206392/pb13944-env-reporting-guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/206392/pb13944-env-reporting-guidance.pdf).

the ‘failure to adapt to climate change’ one of top five risks in terms of impact (see **Figure 3**, below).<sup>142</sup>

The commercial risks and opportunities presented by climate change can be both *direct* (including physical exposures to production and infrastructure) and *indirect* (including regulatory, market and other stakeholder risks).<sup>143</sup> These are discussed below within three broad categories: **operational and strategic risks**, **legal risks** and **market-related risks**.<sup>144</sup>

### *Operational and strategic risks*

The physical consequences of climate change – both gradual-onset and catastrophic - have significant potential impacts on the absolute and relative competitiveness of corporations. Those who fail to *mitigate* are increasingly exposed to reputational damage (amongst customers, staff and other stakeholders), energy insecurity and price volatility, and the potential stranding of emissions-intensive assets. Those that fail to *adapt* are inherently more vulnerable to physical impacts: both gradual changes in the natural environment and to catastrophic ‘shocks’. These vulnerabilities include direct exposure of plant and infrastructure, business interruption and supply chain insecurity (including impacts on the cost and availability of upstream inputs such as water, utility and communications services, and raw materials, and downstream impacts on transport and distribution networks, as well as shifting consumer demand preferences).<sup>145</sup> These outcomes are clearly inimical to the creation of corporate wealth. For example, just one catastrophe, the 2011 floods in Thailand, triggered disruptions to the global supply chains of some 14,500 corporations, with total losses estimated at US\$15-20 billion (including losses of US\$1 billion to Intel and US\$450 million to Japanese automotive manufacturers alone).<sup>146</sup> In the same year, flood events in Australia led to more than AU\$2 billion in insurance claims.<sup>147</sup>

Conversely, corporations with a proactive approach to climate change are better positioned to take advantage of significant commercial *opportunities*. An embedded approach promotes the identification of emerging markets, process improvement, cost reductions, alignment with emerging policy direction and stakeholder expectations, better access to ‘certain’ markets (such as public

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<sup>142</sup> World Economic Forum (WEF) (2013), ‘Testing Economic and Environmental Resilience’, in Lee Howell (ed), *Global Risks 2013, An Initiative of the Risk Response Network*, 8<sup>th</sup> ed, 10.

<sup>143</sup> See for example Bettina Furrer, *Corporate climate strategies and their determinants. an analysis of banks' responses to climate change* (ETH, 2010) <<http://dx.doi.org/10.3929/ethz-a-006233340>>; IPCC 2007; UN Global Compact, above n 3, 15.

<sup>144</sup> The discussion in this paper purposively acknowledges the categories of ‘risk’ set out in the Australian Stock Exchange Corporate Governance Council’s *Corporate Governance Principles and Recommendations*, above n 85, 33. In addition to ‘environmental’ and ‘sustainability’ risks, these include operational (relative competitiveness, insurance), compliance (regulatory and litigation), strategic, ethical conduct, reputational or brand, technological, product or service quality, human capital, financial reporting (‘the risk of material error in financial statements’) and market-related risks (shareholder/credit/finance/capital). For a general discussion of the business risks and opportunities presented by climate change, see Shardul Agrawala, Maëlis Carraro, Nicholas Kingsmill, Elisa Lanzi, Michael Mullan and Guillaume Prudent-Richard, ‘Private Sector Engagement in Adaptation to Climate Change: Approaches to Managing Climate Risks’, OECD Environmental Working Papers, No. 39, OECD Publishing, revised February 2013, <<http://dx.doi.org/10.1787/5kg221jkf1g7-en>>; Furrer, above n 143; UN Global Compact, above n 3, 19-21.

<sup>145</sup> See for example Accenture, above n 22, 9; CDP, above n 22, 10; PriceWaterhouseCoopers, *Investment, Transformation & Leadership – CDP S&P 500 Climate Change Report 2013*, report prepared for the Carbon Disclosure Project, New York, 2013, 24; PriceWaterhouseCoopers, *Sector Insights: what is driving climate change action in the world’s largest companies? – Global 500 Climate Change Report 2013*, report prepared for the Carbon Disclosure Project, New York, 2013, 11; David John Frenkil, ‘Climate Risks and Opportunities: Business Implications of Climate Change’ (2011) 2 *Journal of Energy and Environmental Law* 71; Young and Jones, above n 12, 6-7.

<sup>146</sup> PriceWaterhouseCoopers, ‘Business resilience’, above n 22, 18. See also Marc C Trexler and Laura H Kosloff, *Adapting to Climate Change 2.0 Enterprise Risk Management* (Do Sustainability, 2013), 22.

<sup>147</sup> Trexler and Kosloff, *Adapting to Climate Change 2.0*, above n 146, 21.

**Figure 3 – World Economic Forum Global Risk Landscape 2013**



Reproduced from World Economic Forum, above p 142, 5.

procurements that are subject to environmental criteria), and a lower cost of financial capital.<sup>148</sup> Mercer estimates that private sector technology and innovation in response to the risks and impacts of climate change could exceed US\$5 trillion by 2030.<sup>149</sup> Similarly, Swiss Re predicts that, depending on the mitigation pathway taken by the global economy: ‘*capital expenditures for biofuels, wind power and carbon capture and storage (CCS) alone are expected to amount to ... make up 14–52% of the total annual investment potential by 2030.*’<sup>150</sup> The exploitation of such opportunities is clearly consistent with the creation of corporate wealth and value.<sup>151</sup>

The disparity in performance between corporate ‘leaders’ and laggards’ is likely to be magnified going forwards as a consequence of two factors. First, even ‘gradual’ climate change is unlikely to be linear, predictable or, in fact, gradual. It is likely to occur at scale and with speed in ‘step changes’ as tipping points are reached. This compounds the risks and costs for the laggards, who are less likely to be able to respond in a timely, strategic and efficient manner, and entrenches the competitive advantages of their proactive competitors. In this context, a *reactive* approach to climate change risk management is clearly inimical to operational efficiency and the creation of long-term value.

Secondly, laggards’ exposures will be compounded by the inability to transfer risk by way of *insurance*, due to their increased ‘first-party’ risk (loss of the insured, such as property insurance and business interruption liability and insurance) and ‘third-party’ risks (losses to others occasioned due to the actions of the insured). They also face the increasing potential of regulatory restriction on such insurances to counter the potential for ‘moral hazard’ (ie. reliance on the fact they are insured to avoid taking positive measures to adequately reduce their exposure).<sup>152</sup> Hecht puts it bluntly: ‘*climate change...could render some risks uninsurable if the industry cannot adapt*’.<sup>153</sup> In turn, the inability to insure may render certain projects impractical or impossible.<sup>154</sup>

### ***Legal risks (regulation and litigation)***

Corporations face significant risks (and opportunities) from regulations designed to promote both mitigation (such as statutory emissions restrictions) and adaptation (such as zoning requirements and building codes), and from *litigation* – commenced either by regulators or private entities who have suffered damage related to the corporation’s actions (or lack thereof) on climate change.

<sup>148</sup> See for example Stefan Ambec and Paul Lanoie, ‘Does it pay to be green? A Systematic overview’ (2008) 22(4) *Academy of Management Perspectives* 45; Sarah Barker, ‘Beyond the Carbon Debate’ (2012) *Company Director* 56, May 2012; Ian Havercroft and Arad Reisberg, ‘Directors’ Duties Under the UK Companies Act 2006 and the Impact of the Company’s Operations on the Environment’ (Working Paper Series, University College London draft December 15 2010 (revised 9 January 2011)), <<http://ssrn.com/abstract=1274567>>; Donald S Siegel, ‘Green management matters only if it yields more green: an economic/strategic perspective’ (2009) 21(3) *Academy of Management Perspectives* 5; Colleen Theron, ‘The impact of sustainability and corporate social responsibility on company reporting’ (2010) 22(3) *Environmental Law & Management*, 23; Young and Jones, above n 12. See also previous discussion this author in Barker, *Do directors’ legal duties*, above n 40.

<sup>149</sup> Mercer, above n 124, 11.

<sup>150</sup> Swiss Re, above n 21, 16.

<sup>151</sup> See eg Accenture, above n 22, 16–18; CDP, above n 22; PriceWaterhouseCoopers, *Business resilience*, above n 22; PriceWaterhouseCoopers, *Investment, Transformation and Leadership*, above n 145; PriceWaterhouseCoopers, *Sector Insights*, above n 145; Siegel, above n 148; Theron, above n 148; Chris Wold, David Hunter and Melissa Powers, *Climate Change and the Law* (LexisNexis, 2009), 879.

<sup>152</sup> Miriam Haritz, *An Inconvenient Deliberation: The Precautionary Principle’s Contribution to the Uncertainties Surrounding Climate Change Liability* (Kluwer Law International, 2011), 5; Sean B Hecht, ‘Insurance’, in Michael B Gerrard and Katrina Fischer Kuh (eds), *The Law of Adaptation to Climate Change – US and International Aspects* (American Bar Association, 2012) 511, 524; Kepler Cheuvreux, *Adaptation: Underwriting risks for (re)insurers*, Report for ESG Sustainability Research and CDP, May 2013, 1.

<sup>153</sup> Hecht, above n 152, 513. See also Godden et al, n 16.

<sup>154</sup> Hecht, above n 152, 519; IPCC, *Managing the Risks of Extreme Events*, above n 10, 347.

## Regulation

‘Climate change is increasingly viewed as a **serious market failure** that requires government intervention’.<sup>155</sup> Whilst progress on a globally-binding emissions mitigation treaty remains mired in a geo-political quagmire,<sup>156</sup> the void is increasingly being filled by national and state-based regimes that **regulate emissions** and/or require explicit **disclosure** of relevant commercial activities.

Emissions regulation, predominantly in the form of legislated carbon pricing, has already been introduced in 33 countries and 18 sub-national jurisdictions.<sup>157</sup> In addition, President Barack Obama recently issued a Presidential Memorandum directing the United States Environmental Protection Agency to regulate carbon emissions from power utilities, with the aim to reduce that country’s emissions to 17% below 2005 levels by 2020.<sup>158</sup> Regulation of emissions can have a significant, direct impacts on asset valuations, capital expenditure decisions and project viability assessments, and indirect competitive impacts on input costs and/or consumer demands. Adaptation leaders may influence the playing field with respect to public policy, raising the relative costs of their rivals.<sup>159</sup>

Globally, there is also a clear trend towards requiring more prescriptive market *disclosures*. This applies not only to corporate *emission* levels, but more detailed information regarding the implementation, monitoring and evaluation of relevant corporate policies, and linkages to associated risk management and strategy.<sup>160</sup> In addition to specific disclosure requirements in Australia,<sup>161</sup> the United States<sup>162</sup> and the UK<sup>163</sup> (amongst others), the International Integrated Reporting Committee (IIRC) is scheduled to release its Integrated Framework for consolidated financial and sustainability

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<sup>155</sup> Wallace, above n 51, 759 (original emphasis); see also Johnston, Burton and Baker-Jones, above n 21, vi.

<sup>156</sup> See eg Preston, above n 17, 15.

<sup>157</sup> In addition to Australia, these notably include New Zealand, Japan, South Korea, India, Mexico, the European Union, Finland, Sweden, Denmark, the Netherlands, Switzerland, Costa Rica, ten states in the United States (California, Connecticut, Delaware, Maine, New Hampshire, New York, Vermont, Massachusetts, Rhode Island and Maryland) and several Canadian provinces (Alberta, Manitoba, Quebec, Ontario and British Columbia). Others are currently in development in China, Japan and South Africa: Steffen and Hughes, above n 11, 5.

<sup>158</sup> White House, *The President’s Climate Action Plan*, Executive Office of the President, 26 June 2013 <<http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>>.

<sup>159</sup> See for example CAMAC, above n 37; Forest L Reinhardt and Robert L Stavins, ‘Corporate social responsibility, business strategy and the environment’ (2010) 26(2) *Oxford Review of Economic Policy*, 164; Siegel, above n 148. See also previous discussion by this author in Barker, *Do directors’ duties*, above n 40.

<sup>160</sup> See for example Fischer Kuh, above n 46, 556-557; Havercroft and Reisberg, above n 148.

<sup>161</sup> In Australia, since 2009 large emitters and energy consumers have been required to report their annual emissions under the *National Greenhouse and Energy Reporting Act 2007* (Cth). In August 2013 the ASX Corporate Governance Council released a consultation paper on amendments to its Corporate Governance Principles and Recommendations. Those proposals include to require listed entities to give greater emphasis to corporate risk management (recommendation 7.3), and to disclose whether and how they have regard to economic, environmental and social sustainability risks (recommendation 7.4): ASX Corporate Governance Council, *Review of the Corporate Governance Principles and Recommendations, Public Consultation*, 16 August 2013.

<sup>162</sup> In the United States, in 2010 the Securities and Exchange Commission issued interpretive guidance on listed corporations’ statutory reporting obligations, ‘Disclosure Related to Climate Change’. It specifies disclosure of the impacts (both positive and negative) of (a) domestic and international climate change regulation that is reasonably likely to have a material effect on the corporation, its financial condition or results of operations (including potential costs or profits from any emissions trading schemes, costs of any capital improvements required to comply with regulatory limits or mitigate their financial impacts, and impacts on profit or loss due to expected changes in supply costs and demand dynamics due to the regulatory reforms); (b) operational repositioning due to expected legal, technological, political and scientific developments regarding climate change (including repositioning required due to potential reputational damages from high-carbon operations); and (c) exposure of the corporation’s physical assets to the physical impacts of increasingly variable and extreme weather, and indirect impacts such as supply chain disruptions, decreased primary productivity, and impact on insurances: Securities and Exchange Commission, *Commission Guidance Regarding Disclosure Related to Climate Change*, 17 CFR PARTS 211, 231 and 241, Release Nos. 33-9106; 34-61469; FR-82, Washington, 8 February 2010. See also discussion in Fischer Kuh, above n 46, 556-557.

<sup>163</sup> In the United Kingdom, from 1 October 2013 the *Companies Act 2006* (*Strategic Report and Directors’ Reports*) *Regulations 2013* have required disclosure (on a ‘report-or-explain’ basis) of greenhouse gas emissions by all corporations listed on the main index of the London Stock Exchange, the FTSE.

reporting in December 2013. This Framework provides guidance for corporate reporting on how ‘strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term.’<sup>164</sup> Whilst compliance with the Framework will be *voluntary*, it is likely that participation by some of Australia’s leading corporations<sup>165</sup> and institutions<sup>166</sup> will drive its broader adoption.

With improvements in the volume, content and consistency of such disclosures, the ability of the market to price firms’ climate change exposures (or competitive advantages) are significantly improved.

### *Litigation*

In addition to the risks of legislative breach, corporations who fail to proactively respond to the threat of climate change may face litigation on a number of common law fronts.

As outlined earlier in this paper, domestic climate change litigation has historically been restricted to matters relating to environmental or planning approvals.<sup>167</sup> Actions seeking to recover climate-change induced damages, which are primarily in the United States, have largely been confined to harms arising from a failure to mitigate emissions, under the torts of negligence and nuisance. So far, plaintiffs have had little success, primarily due to the inability to establish duty and causation.<sup>168</sup> However, the law is dynamic. The science on climate change has solidified. The need for strong mitigation has become increasingly urgent in the face of inadequate public policy responses. Adaptation is now recognised as *necessary* for any entity to manage its exposure.<sup>169</sup> Accordingly, scholars are giving greater consideration to the potential for private causes of action based on harms arising from a failure to *adapt*. Such claims have the potential to overcome the evidentiary challenges that have beset claims based on a failure to mitigate,<sup>170</sup> by ‘*shift[ing] the focus from the overwhelming complexity and nonjusticiability of global warming science to a single corporation’s preventable creation of foreseeable harms*’.<sup>171</sup> And as the impacts of climate change become increasingly observable, it is likely that circumstances will present for a viable test case for a determined plaintiff.<sup>172</sup>

In this context, eminent commentators such as Ghaleigh,<sup>173</sup> Lin,<sup>174</sup> Lord,<sup>175</sup> Peel and Osofsky,<sup>176</sup> Preston,<sup>177</sup> and Zahar, Peel and Godden<sup>178</sup> have recognised the potential for, and centrality of,

<sup>164</sup> International Integrated Reporting Council, *Consultation Draft of the International Reporting Framework*, April 2013, <http://www.theiirc.org/wp-content/uploads/Consultation-Draft/Consultation-Draft-of-the-InternationalIRFramework.pdf>, 3.

<sup>165</sup> Which include National Australia Bank, Stockland and bankmecu.

<sup>166</sup> Which include AMP Capital Investors, the Australian Council of Superannuation Investors, Colonial First State Global Asset Management, the Financial Services Council and the Victorian Funds Management Corporation.

<sup>167</sup> See generally authorities above n 27.

<sup>168</sup> Pielke, Roger, Gwyn Prins, Steve Rayner and Daniel Sarewitz, ‘Lifting the Taboo on Adaptation’ (2007) 445 *Nature* 597,598; Zahar, Peel and Godden, above n 16, 373.

<sup>169</sup> See for example *Dual Gas* [2012] VCAT 308; *Taip* [2010] VCAT 1222 (28 July 2010); *Anvil Hill* [2006] NSWLEC 720.

<sup>170</sup> See for example Cosman, above n 51; Durrant, above n 29; Kaminskaitė-Salters, above n 33; Lord et al, above n 33, 4; McDonald, above n 33; Peel, above n 27; Preston, ‘Climate Change Litigation (Part 1)’, above n 27.

<sup>171</sup> Cosman, above n 51, 766.

<sup>172</sup> Kaminskaitė-Salters, above n 33; World Economic Forum (WEF) (2013), ‘Testing Economic and Environmental Resilience’, in Lee Howell (ed), *Global Risks 2013, An Initiative of the Risk Response Network*, 8<sup>th</sup> ed, 19.

<sup>173</sup> Navraj Singh Ghaleigh, ‘Six Honest Serving Men: Climate Change Litigation as Legal Mobilisation and the Utility of Typologies’ (2010) 1(1) *Climate Law* 31, 45.

<sup>174</sup> Lin, above n 27.

<sup>175</sup> Lord, above n 33.

<sup>176</sup> Peel and Osofsky, above n 26; Osofsky and Peel, above n 27.

<sup>177</sup> See eg Preston, ‘The Influence of Climate Change Litigation’, above n 27.

<sup>178</sup> Zahar, Peel and Godden, above n 16, 132.



litigation as an element of regulatory reform in relation to climate change. Whether cases are successful or ‘*ostensibly unsuccessful*’,<sup>179</sup> litigation has a direct impact on statutory interpretation and common law application and precedent.<sup>180</sup> It also has significant *indirect* influence as a catalyst for action via judicial appeals for legislative reform, as influences upon (or recognition of) changing norms and values, and in increasing costs for potential defendants.<sup>181</sup> Cosman comments:

[A] single decision favouring plaintiffs in a [future suit seeking damages relating to climate change] would create drastic and rapid changes in the industry’s conception of liability.<sup>182</sup>

These risks only compound with the stalemate on an effective international emissions mitigation regime, and uncertainty around the form of on-going regulation in Australia,<sup>183</sup> as private litigants seek to deploy other legal avenues to fill the legislative void.<sup>184</sup> This has prompted reinsurance giant Swiss Re to compare the potential for climate change-related suits to those that drove many companies facing asbestos-related claims to insolvency, predicting:

[C]limate change-related liability will develop more quickly than asbestos-related claims...[the pressure from these actions] could become a significant issue.<sup>185</sup>

### ***Market and capital risks***

Information related to corporations’ approach to climate change risks and opportunities is increasingly demanded by investors and creditors.<sup>186</sup> Their financial interest in such disclosures is clear. First, corporations who do *not* proactively adapt to climate change are inherently more risky than their peers.<sup>187</sup> This fact is increasingly emphasised by investor groups such as CDP (formerly the Climate Disclosure Project), an association with more than 700 investor signatories representing US\$87 trillion in assets – around *one-third* of the invested capital in the global economy, and the Global Investor Coalition on Climate Change,<sup>188</sup> which represents 84 asset owners and managers worth more than US\$14 trillion:

In order to protect their investments, shareholders want to understand the risk climate change presents to their portfolios. Companies are expected to demonstrate long-term resilience and in order to

<sup>179</sup> Preston, ‘The Influence of Climate Change Litigation’, above n 27.

<sup>180</sup> Osofsky and Peel, above n 27, 320.

<sup>181</sup> Benjamin Ewing and Douglas A Kysar, ‘Prods and Pleas: Limited Government in an Era of Unlimited Harm’ (2011) 121 *Yale Law Journal* 350; Ghaleigh, above n 173, 45; Osofsky and Peel, above n 27, 320; Peel and Osofsky, above n 27; Preston, ‘The Influence of Climate Change Litigation’, above n 27.

<sup>182</sup> Cosman, above n 51, 761.

<sup>183</sup> The new Coalition Federal Government has proposed to replace the emissions trading scheme under the *Clean Energy Act 2001* (Cth) with a ‘direct action’ plan, the details of which remain to be finalized as at the date of this paper.

<sup>184</sup> Cosman, above n 51; Ghaleigh, above n 173; Peel and Osofsky, above n 27; Osofsky and Peel, above n 27; Preston, ‘The Influence of Climate Change Litigation’, above n 27; Vanhala and Hilson, above n 14.

<sup>185</sup> Swiss Re, *The Globalisation of Collective Redress*, Zurich, 2009. See also Cosman, above n 51, 755.

<sup>186</sup> Baker & McKenzie, above n 3, 16; Frenkil, above n 145; Hecht, above n 15, 511; IPCC, *Managing the Risks of Extreme Events*, above n 10, 347; Lorenz, above n 43, 286; Mercer, *Climate Change Scenarios*, above n 124, 11; Mercer, *Global Investor Survey on Climate Change – Third Annual Report on Actions and Progress*, report prepared for Global Investor Coalition on Climate Change, London, August 2013; PriceWaterhouseCoopers, *Business resilience*, above n 22, 19; PriceWaterhouseCoopers, *Investment, Transformation and Leadership*, above n 145; Priest, Marcus, ‘Investors ‘aware’ coal consumption will fall’, *Australian Financial Review* (Australia), 17 June 2013, <[http://www.afrsmartinvestor.com.au/p/australia2-0/climate\\_commission\\_warns\\_coal\\_will\\_Os3K60MAR9LJPTDd2nGTDO](http://www.afrsmartinvestor.com.au/p/australia2-0/climate_commission_warns_coal_will_Os3K60MAR9LJPTDd2nGTDO)>; UN Global Compact, above n 143, 20.

<sup>187</sup> Mercer, *Climate Change Scenarios*, above n 124, 11.

<sup>188</sup> An alliance between the European Institutional Investors’ Group on Climate Change, the North American Investor Network on Climate Risk, Australasian Investor Group on Climate Change and the Asia Investor Group on Climate Change.

effectively respond to the risks and opportunities related to climate change, businesses need to be strategic, not reactive.<sup>189</sup>

.... Such actions are expected to enhance the likelihood of sustainable financial returns over time. This is particularly important for long term investors including pension funds.<sup>190</sup>

Similarly, corporations with high emissions profiles will bear the brunt of the costs of greenhouse gas regulation and pricing. Mercer estimates that uncertainty relating to future climate policy could contribute as much as 10% to total portfolio risk for institutional (long-term) investors: '*The economic cost of climate policy for the market to absorb is estimated to amount to as much as \$8 trillion, cumulatively, by 2030.*'<sup>191</sup> Companies in the resources sector, in particular, are significantly exposed to the '*brutal reality and the ignoring of a fundamental market contradiction in fossil-fuel reserves*',<sup>192</sup> with only a fraction of proven fossil fuel reserves able to be burnt 'uncaptured' prior to 2050 to have any chance of remaining within the critical 2°C climate threshold.<sup>193</sup> Accordingly, some investor groups are beginning to express concern that emissions will become *financial liabilities* on corporate balance sheets.<sup>194</sup> This was brought into sharp focus in September 2013, when the Carbon Asset Risk initiative, a coalition of 70 large US and European institutional investors with combined assets exceeding US\$3 trillion, wrote to 45 of the world's largest oil, gas, coal and electricity companies (including BHP Billiton and Rio Tinto)<sup>195</sup> seeking information on the financial risks posed by climate change to their business plans. The letter stated, in part:

We would like to understand [the company's] reserve exposure to the risks associated with current and probable future policies for reducing greenhouse gas emissions by 80 per cent by 2050... We would also like to understand what options there are for [the company] to manage these risks by, for example, reducing the carbon intensity of its assets, divesting its most carbon intensive assets, diversifying its business by investing in lower carbon energy sources or returning capital to shareholders.<sup>196</sup>

The CEO of one fund member in the initiative, Jack Ehnes of CalSTRS (America's second largest public pension fund), stated:

As long-term investors, we see the world moving toward a low-carbon future in which fossil fuel reserves that companies continue to develop may actually become a liability, which could take a toll on shareholder value.<sup>197</sup>

The extent of exposure to Australian equities markets is significant when it is considered that 45% of the ASX's capitalised value is represented by resource and energy companies, and a further 25% by those in the financial sector.<sup>198</sup>

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<sup>189</sup> CDP, above n 22, 19.

<sup>190</sup> Ibid, 10.

<sup>191</sup> Mercer, *Climate Change Scenarios*, above n 124, 1.

<sup>192</sup> Romani, Rydge and Stern, above n 113, 9.

<sup>193</sup> In addition, the world's largest 200 publicly-traded fossil fuel companies spend a total of around US\$670 billion per annum on finding and developing new reserves, which have the real potential to become stranded: CERES, *Investors ask fossil fuel companies to assess how business plans fare in low-carbon future*, Press Release, Boston, 24 October 2013 <<https://www.ceres.org/press/press-releases/investors-ask-fossil-fuel-companies-to-assess-how-business-plans-fare-in-low-carbon-future>>.

<sup>194</sup> CERES, above n 193; Cosman, above n 51; Frenkil, above n 145.

<sup>195</sup> CERES, <[https://www.ceres.org/files/car-mats/car-release/companies-that-received-car-letter/at\\_download/file](https://www.ceres.org/files/car-mats/car-release/companies-that-received-car-letter/at_download/file)>.

<sup>196</sup> CERES, *Letter to Oil & Gas Companies from Investors*, 9 September 2013, 2

<[https://www.ceres.org/files/car-mats/car-release/compiled-company-letters/at\\_download/file](https://www.ceres.org/files/car-mats/car-release/compiled-company-letters/at_download/file)>.

<sup>197</sup> CERES, *Investors ask fossil fuel companies*, above n 193, 2.

<sup>198</sup> Including 28% metals and mining, 17% other materials and industrials and 25% financials: ASX, *Listing on ASX – Gateway to the resource capital of Asia*, Sydney, 2013.

Whilst the market risks are particularly acute in emissions-intensive industries, the risks and benefits of climate change risk and strategy apply across almost all sectors.<sup>199</sup> This is because they are applied as a proxy for broader governance integrity: more sophisticated governance structures, a long-term profit maximisation approach, and advanced stakeholder management, measurement and reporting systems.<sup>200</sup> The CDP states:

Strategy responses are of importance for investors as robust risk management processes and business strategies with regards to climate change issues provide a reliable indication of good overall management and understanding of risks. This can give confidence to investors that both risks and opportunities will be appropriately identified, evaluated and managed, therefore increasing the potential for a good return on their investment.<sup>201</sup>

The economic theory is also reflected in market valuation reality. Early empirical studies were equivocal about whether a proactive approach to ‘environmental sustainability’ could be positively-correlated with market value.<sup>202</sup> However, this is clearly no longer the case.<sup>203</sup> Most recently, a 2013 study by the Harvard Business School found that those corporations who have voluntarily embedded (or ‘institutionalised’) sustainability as part of their core business strategy over the long term (from 1993), outperform their peers by a value-weighted average of 4.8% per annum, and have superior rates of return on both equity and assets (see **Figure 4**, below).<sup>204</sup>

This correlation between market valuation and proactive *climate change* strategies, specifically, is also demonstrated in a number of recent climate change-specific studies. In one such study in September 2013 by Kahn and Fox, a direct correlation was found between the quality of corporate engagement on climate change (as a proxy for governance of sustainability) and performance indicators. A ‘quality premium’ equivalent to +5.2% return on equity, +18.1% cash flow stability and +1.6% dividend growth was demonstrated between the top-disclosing quintile of Global 500 companies with the bottom quintile.<sup>205</sup>

<sup>199</sup> See generally Baker & McKenzie, above n 3, 12; Shearing, ‘Climate Change Governance’, above n 28.

<sup>200</sup> See for example Robert G Eccles, Ioannis Ioannou and George Serafeim, *The Impact of Corporate Sustainability on Corporate Processes and Performance*, Working Paper Series 12-035, Harvard Business School, Boston, November 2011, revised July 2013, 44.

<sup>201</sup> CDP, above n 22, 40.

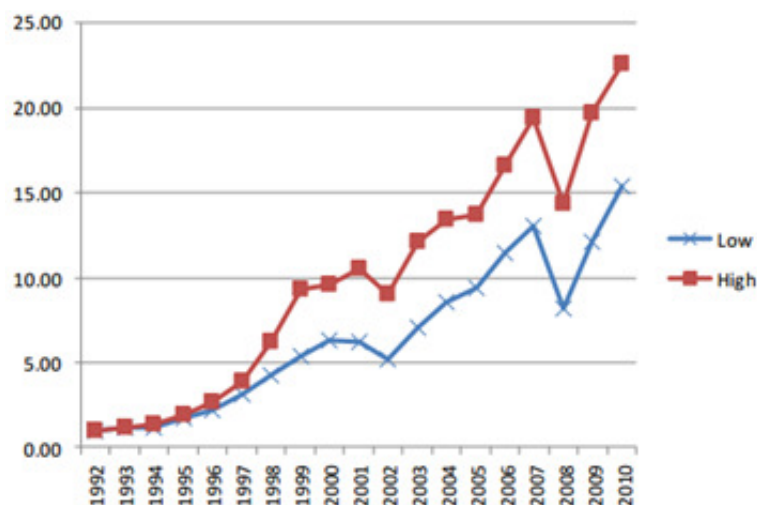
<sup>202</sup> Early management theorists argued that environmental initiatives would generally be associated with a reduction in competitiveness (see for example Kenneth E Aupperle, Archie B Carroll and John D Hatfield, ‘An empirical examination of the relationship between corporate social responsibility and responsibility (1985) 28(2) *Academy of Management Journal* 446; H Russell Folger and Fred Nutt, 1975, ‘A Note on Social Responsibility and Stock Valuation’ (1975) 18(1) *Academy of Management Journal* 155). Other meta-analyses found that there was little direct causality either way (see for example Joshua Margolis, Hillary Elfenbein and James Walsh ‘Does it pay to be good? A meta-analysis of the relationship between corporate social and financial performance’ (Working Paper, Harvard University, 1 March 2009), <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1866371](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1866371)>).

<sup>203</sup> See for example PriceWaterhouseCoopers, *Sector Insights*, above n 145; Kahn and Fox, above n 138; and meta-analyses of the empirical evidence find a positive association between ‘environmental performance’ and financial performance by Ambec and Lanoie, above n 148; Siegel, above n 148.

<sup>204</sup> Eccles, Ioannou and Serafeim, above n 200, 44.

<sup>205</sup> Kahn and Fox 2013, above n 138, 11. The study calculated return on equity = net income less preferred dividends, divided by average total common equity (three-year average, 2010-2012), volatility of cash flow = the coefficient of variation of annual cash flow from operations calculated as the ratio of the standard deviation relative to the mean (ten-year st dev and mean) and dividend growth calculated as the compound annual growth rate in dividend per share (three-year CAGR, 2009-2012). Similarly, the CDP observes a correlation between a performance and company’s position on its Carbon Disclosure Leadership Index (**CDLI**) or Carbon Performance Leadership Index (**CPLI**) ‘Since 2005, **CDLI** companies delivered total returns of 82.8%, outperforming the Global 500 (49.6%) by more than two thirds. Moreover, **CPLI** companies generated average total returns of 31.9% since 2010, outperforming the Global 500 (24.8%) by more than a quarter’: PriceWaterhouseCoopers, *Sector Insights*, above n 145, 17.

**Figure 4 – Evolution of US\$1 invested in the NYSE in value-weighted portfolios: ‘high’ vs ‘low’ embedded sustainability**



*Eccles, Ioannou and Serafeim, above n 200, 44.*

### 3.4 Corollaries for directors

Strategic private sector adaptation to climate change must be a purposeful process: it will not happen by chance. Companies must prioritise adaptation and take action to address risks and pursue opportunities...Companies will find that addressing the impacts of climate change necessitates a departure from business as usual: traditional approaches are insufficient.<sup>206</sup>

It is clear that climate change presents material – if not unparalleled - risks and opportunities. Increasingly, a proactive governance response to climate change is not only consistent with, but essential to, the maximisation of corporate value.<sup>207</sup>

The nature of the steps that must be taken by directors in their oversight of such risks and strategies will vary with the circumstances of each corporation.<sup>208</sup> Climate change is a complex, dynamic problem that requires a multi-faceted, iterative and flexible response.<sup>209</sup> Effective adaptation, in particular, is highly context-specific.<sup>210</sup> However, somewhat contrarily, the uncertainties inherent in the speed, scale and scope of climate change impacts, and in future public policy and technological innovation, serve to clarify the nature of the wealth-maximising corporate response: *viz*, increasing *adaptive capacity* and *resilience* to dynamic exposures.<sup>211</sup> An aggressive plan of emissions *mitigation* is itself a key element of reducing vulnerability and increasing resilience to external shocks, and is therefore essential to effective adaptation. And mechanisms to remove, reduce, transfer and/or share risks must be explored. These essential features of any proactive governance of climate change risk

<sup>206</sup> UN Global Compact, above n 143, 7.

<sup>207</sup> Baker & McKenzie, above n 3; Trexler and Kosloff, above n 104, 16; WEF, *Redesigning Business Value*, above n 139; WEF, *Testing Economic and Environmental Resilience*, above n 172.

<sup>208</sup> Lorenz, above n 43.

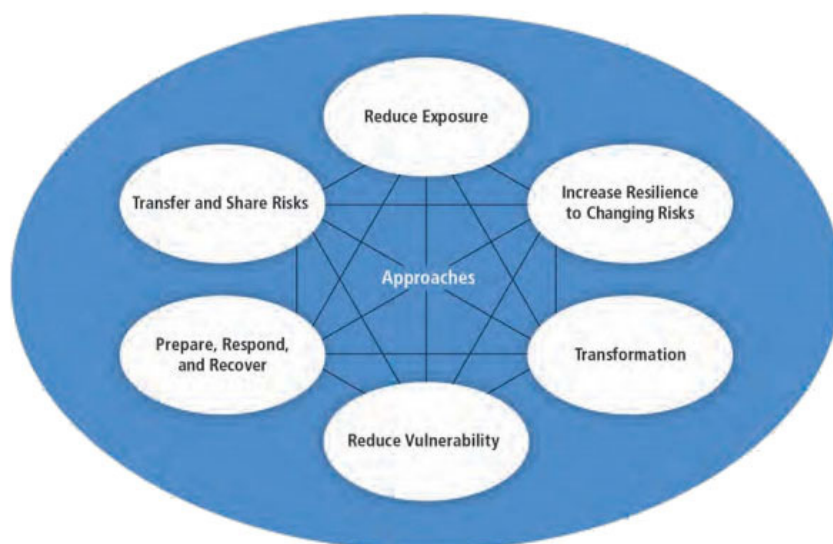
<sup>209</sup> Godden et al, above n 16, 235; World Economic Forum, ‘Testing Economic and Environmental Resilience’, above n 172.

<sup>210</sup> Agrawala et al, above n 144, 16.

<sup>211</sup> IPCC, *Managing the Risks of Extreme Events*, above n 10, 6-17; Trexler and Kosloff, above n 104, 16-17.

are reflected in the ‘key approaches’ to climate adaptation and disaster risk management proposed by the IPCC, illustrated in **Figure 5** below.<sup>212</sup>

**Figure 5 – IPCC Adaptation and Disaster Risk Management Approaches**



*Reproduced from IPCC, Managing the Risks of Extreme Events, above n 10, 6.*

Despite these risks (and opportunities), only a small minority of corporations are proactively managing them. Internationally, for example, the Partnership for Resilience and Environmental Preparedness (**PREP**) reports that 90% of companies have suffered climate-related damage or interruption in the past three years, yet only 30% are actively responding to those risks.<sup>213</sup> These results are consistent with those of a 2012 CDP survey of the climate change strategies of Global 500 companies, which reveals that only one third factor climate change risks and opportunities into their long-term strategic planning.<sup>214</sup> Similarly, in a domestic context, Loechel, Hodgkinson and Moffat<sup>215</sup> report recent studies that only 39% of companies in the Australian resources sector are ‘convinced’ that climate change is occurring, and only 13% have adaptation policies, plans or practices, or had undertaken a climate change risk or vulnerability assessment. Significantly, 25% are still ‘not at all convinced’ the climate is changing.<sup>216</sup>

<sup>212</sup> IPCC, *Managing the Risks of Extreme Events*, above n 10, 6-17. See also Kahn and Fox, above n 138; PriceWaterhouseCoopers, *Sector Insights*, above n 145.

<sup>213</sup> Amado and Adams, above n 57, 3, 7.

<sup>214</sup> PriceWaterhouseCoopers, above n 22, 11. Only 42% of the 405 respondents to the Global 500 survey indicated that climate change has been integrated into their long-term strategies. On the assumption that those who did not respond do not place a high strategic priority on climate change (one which is supported by empirical analysis by the Australian Council of Superannuation Investors - Australian Council of Superannuation Investors, *Corporate Reporting in Australia*, Research Paper (May 2013), 21,

<http://www.acsi.org.au/images/stories/ACSIDocuments/generalresearchpublic/Sustainability%20Reporting%20Journey%202013%20-%20public%20version.pdf>) this means that up to *two thirds* of Global 500 companies do not factor climate change risks and opportunities into their long-term strategic planning.

<sup>215</sup> Loechel, Hodgkinson and Moffat, above n 3, 473.

<sup>216</sup> *Ibid.*

There is no doubt that many corporations will suffer value impairment (if not insolvency) as a result of the observed, committed and potential impacts of climate change. Where they do, shareholders may look to the governing directors (and their deep-pocketed insurers) to recover their loss. And Courts will assess whether directors adequately discharged their duties to govern the relevant risks and opportunities, today. So what does this mean for directors who remain passive, inactive or reactive in their approach to climate change?

## 4 DIRECTORS' DUTIES & CLIMATE CHANGE IN PRACTICE

*Directors who now fail to ensure that their corporation adapts to climate change are increasingly likely to be liable for a breach of their duty to exercise due care and diligence under section 180 of the Corporations Act if their corporation suffers future loss or damage. Common justifications historically relied upon for governance inaction on climate change, such as climate change denial, honest ignorance and uncertainty, are unlikely to satisfy the duty nor the Business Judgment Rule defence under section 180(2). In certain circumstances, directors may also fail to act in good faith in the best interests of the corporation under section 181.*

Chapter 2 of this paper examined the core function of directors to oversee corporate risk and strategy, and the legal duties that they must observe in doing so. Chapter 3 examined the current, committed and potential impacts of climate change, and concluded that the commercial risks and opportunities it presents must be proactively managed in order to maximise corporate wealth. At a minimum, it demands proactive development of *adaptive capacity* and *resilience* in the face of dynamic exposures. This Chapter draws together each element of the foregoing analysis, via an examination of the circumstances in which current governance action (or inaction) on climate change may be susceptible to liability for breach *Corporations Act* duties, should the corporation suffer an impairment of value (or become insolvent) into the future.<sup>217</sup> These include the duties:

- (a) to exercise **due care and diligence** (section 180(1), subject to the 'Business Judgment Rule' defence under section 180(2)); and
- (b) to act in **good faith in the best interests of the corporation**, and for a proper purpose (section 181).

As outlined in Chapter 1 above, this paper assumes that the bona fides of the director are not in question. In other words, the director is presumed:

- (a) to have acted with *subjective* good faith (ie honestly);
- (b) not to have acted for a purpose that is irrelevant or improper; and
- (c) not to have a material personal interest in the relevant subject matter.

Should the director act *without* such bona fides, it is clear that they would contravene their duty to act in good faith in the best interests of the corporation and for a proper purpose under section 181, and would not satisfy the requirements of the Business Judgment Rule defence to the duty of care and diligence under section 180(2).

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<sup>217</sup> This paper examines the potential for directors to contravene sections 180 and 181 of the *Corporations Act* on their terms. It presumes that other elements that may be relevant to a particular claim, such as standing and causation, can be established.

## *Reasons for governance inaction*

Whilst there is a significant body of literature examining the motivations for *positive, voluntary* corporate adaptation to climate change,<sup>218</sup> the reasons for governance *inaction* remain under-researched.<sup>219</sup> From the literature that does exist, the following factors can be distilled as the primary rationales for historical (and prevailing) inaction on climate change:

- (a) **Denial** - overt denial or climate change scepticism;<sup>220</sup>
- (b) **Honest ignorance** - a failure to consider the risks and/or opportunities presented by climate change (at all, or in relation to specific projects);<sup>221</sup>
- (c) **Uncertainty paralysis** - honest uncertainty regarding the speed, scope and scale of climate change impacts;<sup>222</sup>
- (d) **Conscious cost/benefit** – an informed, active decision to continue with ‘business as usual’;  
or<sup>223</sup>
- (e) **Standards-based** – default to compliance with regulatory requirements, or industry standards/norms.<sup>224</sup>

These scenarios are considered, in turn, in the context of directors’ primary statutory duties, below.

### **4.1 Due care and diligence**

As outlined in Chapter 2 above, section 180(1) of the *Corporations Act* requires directors to exercise the degree of care and diligence that a *reasonable person* would apply in the circumstances. The Courts apply the subjective characteristics of the director and their corporation (including the type of company involved, the size and nature of its business or businesses, its Constitution, the composition of the board and its reserved powers, and whether the company is public or private)<sup>225</sup> to an objective assessment of whether the director has taken ‘*all reasonable steps to be in a position to guide and manage the company*’.<sup>226</sup> This, in turn, requires a balancing of the *magnitude* of the relevant risk (its gravity, frequency and imminence) and the *probability* that it will crystallise, as against the *expense*,

<sup>218</sup> Such motivations generally include competitiveness (efficiency driven), legitimacy (issue salience to consumers and institutional pressures) and social responsibility – see eg Pratima Bansal and Kendall Roth, ‘Why companies go green: a model of ecological responsiveness’ (2000) 43(4) *Academy of Management Journal* 717; Pratima Bansal and Iain Clelland, ‘Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment’ (2004) 47(1) *Academy of Management Journal* 93; Sarah Elena Windolph, Dorli Harms and Stefan Schaltegger, Motivations for Corporate Sustainability Management: Contrasting Survey Results and Implementation (2013) Corporate Social Responsibility and Environmental Management, online early view version, 30 October 2013, doi: 10.1002/csr.1337.

<sup>219</sup> Peer C Fiss and Edward J Zajac, ‘The Symbolic Management of Strategic Change: Sensegiving via Framing and Decoupling’ 49 *Academy of Management Journal*, 1173; Furrer, above n 143, 134.

<sup>220</sup> See eg Loechel, Hodgkinson and Moffat 2013, above n 3, 473.

<sup>221</sup> See eg Loechel, Hodgkinson and Moffat 2013, above n 3, 473; Smith and Morreale, above n 42.

<sup>222</sup> See eg C Engau and VH Hoffman, ‘Corporate response strategies to regulatory uncertainty: evidence from uncertainty about post-Kyoto regulation’, 44(1) *Policy Sciences* 53, March 2011; Loechel, Hodgkinson and Moffat, above n 3; PriceWaterhouseCoopers, *Business resilience*, above n 22, 4; Trexler and Kosloff, above n 104; UN Global Compact, above n 143, 17, 28.

<sup>223</sup> Smith and Morreale, above n 42; Trexler and Kosloff, above n 104.

<sup>224</sup> Amado, above n 57, 12; Trexler and Kosloff, above n 104.

<sup>225</sup> *ASIC v Rich* (2003) 44 ACSR 341, [35]; *ASIC v Rich* (2009) 75 ACSR 1, [7201], citing *Commonwealth Bank of Australia v Friedrich* (1991) 5 ACSR 15, 123; *ASIC v Vines* (2005) 55 ACSR 617, [1067]; *Daniels v Anderson* (1995) 37 NSWLR 438, 505.

<sup>226</sup> *Centro* [2011] FCA 717, [16], [143] and [162]. See also *ASIC v Rich* (2009) 75 ACSR 1, [7205-6].



*difficulty and inconvenience* of any countermeasures, and the defendant's *conflicting responsibilities*.<sup>227</sup>

***Subjective characteristics and objective 'reasonable steps': climate change common denominators***

A defendant director's conduct must, of course, be assessed on the facts of each case. However, a number of general observations can be made in respect of both the objective and subjective variables that are likely to apply in any appraisal of their current governance with regard to climate change.

In relation to the characteristics of the particular corporation, the actual magnitude of the risks presented by climate change (and the proportionate governance response required) will vary across industries and between firms. Corporations in the resources, energy, materials manufacturing, primary industry, waste disposal, transport and tourism sectors are particularly exposed to its direct impacts, as are those in the financial sector who invest in or lend to corporations across the economy. However, given the breadth and magnitude of climate change risks, it would be ill-advised for corporations in other industries to presume that the consequences for their operations will be small or benign. To the contrary, the analysis in Chapter 3 above demonstrates that almost every commercial organisation will be, at a minimum, *indirectly* effected as a consequence of the impacts on their suppliers, customers and/or other stakeholders.<sup>228</sup> Further, in relation to the circumstances of the individual director, it is clear that *proactivity* and *engagement* are necessary to discharge their duties. In recent cases the Courts have emphasised that there are certain *minimum* obligations inherent in the duty of care. In short, a 'reasonable' director must:

- (a) proactively acquire, and maintain, an '*irreducible core*' of knowledge and understanding of the fundamentals of their corporation, including in relation to its activities, its financial position and the relevant regulatory framework;
- (b) monitor corporate affairs and policies; and
- (c) '*take a diligent and intelligent interest in the information available to them or which they might appropriately demand from the executives or other employees and agents of the company*'.<sup>229</sup>

This knowledge must be brought to bear by the director in an *independent* and *critical evaluation* of the matters for which they are responsible.<sup>230</sup>

It is against the high bar imputed by these subjective 'common denominators' that the objective assessment of 'all reasonable steps' will occur – balancing on the one hand, the magnitude and probability of the relevant risk against, on the other, the cost and inconvenience of averting action and conflicting responsibilities. As discussed in Chapter 3 above, the *probability* that climate change is occurring, and will continue to occur, must now be regarded as virtually certain. It is also beyond question that *magnitude* of the commercial risks and opportunities presented by climate change are significant – if not unparalleled. The need for economy-wide mitigation, at scale and speed, to avoid catastrophic climate change, and for individual corporations to adapt to observed and future

<sup>227</sup> *Wyong Shire Council v Shirt* (1980) 146 CLR 40, 47, applied in *ASIC v Rich* (2009) 75 ACSR 1, [7231, 7236] and *ASIC v Vines* (approved by the Court of Appeal in *Vines v ASIC* (2007) 25 ACLC 448); *ASIC v Ingleby* (2012) 91 ASCR 66, 69.

<sup>228</sup> Amado, above n 57, 7; Baker & McKenzie, above n 3; Johnson, Burton and Baker-Jones, above n 21, v; Shearing, 'Climate Change Governance', above n 28, 176.

<sup>229</sup> *Centro* [2011] FCA 717, [16], [143] and [162]. See also *ASIC v Rich* (2009) 75 ACSR 1, [7203].

<sup>230</sup> *Centro* [2011] FCA 717.

‘committed’ climate change that is now locked in (at a minimum), is unavoidable. So in what circumstances will the ‘justifications’ commonly relied upon for governance inaction then provide sufficient counterbalance (in terms of cost, inconvenience and conflicting responsibilities) to conclude that a (proactive and engaged) director has satisfied their duty of care and diligence in governing for the risks and opportunities of climate change?

### (a) *Denial: Overt denial or climate change scepticism*

A director may seek to rely on an *honestly-held* denial of anthropogenic climate change to justify their governance inaction. In the context of the ‘*all reasonable steps*’<sup>231</sup> test, this would essentially equate to a submission that the magnitude and probability of the relevant risks are negligible.

However, it is increasingly unlikely that a denialist position could be sustained as the genuine outcome of taking ‘*all reasonable steps*’ in the circumstances. This paper has synthesised the overwhelming evidence as to the unparalleled socio-economic threats of climate change. Internationally, the science on climate change is recognised by the United Nations and its member states, the OECD, the World Bank, the World Economic Forum, the World Meteorological Organisation and the International Energy Agency.<sup>232</sup> Domestically, it is recognised by legislatures in all three tiers of government,<sup>233</sup> by the judiciary in State and federal courts,<sup>234</sup> and by peak scientific and industry bodies such as the Australian Council of Superannuation Investors,<sup>235</sup> CSIRO<sup>236</sup> and Australian Institute of Company Directors.<sup>237</sup> The science is not reported in obscure forums, but in leading peer-reviewed journals (such as *Science* and *Nature*, in which studies by Rogelj et al<sup>238</sup> and Peters et al<sup>239</sup> (amongst others), *infra*, are published) and has been and reported in the mainstream Australian press (including on the front pages of major metropolitan newspapers such as *The Age*, *The Sydney Morning Herald*, *The Australian* and *The Australian Financial Review*).<sup>240</sup> It would be difficult for a Court to deny that a reasonable director would, or ought reasonably to, be generally aware of such high-profile information - regardless of whether the defendant has *actually read* it.<sup>241</sup> Monbiot eloquently describes the challenge that denialist directors face against such overwhelming contrary evidence:

<sup>231</sup> *Centro* [2011] FCA 717.

<sup>232</sup> See eg IEA, above n 16; OECD 2013; UNEP, above n 138; UNFCCC, above n 7; World Bank, above n 18; WEF, above n 172; WMO, above n 11.

<sup>233</sup> See discussion in Chapter 1.2, above.

<sup>234</sup> *Ibid*.

<sup>235</sup> See Australian Council of Superannuation Investors, above n 214.

<sup>236</sup> See eg Sarah Park, Steve Crimp, Anne-Marie Dowd, Peta Ashworth and Emily Mendham, *Understanding climate change adaptation as a national challenge*, CSIRO Climate Adaptation Flagship Working Paper Series #8 (Canberra, 2011).

<sup>237</sup> AICD, above n 82.

<sup>238</sup> Rogelj et al, above n 14, 99,104 and 116.

<sup>239</sup> Peters et al, above n 102.

<sup>240</sup> See for example Marcus Priest, ‘Earth’s Warming ‘unequivocal: IPCC’, *Australian Financial Review* (Sydney), 27 September 2013, 1; Graham Lloyd, ‘Doubts over IPCC’s global warming rates’, *The Australian* (Sydney), 16 September 2013, 1; Reuters, ‘Global warming ‘hiatus’ seen as temporary, leaked IPCC report argues’, *The Age* (Melbourne), 21 September, 1. On 21 October 2013, letter editors of the *Sydney Morning Herald*, Julie Lewis and Marc McEvoy, concur with the high-profile stance taken by their contemporary at the *Los Angeles Times*, Paul Thornton, that he would not print letters that asserted ‘*there is no sign humans have caused climate change*’ because ‘*it was not stating an opinion, it’s asserting a factual inaccuracy*’. Lewis and McEvoy stated: ‘*Climate change deniers or sceptics are free to express opinions and political views on our page but not to misrepresent the facts. This applies to our contributors on any subject*’ (see Julie Lewis and Marc McEvoy, ‘Climate change: a note from our Letters editors’, *Sydney Morning Herald* (online), 21 October 2013, <<http://www.smh.com.au/comment/smh-letters/climate-change-a-note-from-our-letters-editors-20131021-2vvjd.html>>).

<sup>241</sup> *H v Royal Alexandra Hospital for Children* (1990) Aust Torts Reports ¶81-000, SC (NSW).

It's hard to convey just how selective you have to be to dismiss the evidence for climate change. You must climb over a mountain of evidence to pick up a crumb: a crumb which then disintegrates in your palm. You must ignore an entire canon of science, the statements of the world's most eminent scientific institutions, and thousands of papers published in the foremost scientific journals.<sup>242</sup>

Even if there *were* circumstances in which a director could establish that their climate change denial was both honestly held and based on robust information gathering and analysis, such robust systems would also necessarily inform the director that their view *differs* from that of the overwhelming majority of regulators, insurers, creditors and other market stakeholders. This presents, at a minimum, indirect stakeholder risks, and likely direct regulatory, litigation, market and insurance risks, that must be managed in order to maximise corporate wealth.<sup>243</sup> Accordingly, a 'reasonable' director could *not* also genuinely maintain that the risks and opportunities presented by climate change were insignificant or improbable – *regardless of whether the prevailing consensus conflicts with their genuine personal ideologies*.<sup>244</sup>

It is therefore unlikely that a denialist director could demonstrate that they had taken 'all reasonable steps' in the performance of their governance duties in order to discharge their duty of care and diligence under section 180(1). Could they then satisfy the 'Business Judgment Rule' defence under section 180(2)?

#### *Business Judgment Rule*

Before the four substantive limbs of the Business Judgment Rule are applied, the defendant director must satisfy the '*business judgment*' threshold: that they made a conscious decision in relation to the *performance* (as opposed to conformance or compliance)<sup>245</sup> of the corporation. A *business judgment* is unlikely to exist where the climate change denialism results from having omitted to consider the issue,<sup>246</sup> or on the basis of an 'unreflective assumption' where they failed to inform themselves of relevant matters prior to making the decision.<sup>247</sup> However, in circumstances where they have made a *conscious decision* to deny anthropogenic climate change, the defence may be available for judgments regarding planning, budgeting and forecasting,<sup>248</sup> or in the selection of commercial counterparties.<sup>249</sup>

If the denialist director *can* satisfy the threshold requirement of having made a 'business judgment' they would then need to satisfy *each* of the four limbs of section 180(2) (set out in Chapter 2, above) in order to enliven the defence.<sup>250</sup>

The first two limbs of the Business Judgment Rule require the director to demonstrate that they acted:

- (a) *in good faith for a proper purpose, and*
- (b) *they had no material personal interest in the subject matter of the judgment.*

As outlined above, this paper presumes that the director has acted with *subjective* good faith (ie honestly), and that they have no conflicting interest that may compromise their judgment in relation to

<sup>242</sup> George Monbiot, 'Junk Science', *The Guardian* (London), 10 May 2005, <<http://www.monbiot.com/2005/05/10/junk-science/>>.

<sup>243</sup> Haritz, above n 152; Hecht, above n 152; Trexler and Kosloff, above n 104, 18.

<sup>244</sup> *H v Royal Alexandra Hospital for Children* (1990) Aust Torts Reports ¶81-000, SC (NSW).

<sup>245</sup> *ASIC v Rich* (2009) 75 ACSR 1, [7277]. See also Ford, above n 4, [8.310].

<sup>246</sup> *ASIC v Rich* (2009) 75 ACSR 1, 633.

<sup>247</sup> See eg *ASIC v Adler* (2002) 41 ACSR 72; *ASIC v Rich* (2009) 75 ACSR 1, 8; *Gold Ribbon (Accountants) Pty Ltd (in liq) v Sheers* [2006] QCA 335.

<sup>248</sup> *ASIC v Rich* (2009) 75 ACSR 1, [7277]. See also Ford, above n 4, [8.310].

<sup>249</sup> *Wentworth Metals Group Pty Ltd v Leigh and Owen (as liquidators of Bonython Metals Group Pty Ltd): In the matter of Bonython Metals Group Pty Ltd (In liq)* [2013] FCA 349 (18 April 2013).

<sup>250</sup> The limbs of the Business Judgment Rule are *cumulative*: *ASIC v Macdonald (No 11)* [2009] NSWSC 287; *ASIC v Rich* (2009) 75 ACSR 1; *Bell Group Appeal* [No 3] [2012] WASCA 157, [869].

the particular issue. Accordingly, this analysis of the Business Judgment Rule proceeds on the basis that its first two limbs are satisfied. This is subject to the caveat that the first limb may be contravened if the director's failure evidences a *constructive* or, on some authorities, *objective* lack of good faith. This issue is discussed in further detail within the analysis of the duty to act with good faith under section 181, in Chapter 4.2 below.

A denialist director's ability to satisfy the Business Judgment Rule is most likely to turn on its third limb, *viz* whether they *informed themselves about the subject matter to the extent they reasonably believed to be appropriate prior to making their decision*.

This test is subtly different to the inquiry under the duty of care and diligence in sub-section (1), which assesses whether the director *ought to have been aware* of information relevant to a material issue affecting the corporation's business. This distinction was drawn in the leading case on the Business Judgment Rule, *ASIC v Rich*,<sup>251</sup> in which Austin J held that this limb of the defence:

[R]elates to the **decision-making occasion**, rather than the general state of knowledge of the director. It requires the director to become informed about the subject matter of the decision prior to making it, since **the business judgment rule should not protect decisions taken in disregard of material information readily available**. The qualifying words, "to the extent they reasonably believe to be appropriate", convey the idea that protection may be available even if the director was not aware of available information material to the decision, if he reasonably believed he had taken **appropriate steps on the decision-making occasion** to inform himself about the subject matter (*emphasis added*).<sup>252</sup>

His Honour went on to find that this question must be assessed by reference to:

[T]he business judgment to be made; the time available for obtaining information; the costs related to obtaining information; the director's... confidence in those exploring the matter; the state of the company's business at that time and the nature of competing demands on the board's attention; and whether or not material information is reasonably available to the director.<sup>253</sup>

In theory, therefore, there will be circumstances where the defendant director has failed to exercise due care and diligence (in this case, by virtue of a denialist approach resulting from inadequate information or inquiry), but to have formed a reasonable belief that, in the circumstances of the particular decision, they had adequate information on which to base their analysis - and may therefore satisfy the defence. However, in practice, such circumstances are likely to be extremely narrow. They may be informed by the *rationale* underlying this limb of the Business Judgment Rule: *viz* to recognise that commercial decisions must sometimes be made urgently, with more limited information than would ideally be available with the 'luxury' of time.<sup>254</sup> It is clear that decisions made in relation to climate change risk management and strategy are *not* generally made in such time-bound circumstances. It is not the case that the issue of climate change is new, emerging or

<sup>251</sup> For an outline of the facts of *ASIC v Rich* (2009) 75 ACSR 1, refer above n 52.

<sup>252</sup> *ASIC v Rich* (2009) 75 ACSR 1, [7284].

<sup>253</sup> *ASIC v Rich* (2009) 75 ACSR 1, [7283], internal citations omitted.

<sup>254</sup> The Australian Business Judgment Rule is squarely based on that articulated in the American Law Institute's Principles of Corporate Governance: Analysis & Recommendations (Proposed final draft dated 31 March 1992) (**ALI Draft**) – Rule 4.01(c)(ii) of which applies if the director or officer is (amongst other things) '*informed with respect to the subject of the business judgment to the extent the director or officer reasonably believes to be appropriate under the circumstances*'. The commentary to the ALI Draft notes the intention of the rule to permit a director to make decisions under time pressure: '*to accept the risk of incomplete information, so long as the director reasonably believes such informational risk taking to be appropriate under the circumstances, will be fully consistent with the application of the business judgment rule to decisions made with respect to the principal transaction*'. It '*leaves it open to a director to take into account the time which is realistically available in deciding the extent to which [they] be informed in relation to a particular decision. For example, a director could reasonably act on incomplete information, if time constraints required an urgent decision and the risks of delaying that decision outweighed the risks of acting on incomplete information*'. See generally Ford, above n 4, [8.310.27].

marginal.<sup>255</sup> Whilst the need for a response is increasingly urgent, there is no general reason that corporate strategy must be formulated and implemented with haste upon the basis of inadequate information. It would be difficult for a director to argue that they had a reasonable belief that they had appropriately informed themselves if they did not, at a minimum, have a general awareness of the mainstream literature on point – which information would necessarily reveal the fact that *other* stakeholders are responding in a manner that presents risks and opportunities to the company. Accordingly, it is extremely unlikely that a climate change denialist director would be able to satisfy the Court that they had not, in Austin J’s words, ‘*disregarded material information that was readily available*’. They would therefore be unable to satisfy the third limb nor, consequently, the Business Judgment Rule defence.

### **(b) *Honest ignorance* - a failure to consider the risks or opportunities of climate change**

A director may seek to defend their governance inaction on the basis of an honest ignorance as to the risks and opportunities of climate change. Such ignorance may arise from a genuine lack of awareness as to the mainstream science on point, or due to an ‘unreflective assumption’ that the issue does not have a material impact on their corporation. The latter, in turn, may arise due to their (significantly outdated and uninformed) presumption that scientists continue to debate whether anthropogenic climate change exists, or by simply failing to consider relevant risks and opportunities. This essentially reflects a *passive*, rather than proactive, approach to governance.

It is extremely unlikely that ignorance of the observed, anticipated or potential impacts of climate change could now be defended as the conduct of any ‘reasonable’ director. Directors have a positive obligation to apply an inquiring mind to their role, bringing to bear knowledge that they ought reasonably have known about the corporation and its operational context.<sup>256</sup> It has been clearly established that the duty to exercise care and diligence is not limited by the director’s subjective ignorance or inaction (or, by extension, the fact that their knowledge is outdated) – even where they are acting with subjective honesty and in good faith.<sup>257</sup> This may include ‘*failing to make relevant inquiries or raise matters which ought to have been raised*’,<sup>258</sup> or a failure to ‘*join the dots*’.<sup>259</sup>

It is clear that an issue of such high profile and potential economic significance as climate change would put a reasonable, yet uninformed, director on notice that further inquiries were warranted.<sup>260</sup> If analysis of the relevant risks and strategic opportunities were *not* being presented to the board, it would be incumbent upon directors to inquire of management (and/or relevant experts), and to query the veracity and completeness of the corporation’s risk management systems.<sup>261</sup> In that context, it would be extremely difficult for directors to argue that, on the basis of the information available in the present day, it was reasonable to remain uninformed about the potential impacts of climate change.

Similarly, directors are unlikely to discharge their duty of care and diligence where, although informed about climate change and its impacts, they act on the basis of an unreflective assumption that it does not present material risks or opportunities *for their particular corporation*: at either a

<sup>255</sup> Trexler and Kosloff, above n 104, 1.

<sup>256</sup> *Centro* [2011] FCA 717.

<sup>257</sup> *ASIC v Lindberg* (2012) 91 ACSR 640, [30]. See also *ASIC v Ingleby* (2012) 91 ACSR 66; *AWA v Daniels* (1992) 7 ACSR 759; *Centro* [2011] FCA 717, [189].

<sup>258</sup> *Centro* [2011] FCA 717, [189].

<sup>259</sup> *ASIC v Ingleby* (2012) 91 ACSR 66 (appeal to the CAVSC upheld in relation to quantum of penalty, but not liability); *ASIC v Lindberg* (2012) 91 ACSR 640; *Shafroon v ASIC* (2012) 286 ALR 612.

<sup>260</sup> *ASIC v Ingleby* (2012) 91 ACSR 66 (appeal to the CAVSC upheld in relation to quantum of penalty, but not liability); *ASIC v Lindberg* (2012) 91 ACSR 640; *Shafroon v ASIC* (2012) 286 ALR 612.

<sup>261</sup> *ASIC v Ingleby* (2012) 91 ACSR 66; *ASIC v Lindberg* (2012) 91 ACSR 640; *Centro* [2011] FCA 717.

strategic planning or project-based level.<sup>262</sup> As outlined above, whilst some sectors are more vulnerable than others, there are likely to be very few that are not, at a minimum, indirectly impacted by stakeholder risks. Accordingly, a breach of duty would occur in respect of uninformed governance decisions that ‘*increase vulnerability [to the impacts of climate change] without at least having regard to precautionary measures*’.<sup>263</sup>

Finally, it will not be sufficient for a director to point to the *existence* of robust information systems and decision making processes if they do not also ensure that such systems are *applied and implemented*.<sup>264</sup> Accordingly, a director is unlikely to satisfy their duty of care and diligence by pointing to the mere *existence* of emissions mitigation and/or adaptation policies if they cannot also demonstrate that they actively monitored and evaluated the efficacy of their implementation.

Accordingly, it is likely that governance inaction based on a director’s honest ignorance, or a failure to consider, climate change impacts will be in breach of their duty of care and diligence under section 180(1) of the *Corporations Act*.

### *Business Judgment Rule*

Again, before the substantive limbs of the Business Judgment Rule can be applied, it must be established that the director made a ‘business judgment’. First, a ‘judgment’ will only arise from a *conscious decision*. The benefit of the defence will not be available for ‘*sins of omission*’<sup>265</sup> or inaction, a failure to consider the particular issue,<sup>266</sup> or a failure to inform themselves of relevant matters.<sup>267</sup> For example, in *ASIC v Adler*, Santow J held that the business judgment rule could not apply where the defendant director ‘*simply neglected to deal with proper safeguards, with no evidence that he even turned his mind to a judgment of what safeguards there should be*’.<sup>268</sup> On that basis, both honest ignorance as to the impacts of climate change on the corporation’s business (as a whole, or in relation to specific projects), or an ‘unreflective assumption’ that its impact on that particular corporation will be small or benign, are unlikely to comprise ‘judgments’ that would enliven the Business Judgment Rule defence.

Second, the judgment must relate to the corporation’s *business operations*.<sup>269</sup> The defence will *not* apply to the discharge of directors’ specific statutory obligations (such as reporting requirements under the *Corporations Act*), a decision relating to legal compliance, corporate governance precepts or listing requirements, or the exercise of a director’s oversight duties (such as monitoring the company’s affairs and policies).<sup>270</sup> Accordingly, a director is unlikely to be able to satisfy the threshold ‘business judgment’ test of the defence where the relevant failure is that to *oversee the implementation or adequacy of the climate change risk management strategies or policies*.

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<sup>262</sup> McDonald, above n 1, 411.

<sup>263</sup> Jacqueline Peel, ‘Ecologically sustainable development: more than mere lip service?’ (2008) 12 *Australasian Journal of Natural Resources Law and Policy* 1, 9.

<sup>264</sup> See for example *ASIC v Adler* (2002) 41 ACSR 72, in which a CEO contravened his duty to exercise due care and diligence (amongst other breaches) due to his failure to ensure that proper safeguards were implemented for the appraisal of investments against company policies (appeal largely dismissed: *Adler v ASIC* (2003) 46 ACSR 504).

<sup>265</sup> *ASIC v Adler* (2002) 41 ACSR 72, [511].

<sup>266</sup> *ASIC v Rich* (2009) 75 ACSR 1, 633.

<sup>267</sup> See eg *ASIC v Adler* (2002) 41 ACSR 72; *ASIC v Rich* (2009) 75 ACSR 1, 8; *Gold Ribbon (Accountants) Pty Ltd (in liq) v Sheers* [2006] QCA 335.

<sup>268</sup> *ASIC v Adler* (2002) 41 ACSR 72, [406]. See also *ASIC v Rich* (2009) 75 ACSR 1, 633.

<sup>269</sup> See eg *ASIC v Fortescue* (2011) 81 ACSR 563, [197]; *ASIC v Rich* (2009) 75 ACSR 1, 8, 633, [7278].

<sup>270</sup> See eg *ASIC v Fortescue* (2011) 81 ACSR 563, [197]; *ASIC v Rich* (2009) 75 ACSR 1, 8, 633, [7278]. It is, however, acknowledged that many of the ‘conformance’ obligations under the *Corporations Act* are themselves subject to a form of ‘reasonableness’ defence – see for example continuous disclosure obligations under section 674.

It is therefore unlikely that the failure to consider the impacts of climate change, whether borne of ignorance or unreflective assumption, would even satisfy the ‘business judgment’ threshold of the defence.

**(c) *Uncertainty Paralysis* - honest uncertainty regarding the speed, scope and scale of future climate change impacts**

Even if a director accepts the science on anthropogenic climate change, the pervasive *uncertainty* regarding its speed, magnitude and distribution may cause paralysis in the formulation of an appropriate strategic response, leading to perseverance with ‘business as usual’ until the way forward becomes clearer.

As acknowledged in Chapter 2 above, uncertainty in relation to the timing and scale of future impacts is an almost inescapable factor of climate change. The tendency for such uncertainty to cause governance paralysis is aptly described by Fischman and Rountree:

Uncertainty and unpredictability...can act as real barriers to decision making. If insufficient baseline information exists, [the company] may not feel justified in moving forward, and they may believe it is better to put resources toward more sure and predictable issues...Climate change presents an exceptional challenge because...there is still significant uncertainty about how [it] will play out and how it will affect any specific place in any given time span.<sup>271</sup>

Such a reactive, ‘wait and see’<sup>272</sup> approach is eloquently referred to by Zahar, Peel and Godden as governance by a ‘*stationary mode of decision-making and retrospective adjustment of damage*’.<sup>273</sup> In the context of the ‘all reasonable steps’ test, a defendant director would submit that the magnitude and probability of the relevant risks were too difficult to estimate, and were outweighed by the competing resource demands of more quantifiable risks.

However, difficulty in quantifying relevant risks does not mean that directors are relieved of their obligation to manage them.<sup>274</sup> It is unlikely that pervasive uncertainty, *without more*, would justify ‘business as usual’ (or doing very little) as ‘all reasonable steps’ in the oversight of the risks and opportunities of climate change.<sup>275</sup> This is for a number of reasons. First, whilst the scope, scale and speed of climate change impacts remains inherently uncertain, the fact that climate change has occurred, is occurring and will continue to occur, is not. Accordingly, at a *minimum*, corporations need to *adapt* to the shift in environmental and economic conditions that result from observed climate change, and that committed into the future as a result of past emissions. Secondly, any argument that action to mitigation or adaptation is premature, or the range of potential climate futures so vast to be effectively ‘unmanageable’, may actually *strengthen* the imperative for corporate action. As discussed in Chapter 3.4 above, the wealth-maximising response in such circumstances cannot be to ‘do nothing’, but to reduce exposure and vulnerability by proactively developing corporate resilience, flexibility and adaptive capacity.<sup>276</sup> There are in fact a number of recognised economic methodologies that can be applied to augment traditional cost-benefit analysis under conditions of pervasive uncertainty. These include sensitivity analysis, stress testing and scenario planning, which

<sup>271</sup> Robert L Fischman and Jillian R Rountree, ‘Adaptive Management’, in Michael B Gerrard and Katrina Fischer Kuh (eds), *The Law of Adaptation to Climate Change – US and International Aspects* (American Bar Association, 2012) 19, 23-24.

<sup>272</sup> See eg Fischman and Rountree, above n 271; Loechel, Hodgkinson and Moffat, above n 3; PriceWaterhouseCoopers, *Business resilience*, above n 22; Young and Jones, above n 12, 3.

<sup>273</sup> Zahar, Peel and Godden, above n 16, 375.

<sup>274</sup> Amado and Adams, above n 57, 11; Baker & McKenzie, above n 3.

<sup>275</sup> Baker & McKenzie, above n 3, 15.

<sup>276</sup> CDP, above n 22, 6; Cosman, above n 51, 764; Fischman and Rountree, above n 271, 23-24; Godden et al, above n 16, 235; Hecht, above n 152; IPCC, *Managing the Risks of Extreme Events*, above n 10, 16; PriceWaterhouseCoopers, *Business resilience*, above n 22; Steffen and Hughes, above n 11, 45; WEF, above n 172, 16-21; Young and Jones, above n 12, 2.

allow corporations to model risks, opportunities and resilience across the range of plausible potential futures.<sup>277</sup> Amado and Adams point out:

Risk management and entrepreneurship are critical to business success. Despite the complexity of the underlying science, climate change is ultimately like any other risk or opportunity. Even with imperfect information, risk-based decision making is possible and necessary. Risk management tools are already essential parts of the corporate toolbox and can be built upon to assess climate risk and improve resilience.<sup>278</sup>

Moreover, even in the face of pervasive and continuing uncertainty, it is extraordinarily unlikely that the phenomenon of anthropogenic climate change will be conclusively *disproved* overnight.<sup>279</sup> Therefore, *at a minimum*, the accordant regulatory, litigation, market and insurance risks demand a strategic response.<sup>280</sup>

For these reasons, it is unlikely that a governance approach that glosses over potential futures with a broad brush of ‘uncertainty’ will be demonstrative that due consideration has been given to the risks and opportunities presented by climate change. Directors who do so are therefore unlikely to discharge their duty of due care and diligence under section 180(1).

It is important to emphasise that this is *not* a matter of simply penalising unforeseeable outcomes with the benefit of hindsight: the nature of the relevant risks is clear, now, even though we cannot quantify the parameters of their impacts with certainty.

In addition, it is not to suggest that directors are obliged to apply the ‘precautionary principle’<sup>281</sup> in formulating corporate climate change strategies to satisfy their *Corporations Act* duties<sup>282</sup> (although this principle *does* apply in other areas of Australian (and international) environmental law,<sup>283</sup> and its application is *favoured* in corporate environmental decision-making by institutions such as the Productivity Commission<sup>284</sup> and the Australian Institute of Company Directors).<sup>285</sup> Rather, it is a recognition that in circumstances where some form of adaptation will be unavoidable, but where the magnitude of the expected impacts remain uncertain and dynamic, the rational, wealth-maximising (*cf*

<sup>277</sup> See for example Keating and Handmer, above n 104, 16; Productivity Commission, above n 12; Trexler and Kosloff, above n 104; John Wiseman, Che Biggs, Lauren Rickards and Taegen Edwards, *Scenarios for Climate Adaptation: Guidebook for Practitioners* (Victorian Centre for Climate Change Adaptation and Research, June 2011).

<sup>278</sup> Amado and Adams, above n 57, 11-12, quoting V Stenek, R Connell, J Firth and M Colley, *Climate Risk and Business: Practical Methods for Assessing Risk*, International Financial Institution, Washington DC, 2011, 46.

<sup>279</sup> The ‘particularly low probability’ that Trexler and Kosloff refer to as ‘Issue Collapse’ – see Trexler and Kosloff, above n 104, 46.

<sup>280</sup> Haritz, *An Inconvenient Deliberation*, above n 152; Hecht, above n 152.

<sup>281</sup> The precautionary principle was first expressed as Principle 15 of the Rio Declaration in 1992, and subsequently adopted in the UNFCCC in the following terms (UNFCCC, Principle 3): ‘*The Parties should take precautionary measures to anticipate, prevent or minimise the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.*’ It was adopted as one of the seven guiding principles in the National Strategy for Ecologically Sustainable Development endorsed by COAG in 1992. For further analysis of this principle under the Australian law, see Jacqueline Peel, ‘Interpretation and Application of the Precautionary Principle: Australia’s Contribution’ (2009) 18(1) *Review of European Community and International Environmental Law* 11.

<sup>282</sup> This is in contrast, for example, to the requirements embodied in many Australian planning and environment laws – both express and implied – see for example the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth); *Gippsland Coastal Board v South Gippsland Shire Council* [No 2] [2008] VCAT 1545, unreported, Gibson DP and Member Potts, 29 July 2008; *Kala Developments Pty Ltd v Surf Coast SC* [2011] VCAT 513, 24; *Leach v National Parks and Wildlife Service* (1993) 81 LGERA 270.

<sup>283</sup> For a general discussion of the application of the precautionary principle under Australian environmental law and policy, see Peel, above n 281.

<sup>284</sup> Productivity Commission, above n 12.

<sup>285</sup> Australian Institute of Company Directors, *Environment Policy* (4 December 2000)

<<http://www.companydirectors.com.au/Director-Resource-Centre/Policy-on-director-issues/Policy-Papers/2000/ENVIRONMENT-POLICY>>.



precautionary) strategy is to ensure that the corporation proactively maximises adaptive capacity, flexibility and resilience (as demonstrated in Chapter 3.4 above).

### *Business Judgment Rule*

Whether a conscious decision to ‘wait and see’ in the face of pervasive uncertainty will be protected by the Business Judgment Rule will primarily turn on the third limb of the defence, *viz* whether the director *informed themselves about the relevant subject matter to the extent that they believed to be appropriate*.

As in relation to the ‘Denial’ scenario discussed above, this would require the defendant director to establish that they had taken appropriate steps to inform themselves about this subject matter, in the context of the decision-making occasion – and not ‘*in disregard of material information readily available*’.<sup>286</sup> Again, the circumstances in which this test may be satisfied are likely to be extremely narrow, and reflective of its purpose to recognise the realities of time-bound commercial decision-making. That rationale is not germane in relation to decisions on corporate climate change strategy. As detailed in Chapter 3 above, there is a significant body of mainstream information that the phenomenon of anthropogenic climate change is certain, despite the complex variables that give rise to inherent uncertainty in the magnitude and speed of its future impacts. Those information sources are also clear that the wealth-maximising response to such conditions cannot be to ‘do nothing’. Rather, they emphasise the importance of an iterative, dynamic approach to climate change risk management, requiring the proactive development of corporate resilience and flexibility (as discussed in Chapter 3.4, above). The mainstream scientific literature also sets out the *parameters* of the potential futures, and the expected biophysical consequences of each, which can be applied to corporate vulnerability analysis, stress testing and scenario planning. And, finally, that information also clearly reveals that *other* market stakeholders (insurers, creditors, shareholders, competitors) *are* responding to expected climate change impacts, which itself presents risks and opportunities to the corporation.

In that context, where there is a significant volume of ‘material information readily available’, it will be difficult for a director to argue that their ‘uncertainty paralysis’ was based on a reasonable belief that they had appropriately informed themselves about the subject matter of the decision.

Accordingly, it is likely that directors who persevere with a reactive, ‘wait and see’ approach to climate change, without also proactively developing corporate resilience and adaptive capacity, will be unable to satisfy this limb of the Business Judgment Rule, and thus would fail to satisfy the defence.

But what if a director is not *paralysed* by such uncertainty, but *actively engages* with the issue of climate change and makes a conscious commercial judgment to persevere with ‘business as usual’?

### **(d) *Conscious Cost/Benefit* - a bona fide business judgment to continue with ‘business as usual’**

The ‘Uncertainty Paralysis’ scenario above considers governance inaction in circumstances akin to a directorial ‘too hard basket’. In contrast, the ‘Conscious Cost/Benefit’ scenario considers the situation where directors, appreciating the range of potential climate futures and the risks and opportunities to their corporation, makes a *considered decision* that ‘doing nothing’ (or doing little) is the most advantageous strategy for their corporation. In the context of the relevant legal test, the director would submit that they had made an independent judgment after informing themselves as to the magnitude and probability of the relevant risks and opportunities, and critically evaluating them in the context of available treatments and competing resource demands.

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<sup>286</sup> *ASIC v Rich* (2009) 75 ACSR 1, [7284].

Indeed, the duty of care and diligence does not require perfection. The oversight of corporate strategy and risk, including in relation to climate change, inherently requires the exercise of directorial judgment, balancing of expected costs, benefits, risks and opportunities.<sup>287</sup> In the words of Austin J in *ASIC v Vines*:

[F]orecasting is a difficult and uncertain process, with much room for mistakes and errors of judgment, and for differences of opinion.<sup>288</sup>

Accordingly, the law draws a clear distinction between *negligence* (a breach of duty)<sup>289</sup> and a mere *error of judgment* (which is not). Moreover, the defendant director's conduct must be '*assessed with close regard to the circumstances existing at the relevant time, without the benefit of hindsight...*'.<sup>290</sup> This means that if a bona fide judgment to persevere with 'business as usual' proves, upon the expiration of time, to have been causative of the corporation's loss or failure, this will not *of itself* indicate that the directors were derelict in the exercise of their duties – even '*when the present makes the past look blatantly obvious*'.<sup>291</sup>

Given the inevitability of the economic transformation away from high-carbon dependence examined in Chapter 3.4 above, it may be difficult to justify 'business as usual' as rationally wealth-maximising over a long-term time horizon. However, Smith and Morreale recognise that particular circumstances may in fact exist where 'business as usual' is genuinely profit-maximising, particularly in the *short-medium term*:

In certain industries, there may be significant business **disadvantage** for the first mover, either strategically or in the marketplace, measured in the price of equipment, the premature expenditure of capital, or the misdirection of research and development funds. Although ignorant inaction is arguably the least protected course...and while regulatory and economic uncertainties alone may not excuse such inaction, they may combine to allow management to make the necessary case that, within the standards defining its fiduciary obligations, doing nothing is the prudent business course.<sup>292</sup>

For example, directors may justify 'business as usual' as rational in the *short-term* due to:

- competing duties and corporate priorities (eg pressures relating to short-term cash flows or share price impacts over quarterly or annual measurement cycles), or the resource demands of more ascertainable risks;
- a conscious determination made upon the application of a robust cost/benefit analysis that recognises, for example, the option value of waiting (ie. benefits of free-riding, relative costs of 'moving to early');<sup>293</sup> or
- the absence of immediate stakeholder pressure to alter prevailing strategies (eg from customers, suppliers or investors).<sup>294</sup>

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<sup>287</sup> See eg *Ingot Capital Investments v Macquarie Equity Markets (No.6)* [2007] NSWSC 124, [1437]. See generally discussion in Hargovan and Harris, above n 55, 448.

<sup>288</sup> *ASIC v Vines* [2005] NSWSC 738, [1075], approved in *ASIC v Rich* (2009) 75 ACSR 1, 263 and applied in *Centro* [2011] FCA 717, [149] and [181].

<sup>289</sup> *Centro* [2011] FCA 717, [180], [181], [208]; *ASIC v Lindberg* (2012) 91 ACSR 640, 654.

<sup>290</sup> *ASIC v Rich* (2009) 75 ACSR 1, [7242].

<sup>291</sup> Smith and Morreale, above n 42, 512.

<sup>292</sup> *Ibid*, 511, emphasis added.

<sup>293</sup> Trexler and Kosloff, above n 104, 31, 63. See also Keating and Handmer, above n 104, 12-13.

Such arguments may appear reasonable on their face. Even where a robust and appropriate analysis is performed, it may be that the costs of current action on climate change adaptation measures are wholly disproportionate to the risk and expected benefits. Corporations must necessarily prioritise the finite pool of resources at their disposal. However, such judgments must be defensible on the basis of robust, sophisticated and fit-for purpose modelling, in respect of which there is significant (and publicly-available) guidance.<sup>295</sup> In short, ‘business as usual’ *methodologies* may now themselves be insufficient to demonstrate that a director was adequately informed and took ‘all reasonable steps’ in their assessment and governance of future climate change risks.<sup>296</sup>

In particular, such analysis is likely to be open to challenge if does not take consider factors such as:

- the clear economic consensus that *late* adaptors face significantly higher relative costs.<sup>297</sup> As the impacts of climate change continue to intensify, corporations will have no option but to curtail their emissions and to adapt, at scale and with speed. Those who have not proactively adapted will have less strategic discretion, and face higher costs, in managing that transition.<sup>298</sup> This means that, in the words of Trexler and Kosloff, the risks and costs of ‘moving too early’ are increasingly outweighed by those of ‘moving too late’.<sup>299</sup> Cosman explains:

As GHG levels continue to rise, so too does the severity required by eventual corrective measures. In other words, companies may pay disproportionately in the future for their failure to take prudent steps today.<sup>300</sup>

- a ‘value-chain’, or systems thinking, approach to vulnerabilities, both within and beyond ‘*business fencelines*’;<sup>301</sup>
- the limitations of historical data as a predictor with climatic and economic scenario modelling;<sup>302</sup>
- the risks of *maladaption* from the short-term strategy – ie. measures that may deliver short-term economic gains but exacerbate vulnerability to expected climate change impacts in the medium to

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<sup>294</sup> PriceWaterhouseCoopers, *Business resilience*, above n 22, 12.

<sup>295</sup> For example, climate change adaptation and resilience-building tools and guides listed in Amado and Adams, above n 57, 36; UN Global Compact, above n 143, 35 and UN Global Compact, *Business and Climate Change Adaptation: Toward Resilient Companies and Communities*, A Caring for Climate Report to the UN Global Compact and UNEP, New York, June 2012; for example Australian Government Climate Change Impacts and Risk Management Guide for Business, IPCC Data Distribution Centre, UNFCCC Adaptation Private Sector Initiative, World Bank Knowledge Portal, UK Climate Impacts Programme Business Areas Climate Assessment Tool and Risk, Uncertainty and Decision-Making, Acclimatise Awareness Screening Tool, Engineers Canada PIEVC Engineering Protocol for Climate Change Infrastructure Vulnerability Assessment, British Standards Institution Adapting to Climate Change Using ISO9001 and the UNFCCC Compendium on Methods and Tools.

<sup>296</sup> Baker & McKenzie, above n 3, 15; Fischman and Rountree, above n 271, 23-24; Godden et al, above n 16, 235; Trexler and Kosloff, above n 104, 33, 35; World Bank, *Investment Decision Making Under Deep Uncertainty: Application to Climate Change*, Policy Research Working Paper No. 6193, 2012.

<sup>297</sup> See eg Kahn and Fox, above n 138, 7; Mercer, above n 124.

<sup>298</sup> See eg Lynne L Dallas, ‘Short-Termism, the Financial Crisis and Corporate Governance’, (2012) 37(2) *Journal of Corporation Law* 266; Garnaut, above n 14; Kevin J Healy and Jeffrey M Tapick, ‘Climate Change: It’s Not Just a Policy issue for Corporate Counsel – it’s a Legal Problem’ (2004) 29(1) *Columbia Journal of Environmental Law* 89; Kahn and Fox, above n 138, 7; Mercer, above n 124; Peters et al, above n 102; Stern, above n 16, viii; Australian Government Treasury, *Strong Growth, Low Pollution – Modelling a Carbon Price*, [www.treasury.gov.au](http://www.treasury.gov.au).

<sup>299</sup> Trexler and Kosloff, above n 104, 63.

<sup>300</sup> Cosman, above n 51, 766. See also Agrawala et al, above n 144; Australian Government Treasury, above n 298; Stern, above n 16; Garnaut, above n 14; Hatfield-Dodds, above n 104; Kahn and Fox, above n 138; IIRC, above n 164, 16.

<sup>301</sup> Amado and Adams, above n 57, 11; UN Global Compact, above n 143, 5; Young and Jones, above n 12, 2.

<sup>302</sup> Amado and Adams, above n 57, 11; Richard Dodds, Jeremy Oppenheim, Fraser Thompson, Marcel Brinkman and Marc Zornes, *Resource Revolution: Meeting the World’s Energy, Materials, Food and Water Needs* (McKinsey Global Institute, 2011) 63.

long-term (such as locking in capital-intensive infrastructure in a carbon intensive business with no regard to treatment of ‘stranded asset’ risks);<sup>303</sup> and

- the likelihood that climate change impacts will not be incremental or gradual, but occur in dramatic ‘step-changes’.<sup>304</sup> ‘All reasonable steps’ in the governance of the relevant risks therefore requires a dynamic, flexible and iterative approach that strengthens adaptive capacity and resilience.

Again, such challenges to current strategies would not involve the application of hindsight to a judgment that was informed and rational at the time it was made. The necessity for any corporation to consider its vulnerability under various plausible futures, and to build adaptive capacity, are clear, now.<sup>305</sup> This issue is discussed further in relation to the Business Judgment Rule, below.

It is acknowledged that this analysis is (necessarily) simplistic in its generalised context. However, it demonstrates the difficulty that any defendant director will face in seeking to justify conscious perseverance with ‘business as usual’, even in the short term, as ‘all reasonable steps’ in their governance of the corporation.

Accordingly, should a corporation’s value be impaired (or should it become insolvent) due to its failure to proactively mitigate its emissions intensity and/or adapt to the impacts of climate change, its directors may be susceptible to allegations that they contravened their duty of care and diligence under section 180(1) – even where the ‘business as usual’ strategy was pursued upon an appropriately-informed, critical evaluation process. Would the Business Judgment Rule defence then apply?

### *Business Judgment Rule*

Unlike the ‘Uncertainty Paralysis’ scenario discussed above, the ‘business judgment’ threshold, and the third limb of the defence (whether the director reasonably believed that they were ‘appropriately informed’), are not likely to be in issue under the ‘Conscious Cost/Benefit’ scenario. Rather, satisfaction of the Business Judgment Rule will primarily turn on its last limb, *viz: whether the director’s belief that the judgment is in the best interests of the corporation was a rational one.*

Section 180(2) provides that a belief is ‘rational’ *‘unless it is one that no reasonable person in the director’s position would hold’*. In *ASIC v Rich*, Austin J held that it is *less onerous* for a defendant to establish that a belief was rationally held under sub-section (2) than to satisfy the ‘reasonableness’ standard applied under sub-section (1). His Honour stated: *‘there can be a “rational” but nevertheless unreasonable belief that the decision is in the best interests of the corporation.’*<sup>306</sup> The test will be satisfied if the defendant director:

[B]elieved that his or her judgment was in the best interests of the corporation, and that belief was supported by a reasoning process sufficient to warrant describing it as a rational belief, as defined, whether or not the reasoning process is objectively a convincing one.<sup>307</sup>

His Honour went on to find that the director’s belief about the corporation’s best interests, and the rationality of that belief, is based on the information obtained in compliance with the *preceding* limb of the Business Judgment Rule – ie. that the director had informed themselves to the extent that they

<sup>303</sup> Fishman and Rountree; above n 271; UN Global Compact, above n 143.

<sup>304</sup> Young and Jones, above n 12, 4.

<sup>305</sup> Zahar, Peel and Godden, above n 16, 376.

<sup>306</sup> *ASIC v Rich* (2009) 75 ACSR 1, [7255, 7290].

<sup>307</sup> *Ibid*, [7290].

reasonably believed to be appropriate. In other words: ‘*that belief is rational in the sense that it is supported by an arguable chain of reasoning [ie. from the ‘appropriate information’ before the director] and is not a belief that no reasonable person in their position would hold.*’<sup>308</sup>

Satisfaction of this test will obviously turn on the particular circumstances of the case, and the particular information on which the director has based their view. However, it must be remembered that the relevant inquiry is not into the bare rationality of the belief. There are two specific elements that must be considered. First, the director must have *formed a belief* that the relevant course of action was in the corporation’s *best interests*. This requires the defendant director to demonstrate that they turned their mind to what those interests *were*.<sup>309</sup> And, secondly, there must have been an arguable chain of reasoning to that belief from the particular information at the director’s disposal – information in respect of which they could demonstrate, under the third limb, was reasonable for them to consider as ‘appropriately informed’. And it is unlikely that an ‘appropriately informed’ director would fail to recognise the potential catastrophic risks of climate change to non-adapted corporations. These two elements make it demonstrably more difficult to discharge the defence. Accordingly, it is by no means certain that a director could demonstrate that a considered decision to persevere with business as usual (albeit one that does not satisfy the duty of care and diligence under section 180(1)) was made on the basis of a rational belief that the judgment was in the best interests of the corporation. Consequently, a general expectation that the Business Judgment Rule will immunise a considered decision to persevere with ‘business as usual’ in the face of climate change may be misplaced in practice.

**(e) *Standards-Based* - compliance with regulatory requirements and industry standards and/or norms**

The assessment of appropriate due care and diligence ‘does not occur in a vacuum’.<sup>310</sup> Directors may argue that they exercised due care and diligence by asserting conformity with ‘custom’ or industry norms (or, crudely: ‘*we did no less than anyone else*’). Similarly, they may argue that climate change is a *policy* matter within the exclusive remit of government, and that their duty of care was discharged by ensuring corporate adherence to relevant statutory obligations.<sup>311</sup> In the context of the ‘all reasonable steps’ test, this would equate to an argument that a response *beyond* that mandated by law, or in advance of their peers, would be so expensive, difficult or inconvenient as to outweigh the magnitude of the relevant risks.

Such arguments, of themselves, are unlikely to demonstrate satisfaction of the duty, for a number of reasons.

First, ‘acceptable’ or ‘usual’ practice will be *relevant*, but *not decisive*, to determining the conduct of a ‘reasonable’ director.<sup>312</sup> And whilst *necessary*, will not be *sufficient*.<sup>313</sup> In any event, it is not that the legal, corporate governance or management literature sanctions a weak governance response to climate change risks. To the contrary. There is overwhelming literature supporting a proactive approach to the management and exploitation of environmental risks (including climate change), and warning of the economic consequences of the failure to do so (including position statements of the

<sup>308</sup> Ibid, [7294].

<sup>309</sup> See for example See also *ASIC v MacDonald* [2009] NSWSC 287, [542], [1008]; *Gold Ribbon (Accountants) Pty Ltd (in liq) v Sheers* [2006] QCA 365, [247] per Keane JA.

<sup>310</sup> *Centro* [2011] FCA 717, [182].

<sup>311</sup> This position has been taken by a number of defendants to tortious claims in the United States, in the context of that country’s Constitution. See for example cases discussed above n 33.

<sup>312</sup> *Centro* [2011] FCA 717, [180], [181], [208]; *ASIC v Rich* (2009) 75 ACSR 1.

<sup>313</sup> *Centro* [2011] FCA 717, [180], [181], [208]; *ASIC v Rich* (2009) 75 ACSR 1.

Australian Institute of Company Directors).<sup>314</sup> Accordingly, it is unlikely that a reliance on broader industry failures to adapt to climate change would be sufficient to demonstrate that the director had taken ‘all reasonable steps’ in satisfaction of their duty.

Secondly, industrial customs and norms are inherently dynamic. Hunter and Salzman cite an apposite passage from the influential US Restatement on Torts:

If the only test is to be what has always been done, no one will ever have any great incentive to make any progress... Thus, compliance with custom may only be effective as a defense [sic] if the custom is itself reasonable. Moreover, industry customs and standards are not static. They evolve over time as technological and scientific understandings shift.<sup>315</sup>

There can be no doubt that the trajectory of commercial risk from the impacts of climate change is trending upwards, commensurate with the solidification of the science and the increasingly dire consequences of global mitigation inaction. The *extent* of the strategic response it demands must therefore continue to increase accordingly, such that reliance on historical benchmarks - or even current industry norms - will not necessarily suggest that all reasonable steps have been taken.

Thirdly, to satisfy their duty of care and diligence a director will also need to establish that they formed an *independent judgment*, borne of their own *critical evaluation* of the relevant information in the context of their *own corporation's business*. It will not be sufficient to point to the actions of other corporations alone to establish that the directors were active in their engagement with the relevant material risk to *their firm*. This is particularly salient in relation to *adaptation* strategies, which are highly context-specific, and therefore unique to each corporation.<sup>316</sup>

This is not to say that directors should not observe the adaptation actions and experiences of other corporations, and learn and build from them. Rather, the inaction of others is unlikely to provide an adequate justification for their corporation's own lack of strategic progress.

Finally, even if a rigid delineation between ‘public policy’ and private responsibilities was conceptually robust or practically feasible,<sup>317</sup> directors do not discharge their statutory duties by merely ensuring that the company acts ‘legally’.<sup>318</sup> A strategy to ‘comply with minimum legal obligations’ is not wealth- (or even immediately profit-) maximising; necessary in a conformance context, but not sufficient in relation to *performance*. To the contrary, the absence of prescriptive regulations *increases* the potential competitive disparities between companies who seek to do the ‘bare minimum’ and those who proactively strategise.<sup>319</sup> In addition, Australian Courts have expressly recognised that the absence of ‘bright line’ regulatory standards relevant to the particular decision do not excuse a failure to consider reasonable precautions against climate change risks.<sup>320</sup>

Accordingly, it is unlikely that a strategic response to climate change based only on the ‘norms’ of other (laggard) participants in the relevant industry, or on compliance with minimum legislative

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<sup>314</sup> AICD, above n 285. See generally discussion in Chapter 3 above.

<sup>315</sup> David Hunter and James Salzman, ‘Negligence in the Air: The Duty of care in Climate Change Litigation’ (2007) 155 *University of Pennsylvania Law Review* 1741, 1776, citing the US Restatement (Second) of Torts § 295A.

<sup>316</sup> See eg Agrawala, above n 144, 16; Trexler and Kosloff, above n 104, 2, 14 and 46; Young and Jones, above n 12, 2.

<sup>317</sup> For a critique of the utility of the rigid separation between ‘government’ and ‘private’ responsibility in modern Australian law, commerce and society see generally Godden et al, above n 16.

<sup>318</sup> See eg *ASIC v Maxwell* (2006) 59 ACSR 373, [106].

<sup>319</sup> Accenture, above n 22, 12; Celine Herweijer and Robert Muir-Wood, ‘Liability for Climate Change and the Emerging Role of Probabilistic Risk Attribution Science’, in *Addressing Climate Change* (World Jurist Association, 2010) 224.

<sup>320</sup> *Anvil Hill* (2006) LGERA 258, 297; *Taip* [2010] VCAT 1222; Allen 2003, p.892. See also discussion in Durrant, above n 29, 220.

mitigation and/or adaptation obligations, would satisfy the obligation to exercise due care and diligence under section 180(1). The question of ‘usual practice’ may, however, be relevant to the issue of whether the director *rationaly* believed that the relevant course of action was in the best interests of the corporation under the Business Judgment Rule defence, below.

### *Business Judgment Rule*

A governance strategy that *happens* to accord with industry norms or regulatory obligations, as a result of chance rather than strategic design, will not comprise a ‘business judgment’. Nor will a ‘decision’ that the corporation will comply with the law. However, the position is less clear where the directors actively considered the strategies of their peers, and deliberately benchmarked their own corporation’s response to them. If a ‘business judgment’ is found to have been made in those circumstances, the application of the Business Judgment Rule is most likely to focus on the last limb of the defence, *viz*, whether the director they *rationaly* believed that the judgment was in the *best interests of the corporation*.

As discussed in relation to the ‘Conscious Cost/Benefit’ scenario, above, this requires the defendant director to establish that there an *arguable chain of reasoning* in support of their decision from the ‘appropriate information’ they had before them, *and*, on the basis of that information and reasoning, it was not the case that ‘*no reasonable director*’ could conclude that such benchmarking was in the best interests of the corporation. In the view of this author, it is increasingly difficult to establish that an appropriately-informed director would rationally conclude that a ‘default’ to either baseline legal compliance or reactive strategies of others was wealth-maximising over the long-term, particularly given the unique vulnerabilities and context-specific adaptation requirements of each corporation.

Accordingly, it is unlikely that a director could satisfy the fourth limb of the Business Judgment Rule in this scenario, and would therefore fail to establish the defence.

### *Conclusion – duty of care*

In short, the Courts have increasing expectations of engagement and proactivity by directors. Climate change presents unparalleled commercial risks and opportunities, now and into the future. It would therefore be extremely difficult for a defendant director to establish that inaction, reaction or passivity on climate change governance would comprise ‘all reasonable steps’ in the discharge of their obligations to oversee corporate performance, risk management and strategy. Should a corporation’s value be impaired by the impacts of climate change, directors who *now* persist with climate change denial, who have failed to consider its impacts due to honest ignorance or unreflective assumption, are paralysed by the uncertainty inherent in its potential impacts, or who default to the ‘norms’ set by regulators or industry peers, would be susceptible to an action for a breach of their duty of due care and diligence under section 180 of the *Corporations Act*. In addition, even considered decisions to prevail with ‘business as usual’ are increasingly unlikely to satisfy the duty (or the Business Judgment Rule defence) - particularly if they result from a ‘business as usual’ *methodology* that fails to recognise the unprecedented challenges presented by an erratically changing climate.

Finally in relation to section 180, it is noted that there is a live judicial and academic debate as to whether *any* breach of the law by a corporation, without more, is actionable *as a breach of a director’s duty of care and diligence*, regardless of dishonesty or material conflict of interest.<sup>321</sup> There is significant authority in support of the proposition that directors may breach their duty of care and

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<sup>321</sup> See generally discussion in Michael S Pearce, ‘Company directors as “super-fiduciaries”’ (2013) 87 *Australian Law Journal* 464.

diligence where they cause,<sup>322</sup> permit<sup>323</sup> or fail to take reasonable steps to prevent<sup>324</sup> the corporation from breaching the law. This notably includes circumstances where the corporation has made misleading statements to the market (including misrepresentation by silence or non-disclosure), contrary to the *Corporations Act* and/or the *ASIC Act 2001* (Cth).<sup>325</sup> In a climate change context, would a corporation misrepresent their ‘strong commitment to climate change risk management’ if they only pursue mitigation, but not adaptation strategies (or vice-versa)? Would the financial statements of resources companies present a ‘true and fair view’ of their financial position if they omit to mention the potential for their reserves to become ‘stranded’ assets? And, in addition to ‘consequential’ liability under section 180, would such misrepresentations be *primarily* actionable against the directors, due to their express responsibility for directors’ reports and financial statements under the *Corporations Act*?

That broader debate as to whether a corporation’s breach of the law, without more, is actionable against its directors as a breach of the duty of care and diligence is beyond the scope of this analysis. However, the issue of directorial liability for misleading disclosure or reporting due to climate change risks (and associated misrepresentations regarding the *sufficiency* of governance, strategy and risk management programs), whether as an aspect of due care and diligence or otherwise, is a significant issue that merits further research beyond the confines of this paper.

In addition to the duty of care and diligence under section 180, will a passive, reactive or inactive governance stance expose a director to liability for a breach of their duty of good faith under section 181?

## 4.2 Good faith in the best interests of the corporation

As outlined in Chapter 2 above, section 181 of the *Corporations Act* requires directors to act in **good faith** in the **best interests of the corporation**, and for a **proper purpose**.

### *An unorthodox application*

As touched upon in Chapter 2 above, actions for a breach of the duty to act in good faith ordinarily arise in relation to questions of directorial *loyalty* (ie. conflicts and/or self-interest),<sup>326</sup> rather than a failure to adequately oversee the corporation’s risk management and strategy. However, the circumstances in which the duty of good faith may be invoked are not closed.<sup>327</sup> Indeed, such an action is open on the terms of section 181, which are prescriptive (ie requiring positive action), rather than proscriptive (requiring restraint) in nature.<sup>328</sup> Such a construction also appears to find some

<sup>322</sup> *ASIC v Citofresh International Ltd (No.2)* (2010) 77 ACSR 69.

<sup>323</sup> *ASIC v Sydney Investment House Equities Pty Ltd & Ors* (2008) 69 ACSR 1.

<sup>324</sup> *ASIC v Elm Financial Services Pty Ltd* [2005] NSWSC 1033; *ASIC v MacDonald (No. 11)* (2009) 256 ALR 199.

<sup>325</sup> As was alleged in the *Fortescue* series of cases against its managing director, Andrew ‘Twiggy’ Forrest, in which the High Court of Australia ultimately found that the company had not made a misleading disclosure to the market: see *ASIC v Fortescue* (2011) 274 ALR 731, *Forrest v ASIC* [2012] HCA 39.

<sup>326</sup> Ford, above n 4, [8.070] comments that, where the director is acting with subjective honesty, allegations of a failure to act in good faith in the best interests of the corporation arise more commonly where: ‘*circumstances induce directors to believe that the company’s interests correspond with their own interests or with the interests of some other person. Making that unreflective assumption, they then act in the company’s affairs without considering its interests as a separate entity with its own shareholders and creditors.*’

<sup>327</sup> *Item Software (UK) Ltd v Fassihi* [2004] BCC 994, 44 per Arden LJ.

<sup>328</sup> It is beyond the scope of this paper to partake in the on-going scholarly and judicial debate as to whether the duty to act in good faith in the best interests of the company is ‘fiduciary’ in nature. This debate was prompted by the decision of the High Court of Australia in *Breen v Williams* (1996) 186 CLR 1 that a duty can only be ‘fiduciary’ in nature if it is prescriptive, not proscriptive, and was a central issue before the Courts in the *Bell Group* cases. For a general discussion of the issue see for



support (albeit in a fiduciary, not statutory, duty context) in the *Bell Group Appeal*.<sup>329</sup> This paper therefore considers the *potential* application of section 181 in these circumstances, whilst recognising the unorthodoxy of such an approach.

### ***Multiple combinations of uniform terms***

The concepts of ‘good faith’, the corporation’s ‘best interests’ and ‘proper purposes’ are relevant to both the duty of good faith under section 181, and to a number of the elements of the Business Judgment Rule defence to the duty of care under section 180(2). These concepts are not, however, applied in uniform combinations within the various sub-sections, *viz*:

- (a) acting in **good faith** in the **best interests of the corporation** (*section 181*);
- (b) acting for a **proper purpose** (*section 181*);
- (c) whether a business judgment has been made in **good faith** for a **proper purpose** (*Business Judgment Rule defence, section 180(2)*); and
- (d) whether the director **rationaly believed** that the judgment was in the **best interests of the corporation** (*Business Judgment Rule defence, section 180(2)*).

The fact that the requirements to act in ‘good faith in the best interests of the corporation’ and ‘for a proper purpose’ are *discrete* (at least within the internal context of section 181) has been recognised by the Courts.<sup>330</sup> However, the *practical import* of the subtle differences in each of these obligations has yet to be expressly judicially considered. Nor is assistance provided by Parliament in the relevant explanatory memoranda or second-reading speeches. In fact, the concepts are often *conflated* by the Courts.<sup>331</sup> Consistent with that approach, it is sufficient for the purposes of this paper to substantively equate the exercise of directorial powers for a *proper purpose* with the pursuit of the *best interests* of the corporation.<sup>332</sup>

### ***The question of ‘good faith’***

As outlined above, the analysis in this paper presumes that a defendant director has acted *honestly* – ie with subjective good faith, in the belief that they are exercising their functions in the best interests of the corporation. Whilst there remains some judicial authority to the contrary,<sup>333</sup> on balance the law appears to favour the proposition that, in certain circumstances, subjective good faith will be *inadequate* to discharge the duty under section 181. Even under the subjective test, a breach still occur

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example Rosemary Teele Langford, Rosemary, ‘Solving the fiduciary puzzle – the bona fide and proper purposes of company directors’ (2013) 41 *Australian Business Law Review* 127.

<sup>329</sup> See *Bell Group Appeal* [2012] WASCA 157, [884] per Lee AJA.

<sup>330</sup> See for example *Bell Group Trial* (2008) 70 ACSR 1, [4456] per Owen J.

<sup>331</sup> *ASIC v Adler* (2002) 41 ACSR 72, [410]; *ASIC v Rich* (2009) 75 ACSR 1, [7269]; *Bell Group Trial* (2008) 70 ACSR 1, [4588] per Owen J. See also LexisNexis, *Australian Corporation Practice* (at October 2013), [31.405].

<sup>332</sup> For the avoidance of doubt, the assessment remains distinct from that under the *final* limb of the Business Judgment Rule discussed in Chapter 4.1 above, where the inquiry into the judgment as to the best interests of the corporation is *not* one of *good faith*, but *rationality* based on the ‘appropriate information’ at their disposal.

<sup>333</sup> Some judicial disagreement remains as to whether the duty of good faith under section 181 will only be contravened where the director is acting with subjective dishonesty is acknowledged (see eg *Marchesi v Barnes* [1970] VR 434; *ASIC v Maxwell* (2006) 59 ACSR 373; *ASIC v Macdonald (No 11)* (2009) 256 ALR 199 and *Holyoake Industries (Vic) Pty Ltd v V-Flow Pty Ltd* (2011) 86 ACSR 393), or the Court may assess the objectively impropriety of the action (see for example *Re Smith & Fawcett Ltd* [1942] Ch 304, 306; *ASIC v Adler* (2002) 41 ACSR 72; *Bell Group Trial* (2008) 70 ACSR 1, [466] per Owen J; *Mernda Developments Pty Ltd (in liq) v Alamanda Property Investments (No 2) Pty Ltd* (2011) 86 ACSR 277). See acknowledgement of the opposing views in *ACN 101 074 015 Pty Ltd v Oaks Hotels & Resorts Ltd* [2012] VSC 502, per Davies J.

where the conduct is so *manifestly unreasonable* that *no* director in their position could have so acted (or omitted to act) in the circumstances. In such cases, it is open to the Court to find that the director has acted as an ‘honest lunatic’,<sup>334</sup> akin to a *constructive* failure to act in good faith in the best interests of the corporation, or ‘*so irrational that it could not have been based on a valid assessment of the corporation’s best interests*’.<sup>335</sup>

However, on any construction of section 181, it will be difficult to demonstrate that a director believed that a particular course of action was in the corporation’s best interests if they *omit* to consider those interests in the first place.<sup>336</sup> The requirement to act in the best interests of the corporation requires that the director *consider* what those interests in fact *are*. It does not protect actions that follow from unreflective assumption. Therefore, *in practice* satisfaction of this duty will require a number of positive actions, including consideration and investigation of relevant matters,<sup>337</sup> which, in devising corporate strategy, must include the corporation’s long-term interests, and the exercise of independent judgment.<sup>338</sup>

Accordingly, despite its unorthodoxy in a ‘performance’ context, it is reasonably arguable that a director who does not actively turn their mind to the impacts of climate change on the corporation, and/or does not engage in strategic planning over a long term time horizon, may also be liable for a breach of their duty to act in good faith in the best interests of the corporation under section 181.<sup>339</sup>

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<sup>334</sup> This phrase derives from the seminal judgment on point by Bowen LJ in *Hutton v West Cork Railway Co* (1883) 23 Ch D 654, 671: ‘*Bona fides cannot be the sole test, otherwise you might have a lunatic conducting the affairs of the company, and paying away its money with both hands in a manner perfectly bona fide yet perfectly irrational.*’ See *Shuttleworth v Cox Bros and Co (Maidenhead) Ltd* [1927] 2 KB 9, 23-4; *Wayde v New South Wales Rugby League Ltd* (1985) 180 CLR 459; *Associated Provincial Picture Houses Ltd v Wednesbury Corp* [1948] 1 KB 223. Similarly, in *Charterbridge Corp Ltd v Lloyds Bank Ltd* [1970] Ch 62 the Court applied the standard whether ‘*an intelligent and honest man in the position of the director of the company concerned, could, in the whole of existing circumstances, have reasonably believed that the transactions were for the benefit of the company*’. That test was used in *Reid Murray Holdings Ltd (in liq) v David Murray Holdings Pty Ltd* (1972) 5 SASR 386, 402.

<sup>335</sup> This terminology derives from that used by the Delaware courts in waste-based fiduciary breach claims – see for example *White v Panic*, 783 A.2d 543, 554 n.36 (Del. 2001).

<sup>336</sup> *Bell Group Trial* (2008) 70 ACSR 1, 583 [4618] per Owen J; *Bell Group Appeal* [2012] WASCA 157, [1012-13] per Lee AJA; Teele Langford, above n 328, 131, 137.

<sup>337</sup> See for example *ASIC v Adler* (2002) 41 ACSR 72 at 176; *Blackwell v Moray* (1991) 5 ACSR 255.

<sup>338</sup> See for example *Blackwell v Moray* (1991) 5 ACSR 255, 271; *Maronis Holdings Ltd v Nippon Credit Australia Pty Ltd* (2001) 38 ACSR 404, 470-71; *Re Southern Resources Ltd, Residues Treatment & Trading Co Ltd v Southern Resources Ltd* (1989) 15 ACLR 770, 795. See also Lee AJA and Drummond AJA in the *Bell Group Appeal* [2012] WASCA 157, 320 [1969] and 490 [2719-20]; Teele Langford, above n 328, 129; *cf Bell Group Appeal* per Carr AJA [2012] WASCA 157, 517 [2844], 518 [2847-48]), where His Honour held that a failure to investigate so as to ensure corporate benefit, or to obtain sufficient information, was in contravention of a *prescriptive* duty to take reasonable care, and does not contravene what His Honour characterised as the *proscriptive* obligations to act in good faith or for a proper purpose (albeit in a fiduciary, rather than statutory, duty context).

<sup>339</sup> For the sake of completeness, it is noted that there may be a residual risk that a director found to have contravened section 181 may also contravene its *criminal* counterpart under section 184 of the *Corporations Act*, despite the presumption in this paper that a defendant director has acted with subjective good faith. The criminal duty is contravened where the director’s failure to act in good faith was *intentionally dishonest* or *reckless*.

## 5 CONCLUSION

[D]evelopment of the common law, as a response to changed conditions, does not come like a bolt out of a clear sky. Invariably the clouds gather first, often from different quarters, indicating with increasing obviousness what is coming.

*Lord Justice Nicholls, Re Spectrum Plus Ltd (in liq) [2005] 2 AC 680, [33].*

It is now beyond doubt that climate change is existent, and continuing. It presents unparalleled risks and opportunities across the economy. As its impacts intensify, reactive corporations are far more vulnerable to changing physical and economic conditions, and to tail losses in the inevitable market realignment. An inactive, reactive or passive governance stance increasingly compromises the ability of a corporation to take advantage of potential opportunities whilst managing material climate change risks, and is thus inimical to the maximisation of corporate wealth. And where corporate value is impaired, shareholders and liquidators are likely to hold directors to account.

Indeed, the law of directors' duties has significant potential as a remedial cause of action for climate change harms: circumventing political impediments to legislative reform, and overcoming the barriers of duty and causation faced by tortious claims to date. To paraphrase Cosman, it simplifies the question of causation to a single board's preventable creation of foreseeable harms to their corporation.<sup>340</sup>

The Courts are clear that engagement and proactivity is expected of directors in the discharge of their statutory duties. Risk management and strategic planning, by their nature, are not functions that can be optimised *post-facto*. Contemporary directors would therefore be well advised to reflect on their own approach to governance and consider whether it would withstand the scrutiny of a claim under sections 180 and 181 of the *Corporations Act*. If a sceptic, they must act with the knowledge that most others are not. If ignorant, they must investigate. If they default to others' norms, they must refocus in their own context. 'Business as usual' methodologies must be adjusted to reflect unprecedented future variables. And above all, vulnerabilities must be assessed, flexibility embedded and resilience maximised.

In short, directors must *direct*. They have continuous responsibilities within a dynamic commercial playing field, for which they are, and will be, accountable. Good faith initiatives, based on scientific evidence and reasonable economic assumptions, should be taken now to safeguard a corporation's continuing prosperity. Risk can only be managed, and strategy determined, on the best information currently available. And the best strategy is not, and cannot be, to fail to actively govern for the reality of a changing climate.

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<sup>340</sup> Cosman, above n 51, 766.

## BIBLIOGRAPHY

### A. Articles/Books/Reports

Abbs, Ross, Peter Cashman and Tim Stephens, 'Australia', in Richard Lord, Silke Goldberg, Lavanya Rajamani and Jutta Brunnee (eds), *Climate Change Liability: Transnational Law and Practice* (Cambridge University Press, 2012)

Accenture, *Reducing Risk and Driving Business Value: CDP Supply Chain Report 2012-13*, Report for the Carbon Disclosure Project, London, January 2013

Adeyeye, Adefolake, 'The limitations of corporate governance in the CSR agenda' (2010), 31(4) *Company Lawyer* 114

Agnew, Robert, 'The End of the World as We Know It: the Advance of Climate Change from a Criminological Perspective', in R White (ed), *Climate Change from a Criminological Perspective* (Springer 2012)

Agrawala, Shardul, Maëlis Carraro, Nicholas Kingsmill, Elisa Lanzi, Michael Mullan and Guillaume Prudent-Richard, 'Private Sector Engagement in Adaptation to Climate Change: Approaches to Managing Climate Risks', OECD Environmental Working Papers, No. 39, OECD Publishing, revised February 2013 <<http://dx.doi.org/10.1787/5kg221jkf1g7-en>>

Ahmed, Anam, 'A critical analysis of the UK company law corporate objective: purposive, practical and possible: Longitudinal corporate objective to remedy the enlightened shareholder value approach of the *Companies Act 2006*', *unpublished*, SSRN (28 June 2012) <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2117591](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117591)>

Amado, Jean-Christophe and Peter Adams, *Value Chain Climate Resilience: A Guide to Managing Climate Impacts on Companies and Communities*, Report prepared for Partnership for Resilience and Environmental Preparedness, Montreal, July 2012

Ambec, Stefan and Paul Lanoie, 'Does it pay to be green? A Systematic overview' (2008) 22(4) *Academy of Management Perspectives* 45

American Bar Association, *Delineation of Governance Roles and Responsibilities*, Report of the Corporate Governance Committee on Corporate Laws, Section of Business Law (2009) <<http://apps.americanbar.org/buslaw/committees/CL260000pub/materials/20090801/delineation-final.pdf>>

American Law Institute, *Principles of Corporate Governance: Analysis & Recommendations*, Proposed final draft, 31 March 1992

Aupperle, Kenneth E, Archie B Carroll and John D Hatfield, 'An empirical examination of the relationship between corporate social responsibility and responsibility (1985) 28(2) *Academy of Management Journal* 446

Austin, Robert P and Ashley Black, LexisNexis, *Annotated Corporations Act* (at 30 January 2013)

Austin, Robert P and Ian M Ramsay, LexisNexis, *Ford's Principles of Corporations Law* (at September 2013)

Australian Council of Superannuation Investors, *Corporate Reporting in Australia*, Research Paper (May 2013)

<<http://www.acsi.org.au/images/stories/ACSIDocuments/generalresearchpublic/Sustainability%20Reporting%20Journey%202013%20-%20public%20version.pdf>>

Australian Institute of Company Directors (AICD), *Environment Policy* (4 December 2000)

<<http://www.companydirectors.com.au/Director-Resource-Centre/Policy-on-director-issues/Policy-Papers/2000/ENVIRONMENT-POLICY>>

AICD, *Role of Board*, Director Q&A (31 January 2013)

<<http://www.companydirectors.com.au/Director-Resource-Centre/Director-QA/Roles-Duties-and-Responsibilities/Role-of-the-Board>>

Australian Stock Exchange (ASX), *Listing on ASX – Gateway to the resource capital of Asia*, Sydney, 2013

Australian Stock Exchange Corporate Governance Council (ASXCGC), *Corporate Governance Principles and Recommendations*, 2<sup>nd</sup> revised ed, 30 June 2010

ASXCGC, *Review of the Corporate Governance Principles and Recommendations, Public Consultation*, 16 August 2013

Baker & McKenzie, *Pension and Superannuation Trustees and Climate Change Report*, Sydney, 2012

Bainbridge, Stephen M, *Corporate Governance After the Financial Crisis* (Oxford University Press, 2012)

Ban, Ki-Moon, 'Twentieth-century model 'a global suicide pact'' (Transcript of remarks to the World Economic Forum session on redefining sustainable development, Davos, Switzerland, 28 January 2011)

Bansal, Pratima and Kendall Roth, 'Why companies go green: a model of ecological responsiveness' (2000) 43(4) *Academy of Management Journal* 717

Bansal, Pratima and Iain Clelland, 'Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment' (2004) 47(1) *Academy of Management Journal* 93

Barker, Sarah, 'Beyond the Carbon Debate' (2012) *Company Director* 56, May 2012

Baxt, Robert P, *Duties and Responsibilities of Directors and Officers* (Australian Institute of Company Directors, 20<sup>th</sup> revised ed, 2012)

Carbon Disclosure Project (CDP), *Insights into Climate Change Adaptation by UK Companies*, Report to DEFRA (March 2012) <<https://www.cdproject.net/CDPResults/insights-into-climate-change-adaptation-by-uk-companies.pdf>>

Carbon Tracker and the Grantham Research Institute, *Unburnable carbon 2013: Wasted capital and stranded assets* (2013) <<http://www.lse.ac.uk/GranthamInstitute/publications/Policy/docs/PB-unburnable-carbon-2013-wasted-capital-stranded-assets.pdf>>

- Clarke, Thomas, *International Corporate Governance: A Comparative Approach* (Routledge, 2007)
- Commissioner for Environmental Sustainability Victoria, *Climate Change Victoria: the science, our people and our state of play*, Foundation One, State of the Environment Report 2013 (2012)
- Conference of the Parties, United Nations Framework Convention on Climate Change (UNFCCC), *Report of the Conference of the Parties on its Sixteenth Session, Held in Cancun, Mexico from 29 November – 10 December 2010*, UN Doc FCCC/CP/2010/7/Add.1 (15 March 2011)
- Corporations and Markets Advisory Committee (CAMAC), Parliament of Australia, *The Social Responsibility of Corporations* (2006)
- Cosman, Brian, 'Green Derivatives: Extorting Reductions in Greenhouse Gas Emissions via Shareholder Derivative Suits' (2008) 40 *Arizona State Law Journal* 743
- Craig, Robin K, "'Stationarity is Dead' – Long Live Transformation: Five Principles for Climate Change Adaptation Law' (2010) 24 *Harvard Environmental Law Review* 10
- Dallas, Lynne L, 'Short-Termism, the Financial Crisis and Corporate Governance, (2012) 37(2) *Journal of Corporation Law* 266
- Dodds, Richard, Jeremy Oppenheim, Fraser Thompson, Marcel Brinkman and Marc Zornes, *Resource Revolution: Meeting the World's Energy, Materials, Food and Water Needs* (McKinsey Global Institute, 2011)
- Durrant, Nicola, 'Tortious liability for greenhouse gas emissions? Climate change, causation and public policy considerations' (2007) 7(2) *QUT Law and Justice Journal* 403
- Durrant, Nicola, *Legal Responses to Climate Change* (The Federation Press, 2010)
- Easterbrook, Frank and Daniel Fishel, *The Economic Structure of Corporate Law* (Harvard University Press, 1991)
- Eccles, Robert G, Ioannis Ioannou and George Serafeim, *The Impact of Corporate Sustainability on Corporate Processes and Performance*, Working Paper Series 12-035, Harvard Business School, Boston, November 2011, revised July 2013
- Ellen MacArthur Foundation, *Towards the Circular Economy 2: Opportunity for the Consumer Goods Sector*, Cowes, January 2013
- Engau, C and VH Hoffman, 'Corporate response strategies to regulatory uncertainty: evidence from uncertainty about post-Kyoto regulation' (2011) 44(1) *Policy Sciences* 53
- Ewing, Benjamin and Douglas A Kysar, 'Prods and Pleas: Limited Government in an Era of Unlimited Harm' (2011) 121 *Yale Law Journal* 350
- Faure, Michael and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011)
- Fischer Kuh, Katrina, 'Impact Review, Disclosure and Planning', in Michael B Gerrard and Katrina Fischer Kuh (eds), *The Law of Adaptation to Climate Change – US and International Aspects* (American Bar Association, 2012) 543

Fischman, Robert L and Jillian R Rountree, 'Adaptive Management', in Michael B Gerrard and Katrina Fischer Kuh (eds), *The Law of Adaptation to Climate Change – US and International Aspects* (American Bar Association, 2012) 19

Fisher, Elizabeth, 'Climate Change Litigation, Obsession and Expertise: Reflecting on the Scholarly Response to *Massachusetts v EPA*' (2013) 35(3) *Law & Policy* 236

Folger, H Russell and Fred Nutt. 1975, 'A Note on Social Responsibility and Stock Valuation' (1975) 18(1) *Academy of Management Journal* 155

Frenkil, David John, 'Climate Risks and Opportunities: Business Implications of Climate Change' (2011) 2 *Journal of Energy and Environmental Law* 71

Friedman, Milton, *Capitalism and Freedom* (University of Chicago Press, 1962)

Furrer, Bettina, *Corporate climate strategies and their determinants. an analysis of banks' responses to climate change* (ETH, 2010) <<http://dx.doi.org/10.3929/ethz-a-006233340>>

Garnaut, Richard, *The Garnaut Review 2011 – Australia in the Global Response to Climate Change* (Cambridge University Press, 2011)

Gerrard, Michael and Gregory E Wannier, 'United States', in Richard Lord, Silke Goldberg, Lavanya Rajamani and Jutta Brunnee (eds), *Climate Change Liability: Transnational Law and Practice* (Cambridge University Press, 2012)

Ghaleigh, Navraj Singh, 'Six Honest Serving Men: Climate Change Litigation as Legal Mobilisation and the Utility of Typologies' (2010) 1(1) *Climate Law* 31

Gilding, Paul, *The Great Disruption* (Bloomsbury Press, 2011)

Godden, Lee and Jacqueline Peel, *Environmental Law: scientific, policy and regulatory dimensions* (Oxford University Press, 2010)

Godden, Lee, Francine Rochford, Jacqueline Peel, Lisa Caripis and Rachel Carter, 'Law, Governance and Risk: Deconstructing the Public-Private Divide in Climate Change Adaptation' (2013) 36(1) *UNSW Law Journal* 224

Grossman, Nadelle, 'The Duty to Think Strategically' (2013) 73(2) *Louisiana Law Review* 449

Hargovan, Anil and Jason Harris, 'For Whom the Bell Tolls: Directors' Duties to Creditors after *Bell*' (2013) 35 *Sydney Law Review* 433

Haritz, Miriam, *An Inconvenient Deliberation: The Precautionary Principle's Contribution to the Uncertainties Surrounding Climate Change Liability* (Kluwer Law International, 2011)

Haritz, Miriam, 'Liability *with* and liability *from* the precautionary principle in climate change cases', in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 15

Hatfield-Dodds, Steve, 'All in the timing' (2013) 493(3) *Nature* 35

Havercroft, Ian and Arad Reisberg, 'Directors' Duties Under the UK Companies Act 2006 and the Impact of the Company's Operations on the Environment' (Working Paper Series, University College London, draft December 15 2010 (revised 9 January 2011)), <<http://ssrn.com/abstract=1274567>>

Healy, J Kevin and Jeffrey M Tapick, 'Climate Change: It's Not Just a Policy issue for Corporate Counsel – it's a Legal Problem' (2004) 29(1) *Columbia Journal of Environmental Law* 89

Hecht, Sean B, 'Insurance', in Michael B Gerrard and Katrina Fischer Kuh (eds), *The Law of Adaptation to Climate Change – US and International Aspects* (American Bar Association, 2012) 511

Herweijer, Celine and Robert Muir-Wood, 'Liability for Climate Change and the Emerging Role of Probabilistic Risk Attribution Science', in *Addressing Climate Change* (World Jurist Association, 2010) 224

Hogarth, Murray and Andrew Tovey, *The Phoenix Effect: New Frontiers for Sustainability and the Economy*, report prepared for Green Capital and the Total Environment Centre, Sydney, July 2013

Hulme, Michael, *Why We Disagree About Climate Change: Understanding Controversy, Inaction and Opportunity* (Cambridge University Press, 2009)

Hunter, David and James Salzman, 'Negligence in the Air: The Duty of care in Climate Change Litigation' (2007) 155 *University of Pennsylvania Law Review* 1741

Ihlen, Øyvind, 'Business and climate change: the climate response of the world's 30 largest corporations' (2009) 3(2) *Environmental Communication: A Journal of Nature and Culture* 244

International Integrated Reporting Council, *Consultation Draft of the International Reporting Framework*, April 2013, <http://www.theiirc.org/wp-content/uploads/Consultation-Draft/Consultation-Draft-of-the-InternationalIRFramework.pdf>

Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2001: Synthesis Report*, Contribution of Working Groups I, II and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Robert T Watson (ed) (Cambridge University Press, 2001)

IPCC, *Climate Change 2007: Synthesis Report*, Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Rajendra K Pachauri and Andy Reisinger (eds) (IPCC, 2007)

IPCC, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change, Field, CB, V Barros, TF Stocker, D Qin, DJ Dokken, KL Ebi, MD Mastrandrea, KJ Mach, GK Plattner, SK Allen, M Tignor, and PM Midgley (eds), (Cambridge University Press, 2012)

IPCC, *Climate Change 2013: The Physical Science Basis - Approved Summary for Policymakers*, Working Group I Contribution to the IPCC Fifth Assessment Report (IPCC, 27 September 2013)

IPCC, *Climate Change 2013: The Physical Science Basis - Headline Statements from the Summary for Policymakers*, Working Group I Contribution to the IPCC Fifth Assessment Report (IPCC, 27 September 2013)

IPCC, *Climate Change 2013: The Physical Science Basis – Final Draft Underlying Scientific-Technical Assessment*, Working Group I Contribution to the IPCC Fifth Assessment Report (IPCC, 30 September 2013)



International Energy Agency (IEA), *World Energy Outlook Special Report – Redrawing the Energy-Climate Map* (OECD/IEA, 10 June 2013)

International Integrated Reporting Council (IIRC), *Consultation Draft of the International Reporting Framework* (IIRC, April 2013)

Jackson, Tim, *Prosperity without growth? The transition to a sustainable economy*, report for the Sustainable Development Commission UK, London, March 2009

Jensen, Michael C, 'Value maximisation, stakeholder theory and the corporate objective function' (2001) 14(3) *Journal of Applied Corporate Finance* 8

Johnston, Gareth, Donovan Burton and Mark Baker-Jones, *Climate Change Adaptation in the Boardroom*, final report for National Climate Change Adaptation Research Facility, Gold Coast, 2013

Kahn, Bruce M and Marc Fox, *Linking Climate Engagement to Investment Performance: An Investor's Perspective*, report for Sustainable Insight Capital Management and CDP, London, September 2013

Kaminskaitė-Salters, Giedre, 'Climate change litigation in the UK: its feasibility and prospects', in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 165

Kay, John, *The Kay Review of UK Equity Markets and Long-Term Decision Making*, Final Report to Secretary of State for Business, Innovation and Skills UK, London, July 2012

Keating, Adriana and John Handmer, *Future potential losses from extremes under climate change: the case of Victoria, Australia*, Working Paper for the Victorian Centre for Climate Change Adaptation Research, August 2013

Keay, Andrew, 'Ascertaining the Corporate Objective: An Entity Maximisation and Sustainability Model' (2008) 71(5) *The Modern Law Review* 663

Keay, Andrew, *The Corporate Objective* (Edward Elgar, 2011)

Keay, Andrew, *The Enlightened Shareholder Value Principle and Corporate Governance* (Routledge 2013)

Kepler Cheuvreux, *Adaptation: Underwriting risks for (re)insurers*, Report for ESG Sustainability Research and CDP, Paris, May 2013

Kosolapova, Elena, 'Liability for climate-change related damage in domestic courts: claims for compensation in the USA', in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 189

Lewis, Sophie and David Karoly, 'Anthropogenic contributions to Australia's record summer temperatures of 2013', 40(14) *Geophysical Research Letters* 3705

LexisNexis, *Australian Corporation Practice* (at October 2013)

Lin, Joeline, 'Climate Change and the Courts' (2012) 32 *Legal Studies* 35

- Loechel, Barton, Jane Hodgkinson and Kieran Moffat, 'Climate Change Adaptation in Australian Mining Communities: comparing mining company and local government views and activities' (2013) 119 *Climate Change* 465
- Lord, Richard, Silke Goldberg, Lavanya Rajamani and Jutta Brunnee (eds), *Climate Change Liability: Transnational Law and Practice* (Cambridge University Press, 2012)
- Lorenz, Donna, 'Prudence, profit and the perfect storm: climate change risk and fiduciary duty of directors', in Bernd Hanjürgens and Ralf Antes (eds), *Economics and Management of Climate Change: Risks, Mitigation and Adaptation* (Springer, 2008) 271
- Lubin, David A and Daniel C Etsy, 'The Sustainability Imperative: lessons for leaders for previous game-changing megatrends', *Harvard Business Review*, May 2010, 42
- Margolis, Joshua, Hillary Elfenbein and James Walsh 'Does it pay to be good? A meta-analysis of the relationship between corporate social and financial performance' (Working Paper, Harvard University, 1 March 2009), <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1866371](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1866371)>
- Marshall, Shelley and Ramsay I, 'Stakeholders and Directors' Duties: Law, Theory and Evidence' (2012) 35(1) *UNSW Law Journal* 291
- Marshall, Shelley D and Ian M Ramsay, 'Stakeholders and Directors' Duties: Law, Theory and Evidence' (Legal Studies Research Paper No 411, University of Melbourne, 2009) <<http://ssrn.com/abstract=1402143>>
- McConvill, James and Martin Joy, 'The interaction of directors' duties and sustainable development in Australia: setting off on the uncharted road' (2003) 27 *Melbourne University Law Review*, 4
- McDonald, Jan, 'A Risky Climate for Decision-Making: The Liability of Development Authorities for Climate Change Impacts' (2007) 24 *Environmental and Planning Law Journal* 407
- McDonald, Jan, 'The role of law in adapting to climate change' (2011) 2(2) *Wiley Interdisciplinary Reviews: Climate Change* 283
- Mercer, *Climate Change Scenarios – Implications for Strategic Asset Allocation*, report prepared for the Carbon Trust and International Finance Corporation, London, 2011
- Mercer, *Global Investor Survey on Climate Change – Third Annual Report on Actions and Progress*, report prepared for Global Investor Coalition on Climate Change, London, August 2013
- Monbiot, George, 'Junk Science', *The Guardian* (London), 10 May 2005, <<http://www.monbiot.com/2005/05/10/junk-science/>> accessed 21 June 2013
- Oreskes, Naomi and Erik M Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (Bloomsbury Press, 2010)
- Osofsky, Hari M and Jacqueline Peel, 'The role of litigation in multilevel climate change governance': Possibilities for a lower carbon future?', 30(4) *Environmental and Planning Law Journal* 303

- Park, Sarah, Steve Crimp, Anne-Marie Dowd, Peta Ashworth and Emily Mendham, *Understanding climate change adaptation as a national challenge*, CSIRO Climate Adaptation Flagship Working Paper Series #8, Canberra, 2011
- Parliamentary Joint Committee on Corporate and Social Responsibility (**PJC**), Parliament of Australia, *Corporate Responsibility: Managing Risk and Creating Value* (2006)
- Pearce, Michael S, 'Company directors as "super-fiduciaries"' (2013) 87 *Australian Law Journal* 464
- Peel, Jacqueline, 'Ecologically sustainable development: more than mere lip service?' (2008) 12 *Australasian Journal of Natural Resources Law and Policy* 1
- Peel, Jacqueline, 'Interpretation and Application of the Precautionary Principle: Australia's Contribution' (2009) 18(1) *Review of European Community & International Environmental Law* 11
- Peel, Jacqueline, 'Issues in Climate Change Litigation' (2011) 5(1) *Carbon and Climate Law Review* 15
- Peel, Jacqueline and Hari M Osofsky, 'Climate Change Litigation's Regulatory Pathways: A Comparative Analysis of the United States and Australia' (2013) 35(3) *Law & Policy* 150
- Peters, Glen P, Robbie M Andrew, Tom Boden, Josep G Canadell, Phillipe Ciais, Corrine Le Quéré, Gregg Marland, Michael R Raupach and Charlie Wilson, 'The challenge to keep global warming below 2C' (2013) 3 *Nature Climate Change* 4
- Peterson, Thomas C, Martin P Hoerling, Peter A Stott and Stephanie C Herring (eds), 'Explaining Extreme Events of 2012 from a Climate Perspective' (2013) 94(1) *Bulletin of the American Meteorological Society*, Special Supplement, September 2013
- Phelan, Liam, 'Managing climate risk: extreme weather events and the future of insurance in a climate-changed world' (2011) 18(4) *Journal of Environmental Management*, 223
- Pielke, Roger, Gwyn Prins, Steve Rayner and Daniel Sarewitz, 'Lifting the Taboo on Adaptation' (2007) 445 *Nature* 597
- Porter, Michael E and Mark R Kramer, 'Creating Shared Value: How to reinvent capitalism - and unleash a wave of innovation and growth', *Harvard Business Review*, January-February 2011, 62
- Preston, Justice Brian J, 'Climate Change in the Courts' (2010) 36(1) *Monash University Law Review* 15
- Preston, Justice Brian J, 'Climate Change Litigation (Part 1)' (2011) 5(1) *Carbon & Climate Law Review* 3
- Preston, Justice Brian J, 'Climate Change Litigation (Part 2)' (2011) 5(2) *Carbon & Climate Law Review* 244
- Preston, Justice Brian J, 'The Influence of Climate Change Litigation on Governments and the Private Sector' (2011) 2 *Climate Law* 485

PriceWaterhouseCoopers, *Business resilience in an uncertain, resource-constrained world: CDP Global 500 Climate Change Report 2012*, report prepared for the Carbon Disclosure Project, London, 2012

PriceWaterhouseCoopers, *Investment, Transformation & Leadership – CDP S&P 500 Climate Change Report 2013*, report prepared for the Carbon Disclosure Project, New York, 2013

PriceWaterhouseCoopers, *Sector Insights: what is driving climate change action in the world's largest companies? – Global 500 Climate Change Report 2013*, report prepared for the Carbon Disclosure Project, New York, 2013

Priest, Marcus, 'Investors 'aware' coal consumption will fall', *Australian Financial Review* (Australia), 17 June 2013, < [http://www.afrsmartinvestor.com.au/p/australia2-0/climate\\_commission\\_warns\\_coal\\_will\\_Os3K60MAR9LJPTDd2nGTDO](http://www.afrsmartinvestor.com.au/p/australia2-0/climate_commission_warns_coal_will_Os3K60MAR9LJPTDd2nGTDO)>

Productivity Commission, *Barriers to Effective Adaptation to Climate Change*, Inquiry Report, Commonwealth of Australia, Canberra, September 2012

Ramplung, Peter, 'Corporate Governance in a Carbon Constrained World, *unpublished*, 7 December 2011, available at < <http://ssrn.com/abstract=1969276>>

Ramsay, Ian M and Robert P Austin, LexisNexis, 'Ford's Principles of Corporations Law' (at 18 May 2012)

Raynor, Michael E and Mumtaz Ahmed, 'Three rules for making a company truly great' (2013) *Harvard Business Review*, April 2013, 108

Reinhardt, Forest L and Robert L Stavins, 'Corporate social responsibility, business strategy and the environment' (2010) 26(2) *Oxford Review of Economic Policy*, 164

Richardson, Katherine, Will Steffen and Diana Liverman, *Climate change: global risks, challenges and decisions* (Cambridge University Press, 2011)

Rogelj, Joeri, William Hare, Jason Lowe, Detlef P van Vuuren, Keywan Riahi, Ben Matthews, Tatsuya Hanaoka, Kejun Jiang, Malte Meinshausen, 'Emission pathways consistent with a 2C global temperature limit' (2011) 1 *Nature Climate Change*, November 2011, 413

Rogelj, Joeri, Malte Meinshausen and Reto Knutti, 'Global warming under old and new scenarios using IPCC climate sensitivity range estimates' (2012) 2 *Nature Climate Change*, April 2012, 248

Rogelj, Joeri, David L McCollum, Andy Reisinger, Malte Meinshausen and Keywan Riahi, 'Probabilistic cost estimates for climate change mitigation' (2013) 493 *Nature*, January 2013, 79

Rogelj, Joeri, David L McCollum, Brian C O'Neill and Keywan Riahi, '2020 emission levels required to limit warming to below 2C' (2013) 3 *Nature Climate Change*, April 2013, 405

Romani, Mattia, James Rydge and Nicholas Stern, 'Recklessly slow or a rapid transition to a low-carbon economy? Time to decide', Centre for Climate Change Economics and Policy, Grantham Research Institute on Climate Change and the Environment, December 2012

Ross, Andrea, *Sustainable Development Law in the UK: From Rhetoric to Reality?* (Earthscan Publications, 2012)

Rockstrom, Johan, Will Steffen, Kevin Noone, Åsa Persson, F. Stuart Chapin III, Eric F Lambin, Timothy M Lenton, Marten Scheffer, Carl Folke, Hans Joachim Schellnhuber, Björn Nykvist, Cynthia A de Wit, Terry Hughes, Sander van der Leeuw, Henning Rodhe, Sverker Sörlin, Peter K Snyder, Robert Costanza, Uno Svedin, Malin Falkenmark, Louise Karlberg, Robert W Corell, Victoria J Fabry, James Hansen, Brian Walker, Diana Liverman, Katherine Richardson, Paul Crutzen and Jonathan A Foley, 'A safe operating space for humanity' (2009) 461 *Nature* 472

Schneider, Stephen, 'Can we Estimate the Likelihood of Climatic Changes at 2100?' (2002) 52 *Climatic Change* 441

Securities and Exchange Commission (SEC), *Commission Guidance Regarding Disclosure Related to Climate Change*, 17 CFR PARTS 211, 231 and 241, Release Nos. 33-9106; 34-61469; FR-82, Washington, 8 February 2010

Shearing, Susan 'Climate Change Governance and Corporations: Changing the Way 'Business Does Business'', in Robyn Lyster (ed), *In the Wilds of Climate Law* (Australian Associated Press, 2010) 175

Shearing, Susan, 'Raising the boardroom temperature? Climate change and shareholder activism in Australia' (2012) 29(6) *Environmental and Planning Law Journal* 479

Sheehan, Norman T, 'Making risk pay: the board's role' (2009) 30(1) *Journal of Business Strategy* 33

Siegel, Donald S, 'Green management matters only if it yields more green: an economic/strategic perspective' (2009) 21(3) *Academy of Management Perspectives* 5

Skipper, Alice, 'Australia's Response to Climate Change: A Legal Perspective', in *Addressing Climate Change* (World Jurist Association, 2010) 125

Skinner, Luke, 'A Long View on Climate Sensitivity' (2012) 337 *Science* 917

Smith, Jeffrey A and Matthew Morreale, 'The Fiduciary Duties of Directors and Officers', in Michael B Gerrard (ed), *Global Climate Change and U.S. Law* (American Bar Association, 2007) 497

Steffen, Will and Lesley Hughes, *The Critical Decade – Climate Change Science, Risks and Responses*, report for the Climate Commission Secretariat, Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, Commonwealth of Australia, Canberra, June 2013

Steger, Ulrich, 'Building a business case for corporate sustainability', in Stefan Schaltegger and Marcus Wagner (eds), *Managing the Business Case for Sustainability: The Integration of Social, Environmental and Economic Performance* (Greenleaf, 2006) 412

Stenek, V, R Connell, J Firth and M Colley, *Climate Risk and Business: Practical Methods for Assessing Risk*, International Financial Institution, Washington DC, 2011

Stern, Sir Nicholas (2006), *Stern Review Report on the Economics of Climate Change*, report Commissioned by HM Treasury, United Kingdom Government, October 2006

Stevenson, Angus (ed), *Oxford Dictionary of English* (Oxford University Press, 3<sup>rd</sup> ed, 2012)

- Swiss Re, *The Globalisation of Collective Redress*, Zurich, 2009
- Swiss Re, *Building a Sustainable Energy Future: Risks and Opportunities*, Zurich, January 2013
- Swiss Re, *Overview of Top Topics at Swiss re 2013*, Zurich, April 2013
- Tans, Pieter and Ralph F Keeling, *Trends in Atmospheric Carbon Dioxide*, Earth System Research Laboratory, <<http://www.esrl.noaa.gov/gmd/ccgg/trends/>>, 10 July 2013
- Teale Langford, Rosemary, 'Solving the fiduciary puzzle – the bona fide and proper purposes of company directors' (2013) 41 *Australian Business Law Review* 127
- Theron, Colleen 'The impact of sustainability and corporate social responsibility on company reporting' (2010) 22(3) *Environmental Law & Management*, 23
- Trexler, Mark C and Laura H Kosloff, *The Changing Profile of Corporate Climate Change Risk* (Do Sustainability, 2012)
- Trexler, Mark C and Laura H Kosloff, *Adapting to Climate Change 2.0 Enterprise Risk Management* (Do Sustainability, 2013)
- Troiano, Riccardo, 'Climate change: Corporate liability, disclosure requirements and shareholders' remedies' (2008) 26 *Company & Securities Law Journal* 418
- University Corporation for Atmospheric Research (**UCAR**), 'Doping the atmosphere', *AtmosNews*, February 6 2012 <<http://www2.ucar.edu/atmosnews/attribution/doping-atmosphere>>
- United Nations Environment Programme (**UNEP**), *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication – A Synthesis for Policy Makers*, New York, February 2011 <[www.unep.org/greeneconomy](http://www.unep.org/greeneconomy)>
- UNEP, *Decoupling natural resource use and environmental impacts from economic growth*, Report of the Working Group on Decoupling to the International Resource Panel, New York, March 2011
- United Nations Global Compact (**UN Global Compact**), *Adapting for a Green Economy: Companies, Communities and Climate Change*, A Caring for Climate Report for the UN Global Compact, UNEP, Oxfam and the World Resources Institute, New York, June 2011
- UN Global Compact, *Business and Climate Change Adaptation: Toward Resilient Companies and Communities*, A Caring for Climate Report to the UN Global Compact and UNEP, New York, June 2012
- Vanhala, Lisa and Chris Hilson, 'Climate Change Litigation, Symposium Introduction' (2013) 35(3) *Law & Policy* 141
- Van Dijk, Chris, 'Civil liability for global warming in the Netherlands', in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar, 2011) 206

Victorian Centre for Climate Change Adaptation Research (**VCCCAR**), *Options for assessing the cost of climate change for adaptation policy in Victoria: Working Paper 2*, RMIT University, Melbourne, April 2011

Waggoner, Paul E, 'Now, Think of Adaptation' (1992) 9 *Arizona Journal of International and Comparative Law* 137

Wallace, Perry E, 'Climate Change, Corporate Strategy and Corporate Law Duties' (2009) 44(3) *Wake Forest Law Review* 757

West, Jason and David Brereton, D, *Climate Change Adaptation in Industry and Business: A Framework for Best Practice in Financial Risk Assessment, Governance and Disclosure*, report for National Climate Change Adaptation Research Facility, Gold Coast, 2013

White House, *The President's Climate Action Plan*, Executive Office of the President, 26 June 2013  
<<http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>>

Windolph, Sarah Elena, Dorli Harms and Stefan Schaltegger, *Motivations for Corporate Sustainability Management: Contrasting Survey Results and Implementation* (2013) *Corporate Social Responsibility and Environmental Management*, online early view version, 30 October 2013, doi: 10.1002/csr.1337

Wiseman, John, Che Biggs, Lauren Rickards and Taegen Edwards, *Scenarios for Climate Adaptation: Guidebook for Practitioners* (Victorian Centre for Climate Change Adaptation and Research, June 2011)

Wold, Chris, David Hunter and Melissa Powers, *Climate Change and the Law* (LexisNexis, 2009)

World Bank, *Turn Down the Heat: Why a 4C Warmer World Must be Avoided*, report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics, Washington DC, November 2012

World Bank, *Investment Decision Making Under Deep Uncertainty: Application to Climate Change*, Policy Research Working Paper No. 6193, 2012

World Bank, *Turn Down the Heat: Climate Extremes, Regional Impacts and the Case for Resilience*, Report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics, Washington DC, June 2013

World Economic Forum (**WEF**) (in conjunction with Deloitte), *Redesigning Business Value: A Roadmap for Sustainable Consumption*, January 2010

World Economic Forum (**WEF**) (in conjunction with Deloitte), *The Consumption Dilemma – Leverage Points for Accelerating Sustainable Growth*, January 2011

World Economic Forum (**WEF**), 'Testing Economic and Environmental Resilience', in Lee Howell (ed), *Global Risks 2013, An Initiative of the Risk Response Network*, 8<sup>th</sup> ed, 2013

World Meteorological Organisation (**WMO**), *A Summary of Current Climate Change Findings and Figures*, WMO Information Note, March 2013,  
<<http://www.wmo.int/pages/mediacentre/factsheet/documents/ClimateChangeInfoSheet2013-03final.pdf>>

World Wildlife Fund (WWF) and CDP, *The 3% Solution: Driving Profits Through Carbon Reduction*, joint special report of the World Wildlife Fund and the Carbon Disclosure Project, 2013

Young, Celeste K and Roger N Jones, *Building Bridges: Supporting Adaptation in Industry*, VCCAR Think Tank Policy Paper, Victorian Centre for Climate Change Adaptation Research, Melbourne, September 2013

Zahar, Alexander, Jacqueline Peel and Lee Godden, *Australian Climate Law in a Global Context* (Cambridge University Press eBook, December 2012)

## **B. Cases**

*ACN 101 074 015 Pty Ltd v Oaks Hotels & Resorts Ltd* [2012] VSC 502

*Associated Provincial Picture Houses Ltd v Wednesbury Corp* [1948] 1 KB 223

*Australian Securities and Investments Commission v Citofresh International Ltd (No.2)* (2010) 77 ACSR 69

*Australian Securities and Investments Commission v Elm Financial Services Pty Ltd* [2005] NSWSC 1033

*Australian Securities and Investments Commission v Fortescue Metals Group Ltd & Anor* (2011) 274 ALR 731

*Australian Securities and Investments Commission v Healey & Ors* [2011] FCA 717

*Australian Securities and Investments Commission v Hellicar* [2012] HCA 17

*Australian Securities and Investments Commission v Ingleby* (2012) 91 ACSR 66

*Australian Securities and Investments Commission v Maxwell* (2006) 59 ACSR 373

*Australian Securities and Investments Commission v Lindberg* (2012) 91 ACSR 640

*Australian Securities and Investments Commission v MacDonald (No.11)* (2009) 256 ALR 199

*Australian Securities and Investments Commission v Rich* (2009) 75 ACSR 1

*Australian Securities and Investments Commission v Sydney Investment House Equities Pty Ltd & Ors* (2008) 69 ACSR 1

*Australian Securities and Investments Commission v Vines* [2005] NSWSC 738

*AWA v Daniels* (1992) 7 ACSR 759

*Bell Group Ltd (in liq) v Westpac Banking Corp (No 9)* (2008) 70 ACSR 1

*Blackwell v Moray* (1991) 5 ACSR 255

*Breen v Williams* (1996) 186 CLR 1



*California v General Motors Corporation et al* , Case No. C06-05755 MJJ, Order granting Defendants' Motion to Dismiss (N.D. Cal. 2007)

*Charterbridge Corp Ltd v Lloyds Bank Ltd* [1970] Ch 62

*Comer et al v Murphy Oil USA et al* 2009 WL 3321493 (5<sup>th</sup> Circuit, 16 October 2009)

*Commonwealth Bank of Australia v Friedrich* (1991) 5 ACSR 15

*Connecticut et al v American Power Company et al* 2009 WL 2996729 (2<sup>nd</sup> Circuit, 21 September 2009)

*Darvall v North Sydney Brick and Tile Co Ltd* (1989) 16 NSWLR 260

*Dawson International Plc v Coats Paton Plc* [1989] BCLC 233

*Deangrove Pty Ltd (recs and mgrs apptd) v Buckby* (2006) 56 ACSR 630

*Dual Gas Pty Ltd & Ors v Environment Protection Authority* [2012] VCAT 308

*Forrest v Australian Securities and Investments Commission; Fortescue Metals Group Ltd v Australian Securities and Investments Commission* [2012] HCA 39

*Gippsland Coastal Board v South Gippsland Shire Council [No 2]* [2008] VCAT 1545, unreported, Gibson DP and Member Potts, 29 July 2008

*Gold Ribbon (Accountants) Pty Ltd (in liq) v Sheers* [2006] QCA 335

*Gray v Minister for Planning* [2006] NSWLEC 720

*H v Royal Alexandra Hospital for Children* (1990) Aust Torts Reports ¶81-000, SC(NSW)

*Harlowe's Nominees Pty Ltd v Woodside (Lakes Entrance) Oil Co NL* (1968) 121 CLR 483

*HIH Insurance Ltd and HIH Casualty and General Insurance Ltd, Re; Australian Securities and Investments Commission v Adler* (2002) 41 ACSR 72

*Holyoake Industries (Vic) Pty Ltd v V-Flow Pty Ltd* (2011) 86 ACSR 393

*Howard Smith Ltd v Ampol Petroleum Ltd* [1974] AC 821

*Hutton v West Cork Railway Co* (1883) 23 Ch D 654

*Item Software (UK) Ltd v Fassihi* [2004] BCC 994

*Leatch v National Parks and Wildlife Service* (1993) 81 LGERA 270

*Marchesi v Barnes* [1970] VR 434

*Maronis Holdings Ltd v Nippon Credit Australia Pty Ltd* (2001) 38 ACSR 404

*Mercer v Commissioner for Road Transport and Tramways (NSW)* (1936) 56 CLR 580

*Mernda Developments Pty Ltd (in liq) v Alamanda Property Investments (No 2) Pty Ltd* (2011) 86 ACSR 277

*Morely v Australian Securities and Investments Commission* [2010] NSWCA 331

*Native Village of Kivalina v ExxonMobil Corp., et al*, 2009 WL 3326113 (N.D. Cal.)

*Ngurli Ltd v McCann* (1953) 90 CLR 425

*Perry v Hepburn Shire Council* (2007) 154 LGERA 182

*Provident International Corp v International Leasing Corp Ltd* [1969] 1 NSW 424

*Re Smith & Fawcett Ltd* [1942] Ch 304

*Re Southern Resources Ltd, Residues Treatment & Trading Co Ltd v Southern Resources Ltd* (1989) 15 ACLR 770

*Re Spectrum Plus Ltd (in liq)* [2005] 2 AC 680

*Reid Murray Holdings Ltd (in liq) v David Murray Holdings Pty Ltd* (1972) 5 SASR 386

*Ronchi v Wellington SC* [2009] VCAT 1206

*Rozen v Macedon Ranges Shire Council & Anor* [2010] VSC 583

*Shafron v Australian Securities and Investments Commission* (2012) 286 ALR 612

*Shuttleworth v Cox Bros and Co (Maidenhead) Ltd* [1927] 2 KB 9

*Taip v East Gippsland Shire Council* [2010] VCAT 1222 (28 July 2010)

*Vines v ASIC* (2007) 25 ACLC 448

*Washington Environmental Council; Sierra Club, Washington State Chapter v Bellon* (9<sup>th</sup> Circuit, 17 October 2013)

*Wayde v New South Wales Rugby League Ltd* (1985) 180 CLR 459

*Wentworth Metals Group Pty Ltd v Leigh and Owen (as liquidators of Bonython Metals Group Pty Ltd): In the matter of Bonython Metals Group Pty Ltd (In liq)* [2013] FCA 349

*Westpac Banking Corporation v The Bell Group Ltd (in liq)* [No 3] [2012] WASCA 157

*White v Panic*, 783 A.2d 543, 554 n.36 (Del. 2001)

*Whitehouse v Carlton Hotels Pty Ltd* (1987) 162 CLR 285

*Wyong Shire Council v Shirt* (1980) 146 CLR 40

*Xstrata Coal Queensland Pty Ltd & Ors v Friends of the Earth – Brisbane Co-op Ltd & Ors and Department of Environmental and Resource Management* [2012] QLC 01

### **C. Legislation**

Explanatory Memorandum, *Corporate Law Economic Reform Bill 1999*

*Companies Act 2006* (UK)

*Corporations Act 2001* (Cth)

*Environmental Protection and Biodiversity Conservation Act 1999* (Cth)

*National Greenhouse and Energy Reporting Act 2007* (Cth)

### **D. Other**

Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on its Sixteenth Session, Held in Cancun, Mexico from 29 November – 10 December 2010*, UN Doc FCCC/CP/2010/7/Add.1, (15 March 2011)

Standards Australia, *Australian/New Zealand Standard: Risk Management, Principles and Guidelines*, AS/NZS ISO 31000:2009