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WEATHERING THE 'PERFECT STORM'

Addressing the Agriculture, Energy, Water, Climate Change Nexus

The Crawford Fund
2019 ANNUAL CONFERENCE

Parliament House, Canberra, Australia

12-13 August 2019



Editor Ann Milligan

Environment–schmironment: climate change through a finance & liability risk lens*

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Abstract

First it was activist investors. Then mainstream shareholders. And now finance markets, insurance companies, regulators and even auditors are demanding that companies actively address their climate-related financial risks. But why this shift from ‘ethical fringe’ to ‘financial mainstream’, and what does it mean for corporate governance, strategy risk management and disclosure? And how can seemingly divergent national policies, regulatory practices and financial market signals be commercially reconciled? This presentation examines climate risk from the unique perspective of a corporate lawyer, director of a large institutional investor, and faculty member of the University of Oxford’s Sustainable Finance Programme. It focuses on emerging corporate governance issues for FY19, from:

- international regulatory developments: the EU’s Green Taxonomy, the UK’s Net Zero Law, and signalling by central banks and prudential regulators;
- international financial market trends: integration of climate-related issues into credit ratings and commercial loan margin adjustments;
- litigation trends beyond planning and permitting: climate-related negligence, nuisance, directors’ duties and securities fraud claims; and
- annual reports: heightened investor expectations around TCFD-aligned disclosures, and new regulatory guidance on the integration (and audit) of climate-related assumptions in balance sheet accounting estimates.

You might be wondering why the Crawford Fund has asked a corporate lawyer to speak about climate change to a group of people many of whom already have PhDs in this area. You would be right: I don’t care about the environment; I don’t care about the community. But I do care about money and I care about risk, and that’s the lens I bring when I look at climate change.

I’ll start by looking at the different categories of financial risk associated with climate change, and focusing on, not the physical risk impacts but the responses – of financial markets, of capital markets and the real economy – to those changes. Then finally, I’ll talk about the proactive approach to climate change risk management.

Climate change has evolved from an issue that was purely environmental, a few years ago, to one that is squarely a material: financial risk. There are three categories of climate-related risks declared by the Bank of England Prudential

* This article has been prepared from the transcript of the audio recording of Ms Barker’s presentation, and her illustrative slides. It does not represent a formal paper, nor prepared remarks from which Ms Barker spoke.
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Figure 1.

Regulation Authority (Figure 1): i.e. the physical risks, the economic transition risks associated with climate change, and the liability consequences associated with a failure to manage either the physical risks or the financial risks associated with climate change.

Physical risks

Figure 2 summarises the how, why, when and who of climate change. Scientists tell us that we are already 1.1°C above the pre-industrial average in terms of climate change. Note that that's a global average: it's lower at the equator and higher at the poles, and it's 1.4°C above the pre-industrial average over the land in our mid-latitude.

I want to emphasise that the problem is already manifesting. Figure 3 shows bell curves representing the distribution of global average temperatures in 1900 (pale grey) and the comparative situations in the years 1950 and 2000 and now. The average has shifted significantly to the right, indicating that 1.1 degrees of warming are already baked into the system, and we now have a temperature range of between minus 3.5°C and plus 5.5°C: significantly more variable. And we know this across the world from our own weather experiences. Variability means uncertainty and uncertainty means risk.

What, how, when and why?

- **What?**
 - Climate change – 'greenhouse effect'
- **How and why?**
 - Primarily emissions of carbon dioxide, methane etc from human activities: combustion of fossil fuels (energy, transport, industry, manufacturing); agriculture (livestock); land use change and clearing
- **When?**
 - Pre-industrial 280ppm vs 415ppm CO₂e now – already average planetary temp approx. 1.1°C above pre-industrial average
 - 'Business as usual' emissions: 4+°C above pre-industrial average by 2100
- **Who says so?**
 - Scientific consensus – IPCC (2018), NASA, WMO etc etc – as *scientifically certain as gravity*

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Figure 2.

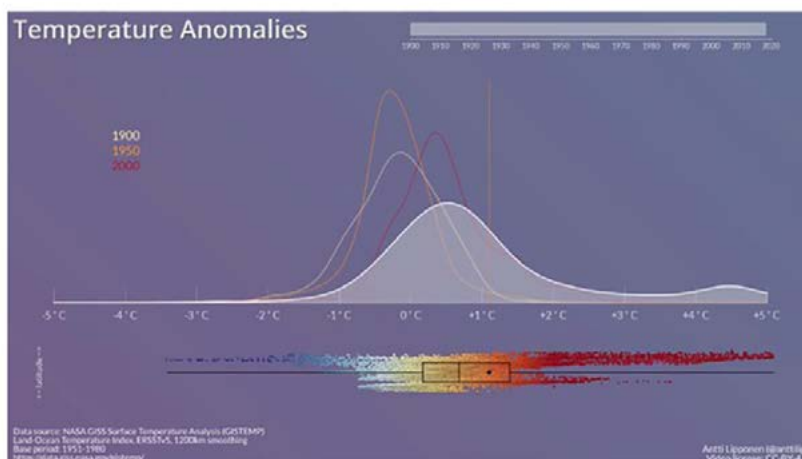


Figure 3.

The way we're going at the moment, in terms of global emissions, and if we continue to operate the way we have as an agrarian economy over the last 50 years, to keep global warming well below 2°C we have to get to net zero by the middle of the century – in every aspect of life.

I want you to start thinking what that means from a monetary perspective. What does it mean for water scarcity? What does an increase in average temperatures mean for your ability to continue the work of your plant and equipment, for spoilage, for soil denitrification, for ocean acidification, for freshwater purification, for disease and pest control? The Queensland floods of 2011 caused *more damage* in terms of social cost, in terms of family breakdown, in terms of suicide, in terms of mental health, than it did to the physical assets. What does changing climate mean for the integrity of your supply chain?

Economic transition risks

Again, the Bank of England has very conveniently given us three categories in which to think about economic transition: policy and regulatory shifts, technological developments, and a shift in stakeholder preferences.

Policy and regulatory perspective: In Australia, we had – and then didn't have – a carbon tax. England has introduced into law a 'net zero emissions by 2050' policy. It's not a policy; it's not a target; it's in their law. A few weeks before that, New Zealand did the same thing. They have got a target of up to 47% reduction in biogenic methane by 2050. If New Zealand can achieve that, other countries can also. What is that going to mean for the relative competitor that maybe is inherently more emissions-intensive?

All the elements of this 'snowball' of policy changes are being driven by the Paris Agreement. **The Paris Agreement** includes Australia. (The only two countries that didn't sign up were Syria and Nicaragua.) For that Agreement, the signatories all agreed about the criticality of limiting global warming, and to commit to policies of their own that would be consistent with limiting global warming below the critical level. The Agreement includes a five-year review – a

ratchet mechanism – meaning that, from 2020, the parties have to come back to the table with more ambitious emissions-reduction policies.

There is a second part to the Paris Agreement: all these countries also signed up for the global economy to be operating on a ‘net zero emissions’ basis in the second half of this century. The problem is that we have let the problem run, and the IPCC now tells us we have to make big progress before the second half of the century – that is, not by 2099 but by 2050.

Stakeholder shifts: There has been plenty of talk about the red meat sector and its impact on agricultural emissions. It is part of a far broader movement, primarily led by Millennials, who are concerned about ethics and values.

We now see rapid shifts in public perception, such as on single use plastics – that shift took only one year, and now you get evil looks if seen using a plastic drinking straw! A year ago that wasn’t of concern at all.

The chart in Figure 4 has orange and yellow bars: orange for change needed by people in the UK, and yellow for the same change at global scale. It’s telling us that to keep global warming to well below 2°C above preindustrial average, we should modify our diets because of the inherent emissions involved, and that will affect business in the agri-sector. Has anyone tried Beyond Meat? a Beyond Burger? They taste so good!

Particularly in Australia, a lot of the shift in stakeholder attitudes has been driven by equity markets, shareholders – not because they care about polar bears or penguins, but because they care about money and continuing to make money for us. They are asking businesses: How do you continue to thrive in this transition to a low carbon economy? Tell us your plan. We want you to keep making money because we need to keep making money.

BlackRock, for instance, is so big it owns 7.8% of every listed company on the planet. They are actively engaging with a consortium of investors, and engaging

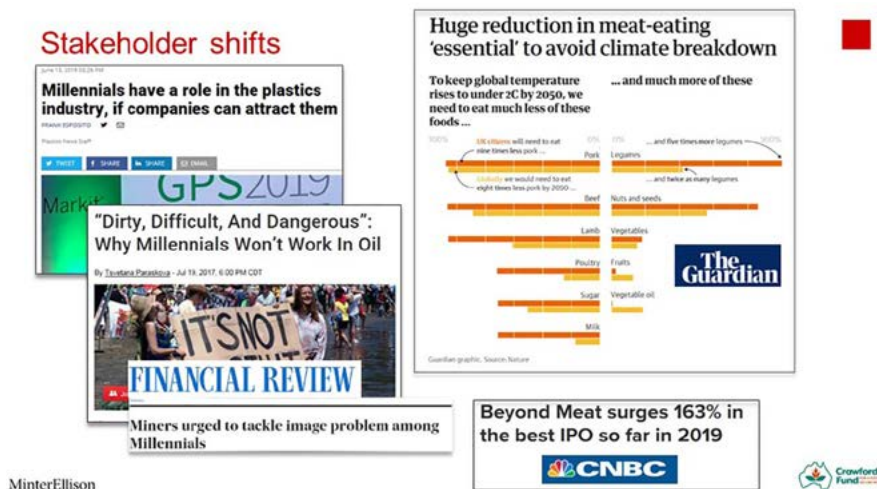


Figure 4.

with the companies they invest in, seeking disclosures in accordance with the recommendations of the Taskforce on Climate-related Financial Disclosures published by the G20 financial stability board after the Paris Agreement was signed. They asked Michael Bloomberg to make recommendations about how a company could assess and then disclose to the market.

The key recommendation in this framework is to do stress testing and scenario planning on a forward-looking basis.

What if ...?

At one end of the spectrum, if we aim to limit global warming to 1.5°C above the preindustrial average, that necessitates the entire global economy decarbonising within the next couple of decades. What does business look like in that scenario?

At the other end of the spectrum, what if we continue business as usual on an economic transition platform, with four degrees of warming by the end of the century? How does our business look then?

Credit rating agencies that make assessments of how likely people are to default on their loans have examined countries' sovereign risks associated with climate change. For populations living within 5 m of sea level, Australia does not do well. Nor do we do well in the category 'agriculture and extractives as a share of GDP'.

Itaú, a Brazilian bank, went through its lending book and looked at its 14 largest agri-business loans, and assessed, all else being equal, what climate change would mean for water scarcity in the region in which these clients grew crops. Their findings are not pretty, other than for Client 3, perhaps a coffee plantation at the top of a mountain; perhaps the only place that will be supplying coffee in 20 years' time.

In Australia, the Commonwealth Bank annual report for 2018 shows its analysis of its lending portfolio on a 5 m x 5 m grid of the country. It assessed the increase in risk associated with climate change due to coastal inundation, freshwater flooding, bush fire, wind shear and – the one that really surprised them – soil contraction (because when some clay soils dry out they shrink markedly).

More relevant for this conference is their 2019 Annual Report analysis of change in farm profitability, *with* adaptation and *without* adaptation, looking ahead to 2060. The scale goes from –50% (brown) to +50% (green). Figure 5 (overleaf) shows the results. The good news is there is much more green *with* adaptation, such as by positive steps to build resilience into cropping.

Good news: finance opportunities

It is going to be an advantage to be able to operate sustainably. There are not only brown penalties, there are also green discounts. These are emerging particularly in Europe: for example, sustainability-linked loans, where every year your performance is evaluated against predetermined sustainability, and if you miss a target you get a brown penalty. This is now commonly in use across Europe and Asia, particularly in the agri-sector: from Danone, Bel, Olam, Wilmar. These kinds of schemes are only in their infancy in Australia.

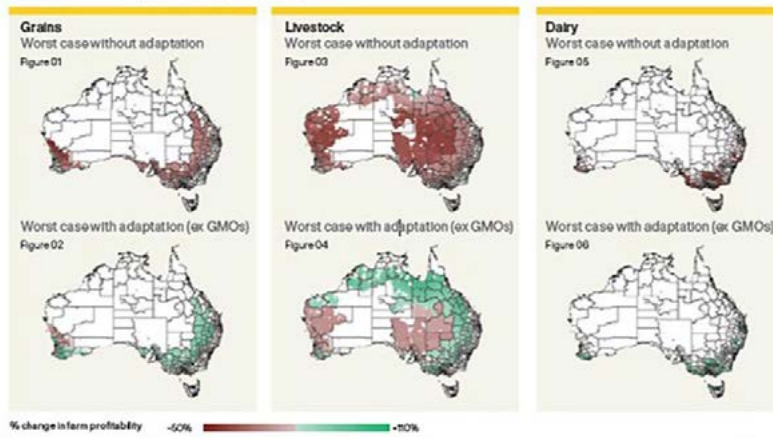


Figure 5. Climate simulation: Impact on farm profitability by 2060.
 Source: Commonwealth Bank of Australia

Leading global guidance on climate-related financial risk assessment & disclosure: G20 FSB TCFD Report

- *What makes these voluntary standards so significant?*
- Governance, strategy, risk management, metrics & targets
- Specific additional 'supplemental guidance' for financial services + 12 non-financial sectors
- **Stress-testing and scenario planning are central themes**
- **Investors from BlackRock, ACSI and Climate Action 100+ seeking disclosure by investees consistent with TCFD Recommendations**
- Refer to [Annex](#) for sector-specific risk/opportunities guidance



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Figure 6.

What does this mean for the business of food?

- The legal and financial imperatives for robust consideration is clear...but there are risks **and opportunities**
- Minimising risks and capturing opportunities requires contemporary understanding, proactive inquiry and critical evaluation – forward-looking basis
- **How robust are scenarios and assumptions used in strategy and planning?**
How will the decisions we make now position us to continue to produce in this disruption?
- A change from historical norms is inevitable (and has already happened). The variable will be 1.5°C vs 4°C+.
- **Planning based on historical norms instead of future scenario planning is a red flag.**

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Figure 7

Practical tips

If you are adjusting your operations to be resilient to the impacts of climate change, talk to your bank about it, leverage it, lower your cost of capital and, most importantly, make sure you are doing stress-testing and scenario planning (Figures 6, 7).

Sarah Barker has two decades' experience as a corporate lawyer and is regarded as one of the world's foremost experts on investment governance issues relating to climate change. Her expertise is sought by public and private sector clients across Australasia, and by global institutions from the Bank of England to the United Nations PRI. Sarah is a non-executive director of Emergency Services and State Super and the Responsible Investment Association Australasia, and she is on the Steering Committee of the Australian Sustainable Finance Initiative. She teaches the Australian Institute of Company Directors' flagship Company Directors' Course and the Cambridge Institute for Sustainability Leadership's 'Earth on Board' program, and is an academic visitor at the Smith School of Enterprise & the Environment, at the University of Oxford. Sarah holds a B.COM (ACC & FIN), LLB (HONS) and M.ENV (HONS).