

Box C

Financial Stability Risks From Climate Change

Climate change is exposing financial institutions and the financial system more broadly to risks that will rise over time, if not addressed. According to the Intergovernmental Panel on Climate Change (IPCC), it will take significant effort to limit global warming to 1.5°C above pre-industrial levels, as targeted in the Paris Agreement. Even if targets are met, this level of warming is likely to be accompanied by rising sea levels and an increase in the frequency and intensity of extreme weather (including storms, heatwaves and droughts). Some of these outcomes are already apparent (Graph C.1). These changes will create both financial and macroeconomic risks.^[1]

This box focusses on the financial risks arising from climate change, particularly for Australian financial institutions. These risks can be classified as either:

- **physical:** disruptions to economic activity or reductions in asset values resulting from the physical impacts of climate change;
- **transitional:** the impact of changes in regulation or pricing introduced to facilitate a transition to a low-carbon economy; or
- **liability:** an inadequate response to these risks also raises the potential for reputational and legal risk.

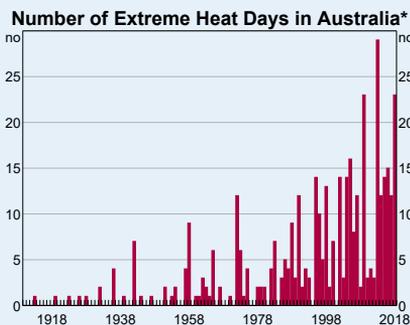
While climate change is not yet a significant threat to financial stability in Australia, it is becoming increasingly important for investors and institutions to take account of and manage these risks.

Climate change poses some material risks to Australian financial institutions

The physical effects of climate change can have a significant impact on Australian financial institutions. As an example, inflation-adjusted insurance claims for natural disasters in the current decade have been more than double those in the previous decade. This impact is likely to grow over time.

An increase in the frequency and severity of natural disasters will increase the incidence of damage to, or destruction of, physical assets that are insured or used as collateral. Assets that are exposed to increasing physical risk (such as property located in bushfire-prone or coastal areas) could decline in value,

Graph C.1



* Number of days each year where the Australian area-averaged daily mean temperature is extreme; extreme days are those above the 99th percentile of each month from the years 1910–2018; these extreme daily events typically occur over a large area, with generally more than 40 per cent of Australia experiencing temperatures in the warmest 10 per cent for that month

Source: Bureau of Meteorology State of the Climate report, updated to 2018

particularly if these risks become uninsurable. Climate change could also reduce certain types of business income that is used to service loans. Examples include changing rainfall patterns that result in lower or less predictable income from agriculture, more frequent storms disrupting supply chains and therefore sales, and damage to natural assets that reduces tourism income.

Insurers are most directly exposed to the physical impacts of climate change. This can arise through natural disaster claims, crop insurance, and health and life insurance. While insurers can increase their premiums to reflect higher risk, it is difficult to accurately price new and uncertain climate risks. If insurers under-price these risks, it could threaten their viability in the event of extreme weather events resulting in very large losses. On the other hand, over-pricing would impede the risk pooling function provided by insurance and unduly limit economic activity. Even if correctly priced, more of these risks may become uninsurable, forcing households, businesses or governments to bear this risk.

Banks (and other lenders) are also exposed to physical risks because climate change can result in a decline in the income or value of collateral that they are lending against. Such effects can go beyond the industries directly affected by climate change (such as agriculture and tourism), to the households and businesses that rely on income from those industries.

Australian financial institutions that have exposure to carbon-intensive industries – such as power generation and mining, or to energy-intensive firms – will also be exposed to transition risk. Transition to a lower carbon economy can also affect institutions with exposures to individuals and communities

reliant on these industries. Sudden or unexpected regulatory change could quickly lower the value of such assets or businesses, some of which may become economically unviable or ‘stranded’. Such regulatory changes could either be domestic or come from abroad, given the carbon intensity of Australia’s exports. Transition risk could also arise if large investment in technologies allowed new entrants to displace established but emissions-intensive practices, or if consumer preferences shifted rapidly towards ‘green’ products. If such changes occur abruptly, and certain sectors or firms face large losses, there could be broader dislocation in financial markets, despite the opportunities created for some firms from these changes.

Transition risk will be greatest for banks that lend to firms in carbon-intensive industries and to individuals or businesses that are reliant on these firms. Other financial institutions investing in carbon-intensive industries, such as superannuation and investment funds, are also exposed to the risk that climate change will diminish the value of their investments. This could occur both through direct investments in carbon-intensive industries, or indirect investments in banks that lend to these industries.

Financial institutions may also face reputational damage if they are seen to be contributing to climate change or failing to manage climate risks. This could affect an institution’s ability to retain customers and raise funding. Firms also face legal risks if directors fail to address the potential exposure of their firms to climate-related risks, according to the Hutley opinion (a landmark legal opinion on directors’ duties in relation to climate change under Australian law).^[2]

Climate risks are challenging to manage and there are significant data gaps

Australian financial institutions have become increasingly aware of the financial nature of climate risks and are taking steps to assess and manage their exposure to physical and transition risks. But it is difficult to map the impacts of climate change to changes in asset values and financial losses. The risks from climate change are particularly difficult to assess because of their long-term nature and complexity. These risks involve a great deal of uncertainty due to unknown future policy responses and the possibility that feedback loops and tipping points may lead to greater and/or more rapid physical impacts than is currently expected. Climate risks also have the potential to be correlated across regions, requiring institutions to reassess the benefits from geographical diversification.

Significant data gaps compound the difficulty of financial institutions and investors assessing and managing climate risks. To manage their own direct exposure to physical risk, insurers and banks need granular information on the location and physical risks faced by the assets they insure or the collateral they lend against. But they also need to consider their indirect exposure to firms or individuals that may be exposed to climate risk, which is challenging because of firms' incomplete or inconsistent climate-related financial risk disclosure. The Task Force on Climate-related Financial Disclosures (TCFD) has developed a consistent, voluntary disclosure framework for firms, which is an important first step towards addressing this data gap. It is important that the focus of disclosure is on *consistently* and *regularly* providing quality information, so that

financial institutions and investors can build an economy-wide understanding of the risks and how they are evolving. It is also important that firms supplement increased data disclosure with clear communication of their strategy to manage climate risks.

Climate change will have a broad-based impact on Australian financial institutions and therefore clearly poses risks that are systemic in nature. However, it does not yet pose an imminent threat to financial stability. Change has so far occurred at a pace that has allowed financial institutions to adjust, and losses associated with climatic events have been manageable. But climate change could emerge as a risk to financial stability if it is not properly managed, or if the size of climate-related losses increased materially. Rising climate-related losses could also erode confidence in an institution or the financial system, leading to a withdrawal of funding. This would be more likely if the physical impacts of climate change are more severe or occur sooner than currently projected, or if the transition to a low-carbon economy occurs in a disruptive and costly manner.

Actions taken by financial institutions can reduce the potential for the physical and transition risks associated with climate change to become financial stability risks. Given the long-term nature of climate change, financial institutions may be able to wind down their exposure to physical risks before the worst impacts of climate change are felt, or work with clients to adjust their operations. Suitable pricing of these risks would also mean that financial institutions are being compensated for their exposures and incentivised to adjust. That said, transition risks can materialise abruptly and the physical impacts of climate change could occur faster or affect a much wider range of

assets than currently anticipated. The climate-related exposures that pose the greatest risk to stability, such as general insurance policies and loans to industries most affected by climate change, are typically of shorter duration and so can be more easily adjusted. Climate change poses a bigger problem to longer-term financial contracts, such as mortgages and life insurance, as risks may change over time without the ability to adjust contract terms. However, these exposures are generally not where the largest climate risks lie.

Australian financial regulators are taking steps to address emerging climate risks

Financial regulators have a role to play in ensuring that climate risks are effectively managed by financial institutions. This includes setting expectations that financial institutions will identify, manage and disclose their exposure to climate risks. The Council of Financial Regulators has established a working group on the financial implications of climate change to help coordinate agencies' actions.

The Australian Prudential Regulation Authority (APRA) has emphasised that climate risks should be managed like any other risk, in line with existing prudential risk management standards.^[3] APRA has also supported the recommendations from the TCFD. APRA's recent survey of institutions' climate risk management practices found that the majority are taking steps to increase their understanding of risks, but further improvement is needed.^[4] APRA is increasing its scrutiny of institutions' climate risk management and will factor this into its

ongoing supervisory activities. It has also engaged with international regulators on climate risks through its involvement with the International Association of Insurance Supervisors (IAIS) and the United Nations Environment's Sustainable Insurance Forum (SIF), which APRA chairs.

The Australian Securities and Investments Commission (ASIC) has similarly provided updated regulatory guidance that applies to all listed companies, their directors and advisors. ASIC recommends that listed companies disclose meaningful and useful climate-risk-related information to investors, and strongly encourages listed companies with material exposure to climate change to consider reporting voluntarily under the TCFD framework. In a 2018 report, it found that most large Australian listed companies considered climate risks to some extent, with some identifying these risks as material. But climate risk disclosure was often too fragmented, general, or not comprehensive enough to be useful for investors.^[5]

The RBA does not regulate financial institutions that directly face climate risk. Nonetheless, it monitors climate risks as part of its monetary policy and financial stability mandates. This involves working to incorporate the potential impacts of climate change into the outlook for the economy, and monitoring the evolving risks to financial institutions. The RBA is also involved in international efforts to improve regulators' understanding of the implications of climate change for the financial sector, including through the Network for Greening the Financial System (NGFS), a group of central banks and supervisors.^[6] 🏠

Endnotes

- [1] Debelle G (2019), 'Climate Change and the Economy', Speech at the Centre for Policy Development Public Forum, Sydney, 12 March.
- [2] Centre for Policy Development (2019), 'Updated Hutley opinion on directors' duties and climate risk'.
- [3] Summerhayes G (2017), 'Australia's new horizon: Climate change challenges and prudential risk', Speech at the Insurance Council of Australia Annual Forum, Sydney, 17 February and Summerhayes G (2019), 'Financial exposure: the role of disclosure in addressing the climate data deficit', Speech at ClimateWise and University of Cambridge Institute for Sustainable Leadership, London, 22 February.
- [4] APRA (2019), 'Climate change: Awareness to action', Information Paper, March.
- [5] ASIC (2018), 'Climate risk disclosure by Australia's listed companies', Report, September.
- [6] Network for Greening the Financial System (2019), 'A call for action: Climate change as a source of financial risk', April.

