



RESERVE BANK OF AUSTRALIA

Speech

Climate Risks and the Australian Financial System

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Today I will talk about the risks that climate change presents to the Australian financial system. It is timely to do so ahead of COP26 in Glasgow at the end of the month. I will draw out the main points from the recent paper published by the Council of Financial Regulators (CFR) Working Group on the Financial Implications of Climate Change that I chair. [\[1\]](#)

Why is there a particular focus of the CFR on the financial risks of climate change? Isn't it just like any other risk that we would expect financial institutions to manage?

Climate change is a first-order risk for the financial system. It has a broad-ranging impact on Australia, both in terms of geography and in terms of Australian businesses and households. Most Australian financial institutions now recognise climate as a risk. The assessment of climate risks has evolved considerably over the past five years, but there remains considerable scope for further improvement. There are a number of complexities that make this a challenging risk for financial institutions to assess, including the uncertainties involved in making assumptions about a possible future and the lack of historical data. [\[2\]](#)

These challenges make the case for public policy to provide regulatory guidance about what standards of risk management should look like and to co-ordinate outcomes in areas such as disclosure. One of the main challenges that we are focussing on in the CFR Working Group is the quality, consistency, comparability and often the sheer availability of data to appropriately assess climate risks.

All the members of the Working Group – Treasury, APRA, ASIC and the RBA – are actively engaged in the work that is taking place globally on climate risks and the financial system. The RBA and APRA are members of the Network for Greening the Financial System (NGFS) which comprises more than

100 central banks and prudential regulators from around the world. [\[3\]](#) The NGFS has developed much of the infrastructure for assessing climate risks in the banking system. The G20 has had a focus on sustainable finance for a number of years now. Climate is a significant part of the agenda at the Financial Stability Board, IOSCO and the Basel Committee.

The work that we are doing has a number of components that I will expand on in the rest of this talk.

A cornerstone of our work is the Climate Vulnerability Assessment (CVA) that APRA is leading with assistance from the RBA and Treasury. The CVA focuses on the climate risk of the five largest Australian banks. The lending books of the five banks encompass all parts of the Australian economy. Because of the breadth of this work, our expectation is that this exercise will provide useful data and methodology for other Australian financial institutions, particularly asset managers. It should also help Australian companies with their disclosures of climate risks. In particular, it can serve as a focal point in terms of the scenarios used in the CVA, as well as providing a macroeconomic overlay that can be used by financial institutions and companies.

This leads onto another pillar of our work: improving the quality and comparability of disclosures of climate risk by Australian companies. This work is being led by ASIC. The information provided in these disclosures is a key input into risk assessments conducted by financial institutions. To be more usable, these disclosures need to be comparable and consistent across companies, both within Australia but also globally, given the sizeable share of offshore funds invested in Australia as well as the significant investments abroad of Australian asset managers. We want these assessments to be comparing like-with-like, so that the risks are assessed appropriately. The Task Force on Climate-Related Financial Disclosures (TCFD) [\[4\]](#) provides a global framework that ASIC is encouraging Australian companies to use as the primary reference for Australian corporate disclosures.

Related to this is the work on taxonomies and standards. Taxonomies describe what is a 'sustainable' activity or financial product. There are a number of taxonomies being developed globally, most notably in China and Europe. One important concern is that these taxonomies do not differentiate for the impact that climate change has in different parts of the world and the different structures of economies. A taxonomy may be appropriate for guiding sustainable finance decisions in a particular region – but if it is then applied to investment decisions globally, it can lead to a misallocation of financial capital.

In Australia, over recent years, climate risks have increasingly entered the discussion with foreign investors. It almost invariably comes up in conversations I have with asset managers. In our liaison conversations with many Australian companies, they also tell us that climate comes up constantly in their discussions with their equity investors and bond holders. This has been another area of focus at the CFR because of the potential implications for the cost of and ease of access to capital for Australian corporates, and also for Australian governments. We discussed this issue recently at the Reserve Bank Board. [\[5\]](#) Treasurer Frydenberg talked about it in a recent speech. [\[6\]](#) To date, we have only isolated examples of divestment from Australia because of climate risk, but the likelihood of more significant divestment is increasing. I will come back to this later.

Finally, while most of the focus of my talk today is on climate risk (which often has a negative tone), I will finish on a more positive note and talk about climate opportunities. We have already seen a significant amount of investment in renewable electricity generation in Australia over the past decade. There are plenty of opportunities for Australia to continue to take advantage of its natural endowments of renewable resources and continue to be an exporter of energy to the world, but in a much cleaner and more sustainable way.

Climate Vulnerability Assessment

The Climate Vulnerability Assessment is being led by APRA to assess the potential financial exposure of the five largest Australian banks to climate risks. [\[7\]](#) The assessment is being done cooperatively with the banks, and with the support of the Australian Banking Association. It is not a stress test like APRA's stress tests of the banks' loan portfolios. There are no implications for the amount of capital the banks need to hold against these risks at this stage. The aim of the CVA for both APRA and the banks is to get a better understanding of the potential risks.

The banks' loan portfolios are assessed for their exposure to both physical and transition risk under two scenarios. One scenario assumes current global policy settings continue and the other assumes there is a late and disorderly transition to global net zero emissions by 2050. These scenarios are aligned with two of the climate scenarios set out by the NGFS, [\[8\]](#) which are the basis for similar CVAs being conducted by many prudential regulators around the world. This is another example of ensuring consistency in approach across the world to allow for informed investment decisions. So, for example, when foreign investors are assessing their holdings of Australian bank equity and bonds, they are doing it consistent with their assessment of climate-related risks of banks in other countries. That said, the CVA takes account of the need to take those global scenarios and apply them appropriately to the Australian situation.

Physical risks are the direct loss from a climate event. For example, the risk that a business' assets or property (which are the collateral for a loan) is destroyed in a bushfire or a flood. Climate change can increase the frequency and severity of such events. Changing physical risks have significant implications for mortgage portfolios, which commonly have a term of around 25 years. The first part of the CVA looks at the effects of physical climate risk under the two scenarios, taking the banks' current loan books as given. This exercise removes one of the challenges associated with the long time horizon over which climate risks play out (although we are already seeing more frequent climate events with a large financial impact).

Transition risk is the result of the structural change to the economy from the move to lower emissions. Stranded assets are a good example of transition risk. Due to, say, a change in consumer demand for a product or a change in the energy policy of a country, the value of a company's assets or income it was expected to earn can decline quickly and significantly, permanently reducing the value of the company and its ability to service a loan. The RBA recently published analysis of some of the potential impacts of the net zero policies of our largest trading partners. [\[9\]](#) While the effect on the Australian economy is small, the effect on the coal industry, and those regions that currently depend on it is not.

Assessing transition risk adds complexity to the scenario analysis in a number of ways. First, to do an appropriate risk assessment, banks need macroeconomic outcomes and information on the structural changes that are likely to occur in the economy. That means the scenarios require a macroeconomic overlay and modelling of structural change to take account of the evolution of the economy in these different climate scenarios over the long period of the transition. The RBA has been helping with this aspect of the CVA. In doing so, we are increasing our understanding of the ways different types of macro models are integrating climate and the challenges involved.

Second, the scenario needs to take into account the structural change that is likely to occur over the long transition period to a lower emissions economy. Given that banks' corporate loan portfolios are generally short (most loans are for no more than five years), it is likely they will adjust these loans as climate risks are realised to manage down their exposure. To handle this, the CVA also runs the scenarios assuming that banks can adjust their balance sheets in a way that is consistent with the structural change in the economy.

At the RBA, we have been doing work to assess the climate risk to the Australian banking system that is a complement the CVA. We have had a first attempt at doing a top-down risk assessment to provide preliminary estimates of the possible scale of risks climate change poses to banks' housing and business exposures. [\[10\]](#) This is broadly similar to our approach to stress tests of banks' housing loan books, where we provide a top-down look that is complementary to APRA's granular assessment.

The results of this exercise suggest that a small share of housing in regions most exposed to extreme weather could experience price falls that might subsequently result in credit losses. However, the overall losses for the financial system are likely manageable. Banks are also exposed to transition risks from their lending to emissions-intensive industries, but their portfolios appear to be less emissions intensive than the economy as a whole.

As I said, this is our first look at this, and we will continue to learn from this process and refine, adapt and improve our analysis. It is useful to examine climate risk from different angles because there is considerable uncertainty surrounding climate change and estimates of its impact.

Similarly, the CVA is a necessary first attempt at analysing the climate risk of the banking system. APRA, the banks and the RBA are all learning as we go. We are aware of the challenges and limitations of the exercise. The results will be necessarily imperfect. But it is important not to let the perfect get in the way of the good.

The CVA will be critiqued, hopefully constructively. The scenarios used in the CVA are just that, scenarios, not central forecasts. They may not eventuate. Indeed in some cases, given their implications, we very much hope they don't eventuate. But we want to put the CVA into the public domain to receive the feedback so there can be a collective effort to improve the technology and the methodology of such exercises. The intent is to improve the understanding of the financial risks of climate change so that informed financial decisions can be made to support the Australian economy. We are also learning from the experiences of other central banks and prudential regulators that are conducting CVAs. [\[11\]](#) The NGFS provides one platform to share experiences and lessons, but there

are others including the IMF. Within our region, this is a prominent topic of discussion at the EMEAP meetings that I attend. [\[12\]](#)

As I said earlier, the portfolios of the banks span the breadth of the Australian economy in terms of geography and industries. Hence, the scenarios, modelling and risk assessment infrastructure that comprise the CVA provide a framework that can potentially be used by asset managers to assess the climate risks of their equity and loan portfolios. Insurance companies are already well advanced in this space but the CVA can also provide them with some useful inputs and comparisons.

Unlike banks' loan exposures, asset managers have a greater risk from the consequence of owning a stranded asset. The duration of the assets they hold are much longer and hence climate risk should be a fundamental part of the risk framework of asset managers. It is pleasing to see that this is the case and that many super funds are investing time and effort to do this work. They are also pushing the companies they invest in to improve their disclosures. In that regard, the CVA can provide inputs into a framework of consistent disclosures for Australian companies, which I will now turn to.

Climate disclosures

Since at least Paris, there has been a push to improve corporate disclosures on climate. The law in Australia requires companies to take account of, and appropriately disclose, all relevant risks. That includes the risks from climate. [\[13\]](#)

Potentially you could rely on this argument to state that companies already have an obligation to disclose where that is necessary. The current global debate revolves around whether a more detailed, bespoke climate disclosure framework is required above and beyond existing legal requirements, and furthermore whether these types of climate disclosures should be mandatory or voluntary. [\[14\]](#)

For many companies, this question has already been answered by their investors – both foreign and domestic. The investors are already requiring climate disclosures. [\[15\]](#) 49 of the ASX top 200 companies have a net zero policy. 80 make climate disclosures under TCFD on a voluntary basis. [\[16\]](#) These Australian companies have moved beyond the question of whether to disclose to the question of what to disclose.

To be useful, the disclosures need to be usable and comparable. There has been a plethora of well-intended efforts to provide guidance as to what form climate disclosures might take. But each of these has its own emphases and nuances. This increases the challenges for companies in disclosing and for investors in interpreting the disclosures.

The TCFD was an outcome of the Paris Agreement and it has published guidance on climate disclosures. To date, this guidance has been high level and principles based. The TCFD will shortly be publishing more detailed guidance about the form these disclosures should take.

Moreover, in response to growing demand to improve the global consistency and comparability of sustainability reporting, including climate reporting, the trustees of the IFRS Foundation propose to create an International Sustainability Standards Board. If these proposals proceed, and a decision is

expected imminently, this new board would work towards setting IFRS sustainability standards, taking a climate-first approach, and building off the work of the TCFD and other sustainability standards setters.

The TCFD together with the current IFRS proposals can serve a useful purpose in providing coordination so there is a baseline of commonality to disclosures. ASIC, as part of IOSCO, is involved in this work. More generally, ASIC encourages listed companies and their directors to consider both physical and transitional climate risks to the company and, where those risks are material, consider providing further and more detailed voluntary disclosure under the recommendations developed by the TCFD. [\[17\]](#)

Whether disclosures should be mandatory is a question for government.

Disclosures are necessary and important, but their accuracy and intent is even more so. Greenwashing is a live issue and is a focus of ASIC. Investment products that purport to be green need to live up to their claims. Green bonds require a verifiable audit trail. Words are not going to address climate change, actions are essential. To turn things around, we need policies and actions that lead to actual change and that are being implemented, rather than just being talked about.

Climate taxonomies

Closely related to the disclosure question is that of taxonomies. To remind you, taxonomies define what can be called a sustainable activity or financial product. [\[18\]](#) That is, they establish standards that allow investors to assess the sustainability of projects or products.

Some taxonomies that have been developed have a very green and black view of the world. That is, a project or product is either good or bad for the environment. But as Mark Carney has said recently, there are many shades of green.

This is particularly the case when it comes to transition. Countries and economies need to transition sustainably. Some projects that are not 'green' will nevertheless be needed to assist an economy transition to net zero. Investing in a reduction in carbon emissions can still be an important part of the transition, even if the immediate outcome is not zero emissions. Simply shutting down parts of the economy is unlikely to deliver a socially optimal transition. It is not necessary today to go down such a path, though the time we have before such a path might be necessary is decreasing.

The transition path to net zero needs to be funded, and that will require funding for projects with varying degrees of emissions intensity, not just those with zero. The longer we leave actions to reduce carbon emissions, the more likely it is that we will need to take drastic and disruptive actions later.

While we may think that taxonomies in place elsewhere in the world are not appropriate for the Australian situation, we need a realistic alternative. Not having a taxonomy won't beat an existing bad one.

To ensure the transition is funded effectively, we need taxonomies that define activities that are consistent with that transition. We need a taxonomy that suits the structure and trajectory of the

Australian economy. At the same time, it will be highly desirable to have a taxonomy that is consistent with those developed elsewhere in the world that investors find straightforward to use.

This is another area where the CFR working group is devoting its attention.

Climate and the cost of capital

As I said earlier, climate comes up in most conversations I have with foreign investors. This is a marked change from a few years ago. Australian companies with an international investor base experience the same, as do the government debt agencies (both the Australian Office of Financial Management and the states').

To date, these discussions have not led to any obvious change in investor appetite for Australian bonds or equity, with only a few small exceptions. One of these is when the Riksbank discontinued its investment in Queensland and WA state government paper a few years ago. There is a risk we will see more of these divestment decisions sooner rather than later.

Divestment raises the question as to whether change can be more effective from within, by influencing the approach of the entity you are investing in, or whether divestment is more effective. If it is the latter, it begs the question as to how transition will be financed, particularly in the case of governments that will have to deal with both the costs of compensating those adversely affected directly by climate change as well as structural changes to the economy as it evolves.

Investors will adjust their portfolios in response to climate risks. Governments in other jurisdictions are implementing net zero policies. Both of these are effectively increasing the cost of emissions-intensive activities in Australia. So, irrespective of whether we think these adjustments are appropriate or fair, they are happening and we need to take account of that. The material risk is that these forces are going to intensify from here.

Climate opportunities

So far I have talked about the risks from climate change. This casts the debate in a negative light. But let me finish on a positive note. There are plenty of opportunities for Australia. Reflecting our endowment, Australia has been an energy exporter for many decades. And there is no reason why this should change. Australia is also endowed with resources that have the potential for Australia to continue to be an exporter of energy – but renewable rather than emissions-intensive fossil fuels. This is a great opportunity that a number of people have highlighted.

It is an opportunity that is being realised today in places like Port Augusta. There is an undeniable negative impact on some regions and communities as this transition occurs but, as Port Augusta shows, the opportunities are potentially there for the very same communities. As another example, the New South Wales government has articulated its strategy in its Net Zero Plan to transform the energy composition of the state while providing opportunities for those regions currently most dependent on fossil fuels. ^[19] Other states have similar plans in train. Likewise, Australian companies are seeing the opportunities provided by the changing climate and investing in them.

There are challenges ahead in managing the transition and in managing the financial risks. But with the risk comes a great potential for reward.

Endnotes

- [*] Thanks to Alex Heath, Ashvini Ravimohan, Jonathan Kearns, Anna Park and my colleagues on the Council of Financial Regulators Working Group on the Financial Implications of Climate Change for their input and work on these issues.
- [1] CFR Working Group on Financial Implications of Climate Change (2021), 'Council of Financial Regulators: Climate Change Activity Stocktake 2021', September. Available at <<https://www.cfr.gov.au/publications/policy-statements-and-other-reports/2021/council-of-financial-regulators-climate-change-activity-stocktake-2021/>>.
- [2] The IPCC report articulates these issues. See Intergovernmental Panel on Climate Change (2021), 'Summary for Policymakers', in Masson-Delmotte V, P Zhai, A Pirani, SL Connors, C Péan, S Berger, N Caud, Y Chen, L Goldfarb, MI Gomis, M Huang, K Leitzell, E Lonnoy, JBR Matthews, TK Maycock, T Waterfield, O Yelekçi, R Yu and B Zhou (eds), Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge.
- [3] See NGFS, <<https://www.ngfs.net/en>>.
- [4] See Task Force on Climate-Related Financial Disclosures, <<https://www.fsb-tcfd.org/>>.
- [5] RBA (2021), '[Minutes of the Monetary Policy Meeting of the Board](#)', Hybrid, 1 June.
- [6] Hon Josh Frydenberg MP (2021), 'Capital Markets and the Transition to a Low Emissions Future', Address to the Australian Industry Group, Melbourne, 24 September. Available at <<https://ministers.treasury.gov.au/ministers/josh-frydenberg-2018/speeches/address-australian-industry-group-melbourne>>.
- [7] More generally, APRA has articulated its supervisory expectations for financial institutions regarding climate change. APRA (2021), 'Consultation on Draft Prudential Practice Guide on Climate Change Financial Risks', 31 July. Available at <<https://www.apra.gov.au/consultation-on-draft-prudential-practice-guide-on-climate-change-financial-risks>>.
- [8] See NGFS Scenarios Portal, <<https://www.ngfs.net/ngfs-scenarios-portal/>>.
- [9] Kemp J, M McCowage and F Wang (2021), 'Towards Net Zero: Implications for Australia of Energy Policies in East Asia', RBA [Bulletin](#), September.
- [10] Bellrose K, D Norman and M Royters (2021), 'Climate Change Risks to Australian Banks', RBA [Bulletin](#), September.
- [11] See Bank of England (2021), 'Bank of England Publishes the Key Elements of the 2021 Climate Biennial Exploratory Scenario: Financial Risks from Climate Change', News Release, 8 June. Available at <<https://www.bankofengland.co.uk/news/2021/june/key-elements-of-the-2021-biennial-exploratory-scenario-financial-risks-from-climate-change>>; European Central Bank (2021), 'Firms and Banks to Benefit from Early Adoption of Green Policies, ECB's Economy-wide Climate Stress Test Shows', Press Release, 22 September. Available at <<https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210922~59ade4710b.en.html>>.
- [12] Debelle G (2021), '[Priorities of EMEAP and Update on Global FX Code of Conduct](#)', Speech at ASIFMA Compliance Week 2021, Virtual Conference, 9 September.
- [13] That is the essence of the Hutley opinion. See Hutley N and S Hartford Davison (2016), 'Climate Change and Director's Duties – Memorandum of Opinion', CPD, October. Available at <<https://cpd.org.au/wp-content/uploads/2016/10/Legal-Opinion-on-Climate-Change-and-Directors-Duties.pdf>>; Hutley N and S Hartford Davison (2019), 'Climate Change and Director's Duties – Supplementary Memorandum of Opinion', CPD, March.

Available at <<https://cpd.org.au/2019/03/directors-duties-2019/>>; Hutley N and S Hartford Davison (2021), 'Climate Change and Director's Duties – Further Supplementary Memorandum of Opinion', CPD, April. Available at <<https://cpd.org.au/wp-content/uploads/2021/04/Further-Supplementary-Opinion-2021-1.pdf>> These opinions highlight the risks for company directors and trustees of superannuation funds if they fail to identify, understand, manage and disclose climate change risks.

- [14] A related question is the effectiveness of enforcement around climate disclosures. A mandatory regime potentially increases the ability of enforcement to affect the content and quality of disclosures.
- [15] For example, the 'three asks' of the Climate Action 100+, which represents \$55 trillion in assets under management: see Climate Action 100+, <<https://www.climateaction100.org/>>.
- [16] Australian Council of Superannuation Investors (2021), 'Net Zero Targets Jump Among ASX200 Companies', Media Release, August. Available at <<https://acsi.org.au/media-releases/net-zero-targets-jump-among-asx200-companies/>>.
- [17] For example, see ASIC (2021), 'Corporate Finance Update – Issue 4', March. Available at <<https://asic.gov.au/about-asic/corporate-publications/newsletters/asic-corporate-finance-update/corporate-finance-update-issue-4/#climate-change-related-disclosure>>.
- [18] Ehlers T, D Gao and F Packer (2021), 'A Taxonomy of Sustainable Finance Taxonomies', BIS Papers No 118, October. Available at <<https://www.bis.org/publ/bppdf/bispap118.pdf>>.
- [19] See NSW Government (2021), 'Net Zero Plan Stage 1: 2020–2030'. Available at <<https://www.environment.nsw.gov.au/topics/climate-change/net-zero-plan>>; NSW Government (2021), 'Electricity Infrastructure Roadmap'. Available at <<https://www.energy.nsw.gov.au/government-and-regulation/electricity-infrastructure-roadmap>>.

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