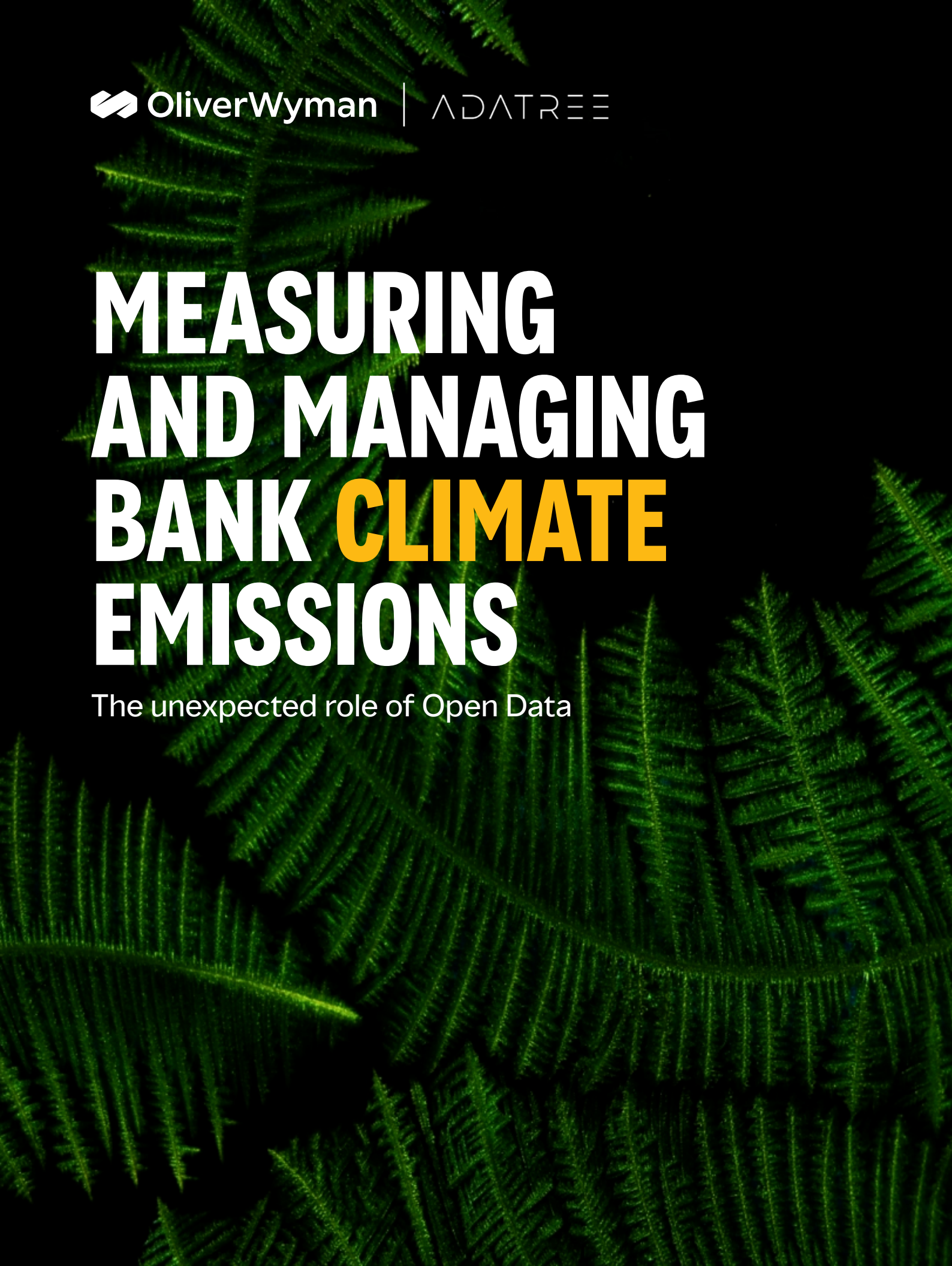

OliverWyman
ADATREE
MEASURING AND MANAGING BANK CLIMATE EMISSIONS
The unexpected role of Open Data

DESTINATION AGREED, ROUTE STILL TO BE DETERMINED

Australia's largest banks have signed up to the Net Zero Banking Alliance (NZBA). The NZBA requires the banks to publicly announce, within three years, the interim carbon emission targets that they will aim to meet by 2030. These targets are designed to be consistent with the global carbon budget required to achieve no more than a 1.5 degree temperature increase globally within the century, which in turn will require us to achieve net zero emissions globally by 2050. The targets that have been announced are ambitious, as a 1.5 degree scenario requires rapid action to be carried out in the power and resources sectors before 2030, with other sectors like transportation, manufacturing, agriculture and land use to follow soon afterwards. Residential and commercial real estate will also be required to make large reductions in emissions.

Setting the targets has been the first step and is comparatively easy; operationalization of activities to achieve them is much harder and comes next.

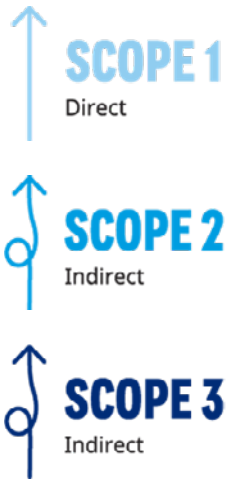
Operationalization of activities to meet emissions targets will require banks to develop a number of new capabilities:

- **New measurement:** Banks are required to measure the emissions footprint of their own operations and more importantly, their financed emissions. This will include the banks' customers' scope 1 and 2 emissions — and where material, scope 3[1] emissions (most important for coal mining, oil & gas extraction, auto manufacturing, and construction). At this point in time, Australian banks' current measurement methods still rely heavily on averages and estimates.
- **New reporting:** Banks will be required to report annually on their emissions footprint, its evolution and the activities they are undertaking to reduce it.
- **New decision making and portfolio steering:** Banks will be expected to make decisions on individual lending or investment decisions based on their expected impact on their emissions profile and transition pathway, balancing these alongside other strategy, risk, and return considerations.
- **New supporting operating models:** Banks will need new data, systems, processes, people, and governance structures to do all the above effectively.

1 Refer to Exhibit 1 for definition of Scope 1–3 emissions

Exhibit 1: Description of Scope 1–3 emission types

Department of climate change, energy, the environment and water



Source: National greenhouse accounts

Initial public announcements on targets from the banks focus on specific sectors in their institutional and corporate books, most importantly energy, coal mining, oil and gas. This makes sense. Decisions on deals in these sectors will have the largest individual impact on their emissions exposure and transition path, and they will also drive scale benefits. For example, the impact of a loan to reduce the carbon emissions of a powerplant in NSW impacts the Scope 2 emissions of all downstream power customers, achieving a much broader impact than lending to individual retail consumers to improve their home setup by e.g. installing improved insulation or solar power.

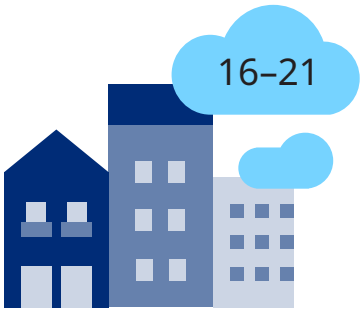
WHEN IT COMES TO MEASURING HOT AIR, IT'S HARD TO KNOW WHICH HOUSE IS BETTER

Measurement and reporting on the emissions profile of the banks will be a huge challenge, and one which banks are just starting to turn their attention to. Some have likened its scale to the 2004 Basel II regulations which forced banks to implement a materially more sophisticated and data intensive approach to credit decisioning and reporting. In the future, assessment of carbon exposure on any lending decision will need to go hand in hand with credit risk, fraud and anti–money laundering assessments.

Mortgages represent a particularly large challenge. At this point in Australia the only public information that can be used to estimate the emissions intensity of a property is the property type, size, and age of its construction. This is in contrast to the UK and Europe where banks are given access to a database of Energy Performance Certificate (EPC) ratings that can be mapped to any property. These allow them to identify and attribute meaningful differences in energy efficiency across their property portfolios. As the same information does not exist in Australia, banks here are forced to use foreign emissions factors in their own estimation methodologies for domestic emissions, with the acknowledgement that the data accuracy of the resulting figures is likely to be low.

We see a wide range of estimates for the aggregate financed emissions of Australian mortgages within bank portfolios, ranging from 10–21 Mega tonnes of CO_2 equivalent. Such a wide range is not surprising given the lack of accurate data available at this point, however regardless of where in the range the actual emissions amount may be, they are still a highly material emissions problem.

Exhibit 2: Estimating aggregate mortgages financed emissions
Resulting emissions estimate (in Mega tonnes of CO_2 equivalent)



Selected Bank financed emissions disclosures[2] scaled by APRA market share statistics[3]

Average household emissions from the Australian Green House office[4], scaled by houses with mortgages (3.3m) from ABS household stats[5], and using 50% LVR[6]

While mortgages emissions intensity is low, the size of these portfolios means that the prize for producing meaningful emissions estimates to facilitate more effective management is large. In its 2021 sustainability reporting pack, Westpac estimates that while residential mortgages rank second lowest (out of 12 sectors in terms of emissions intensity), it is second largest in overall emissions (18.2% only behind Manufacturing at 21.2%).

Ultimately in order to achieve their NZBA targets and have a positive impact on the climate, banks will need to improve their estimates of financed emissions over time, and use a range of "carrot" and "stick" levers to incentivize customers to decarbonize. In the mortgage space, that is likely to include green mortgages (i.e. discounts for greener properties, especially new construction); advising customers on how to decarbonise; financing home improvements such as insulation, home solar and battery systems, and replacement of gas appliances with electric. This could be coupled with advice and financing for home improvements that make properties more resilient to weather risks such as floods and bushfires.[72]

2 https://www.commbank.com.au/content/dam/commbank-assets/about-us/2022-08/2022-climate-report_spreads.pdf
https://www.nab.com.au/content/dam/nabrwd/documents/reports/corporate/sustainability-data-pack-xlsx.xlsx
https://www.westpac.com.au/content/dam/public/wbc/documents/excel/sustainability/2021_Sustainability_Datasheet.xlsx

3 https://www.apra.gov.au/monthly-authorised-deposit-taking-institution-statistics

4 https://www.greenwire.com.au/resources/articles/your-household-carbon-footprint/

5 https://www.abs.gov.au/statistics/people/housing/housing-census/2021

6 50% is chosen as conservative estimate of bank LVRs based on results presentations from major banks

The advisory angle is important here; brand consultancy Lippincott's customer research suggests that customers are highly interested in how they personally can reduce their own carbon footprint. Helping customers to "do the right thing" will build trust and deepen the customer relationship, as well as reducing the bank's financed emissions.[3]

ENTER THE CONSUMER DATA RIGHT, AN UNEXPECTED SOLUTION

From November 2022, all major Australian energy retailers will be required to make their data available in Australia's Open Data ecosystem, the Consumer Data Right (CDR) regime. The data provided into the regime will include detailed information on the energy consumption of individual households and commercial properties (electrical and gas) for up to two years. The regime was designed to give customers greater ownership and privacy rights on their information, foster faster provider switching, and accelerate product and service innovation. In this case however, it would also provide banks (that are regulated as Accredited Data Recipients in the regime) with a way to potentially source direct, accurate emissions data on the largest portfolio of assets on their balance sheet, and reduce reliance on averages and overseas emissions benchmark factors.

Adatree, a regulated technology provider of CDR access and consent management infrastructure, is ready to start testing energy data through the CDR eco–system for Open Energy use cases. They observe that there are energy Data Holders who have already passed conformance testing before the November 15 deadline, which is significantly ahead of where the banking sector was at the equivalent time. This bodes well for the pace at which energy data may be provided and consumed through the CDR eco–system relative to the introduction of banking data.

Use of CDR energy data will not be a slam–dunk however. Trust in the CDR ecosystem and the data within it will be required on both sides. The energy data provided by customers applying for a mortgage would also only relate to their prior home, so the banks will need to provide a value proposition that will incentivize customers to provide consent to share their energy data post acquisition. We expect to see price, advisory and "green" financing propositions at the negotiation table which will hopefully facilitate a virtuous cycle — more accurate data, better pricing, better emissions understanding, greater ability and desire to reduce, more financial options to do so, better outcomes for the bank and customer.

Utilization of energy consumption data is only one of several such emissions related CDR opportunities. Beyond mortgages, general insurance data (potentially available via CDR in 2024, however timing still being finalized) may also provide useful information on vehicle usage that may improve banks' ability to estimate emissions for the auto book, and home insurance coverage that will inform banks' physical risk assessments.

7 Lippincott is part of the Oliver Wyman Group

“Open Energy is already off to a positive start, as we can see that there are already Data Holders passing conformance testing before the regulatory deadline. Energy is ahead of schedule at a time where banking had a number of go–live delays. This is great news for those who are already thinking about how to leverage the rich Energy CDR datasets.

We observe that the biggest mistake companies make when thinking about new CDR data sets is starting their use case thinking too late. It takes considerable time to initiate the creativity and build the momentum required for deployment of new services in large organizations. We have found that those who saw the CDR opportunity early and who started their thinking early, are now deploying use cases well ahead of their competitors (equivalent of multiple years in terms of development time for some). They have also built important infrastructure in their businesses and this has helped them become materially more mature from an information security standpoint, which is timely given the increased scrutiny on data security in the market.

While there were delays in bank compliance when banking data was initially released, the more challenging issue we saw with companies accessing CDR at that time was that intermediary access models didn't exist. Now that the technical and functional infrastructure has been hardened, and intermediary access platforms like Adatree have been established, the cost and speed to access CDR has been materially reduced. Adatree as an ADR is now allowed to sponsor others access to the ecosystem using our turnkey conformant environments, and as such we are seeing much faster deployment of use cases to market. We believe that Energy CDR data is on track for a considerably smoother faster roll–out than we saw with banking data before.”

Adatree COO — Alex Scriven

CDR ISN`T EVERYTHING, BUT IT WOULD COMPLEMENT OTHER DEVELOPMENTS

In the Netherlands, Rabobank has recently rolled out functionality to provide its banking app customers an estimate of their carbon emissions (scope 3) based on their payments data, with the hopes of influencing purchasing decisions towards lower emission alternatives. In Australia CBA and Westpac have similarly announced a partnership with CoGo to estimate customer emissions based on their transaction data. Combining these types of services with actual energy usage data from within the CDR ecosystem will allow banks to build a holistic picture of their customers' emission profile (Scope 1, 2 and 3), achieve far greater accuracy in capturing (and reporting) their financed emissions profile, and provide valuable advice and support on how customers can reduce their carbon emissions profile.

ONLY THE START OF THE SOLUTION

While the use of CDR data is promising, there is much work to be done around acquiring, using, storing and processing that data in a way that is consistent with regulations. To be successful, banks will have to develop new value propositions, balance achieving their goals with strict usage and privacy constraints, and develop the required technical infrastructure, supporting capabilities and partners to effectively consume and analyse the new data. We see three critical challenges in the short term that will need to be addressed.

- **Consent — value trade-off:** Access to CDR data requires customer consent, which means banks will need to create new value propositions to incentivize customers to provide access. We expect to see "green" discounts and a potential suite of new products and ancillary services (e.g. carbon calculators, energy provider comparisons and switching, new "emission reduction" financing etc.) needing to be developed. These will likely need to change how customers perceive value being provided by banks and energy providers alike to enable sharing consent — not just at the point of application, but beyond in order to maintain up to date information.
- **Privacy and conduct compliance:** CDR data use is bound by tight regulation and rules around how the data is used, stored, accessed, and controlled. Any customer proposition using CDR data needs to clearly provide benefit to customers and not just help the bank improve its measurement and management ambitions. Becoming an Accredited Data Recipient (ADR) is a potentially expensive and complex undertaking and will likely require partnerships with industry intermediary partners to succeed.
- **CDR data will not solve for all:** There will be gaps in coverage. Banks will need to develop extrapolation methodologies to develop an accurate picture for clients who have not given CDR permission for their energy data, or where the data originally provided has aged. This will mean the development of entirely new, potentially complex data environments, systems and supporting analytics.

The opportunity for CDR energy data to greatly improve emissions reporting and management is clear, the size of the prize is material. It will be up to leading banks to design and deploy customer value propositions that will enable them to achieve it.

Oliver Wyman has been at the forefront of designing CDR use cases in financial services, from instant regulatory compliant POS credit decisions to new main financial institution value propositions in transaction banking and deposits. We are also playing a leading role in designing climate data operationalization infrastructure, operating models and analytics.

Oliver Wyman is a global leader in management consulting. With offices in more than 70 cities across 30 countries, Oliver Wyman combines deep industry knowledge with specialized expertise in strategy, operations, risk management, and organization transformation. The firm has more than 6,000 professionals around the world who work with clients to optimize their business, improve their operations and risk profile, and accelerate their organizational performance to seize the most attractive opportunities.

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