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Between the Orderly and Hot House World: A Practical Guide to Effective Climate Risk Management for Banks

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May 2024

Presented at the 2024 All Actuaries Summit

Agenda

01 – Brief introduction to climate-related risks

02 – Brief introduction to credit risk management for banks

03 – Key actions for banks on residential lending

04 – Summary & Q&A

Brief introduction to climate related risks

01

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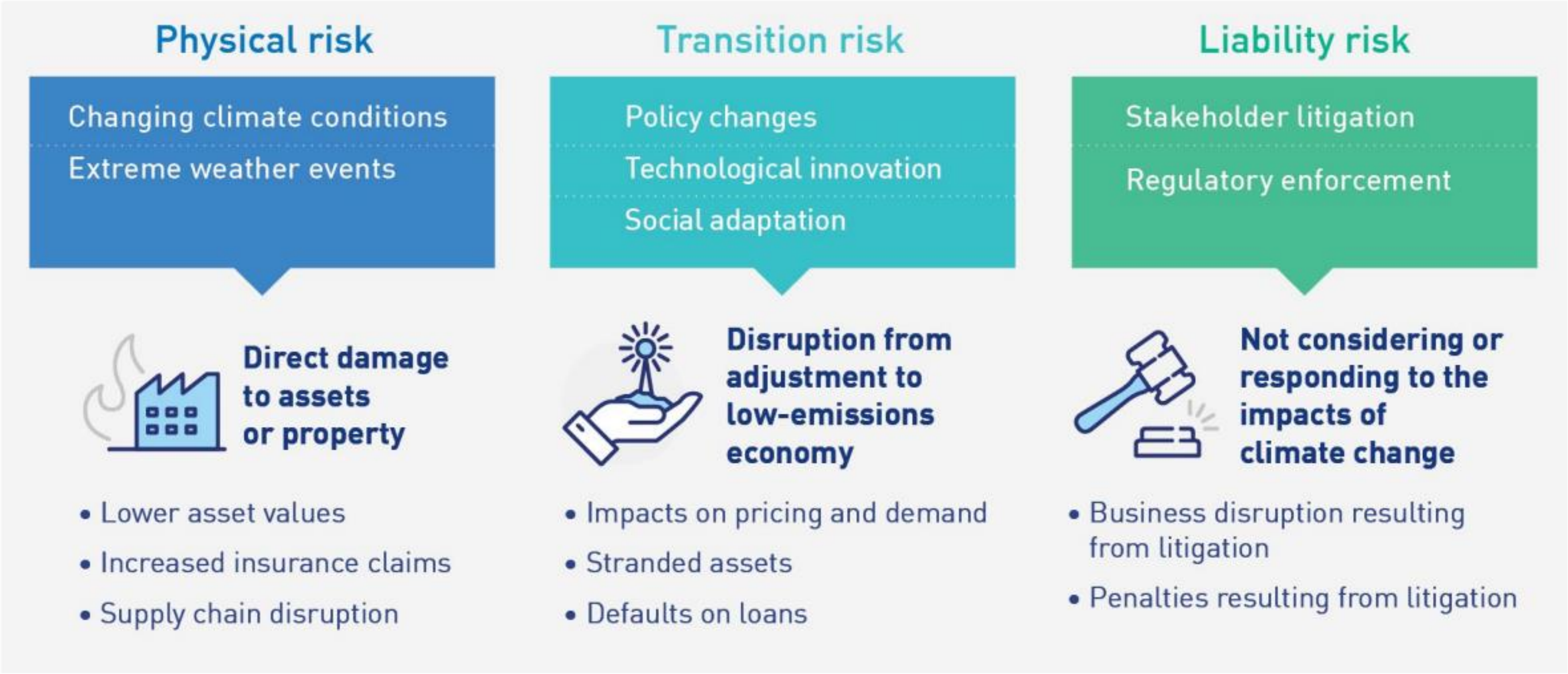
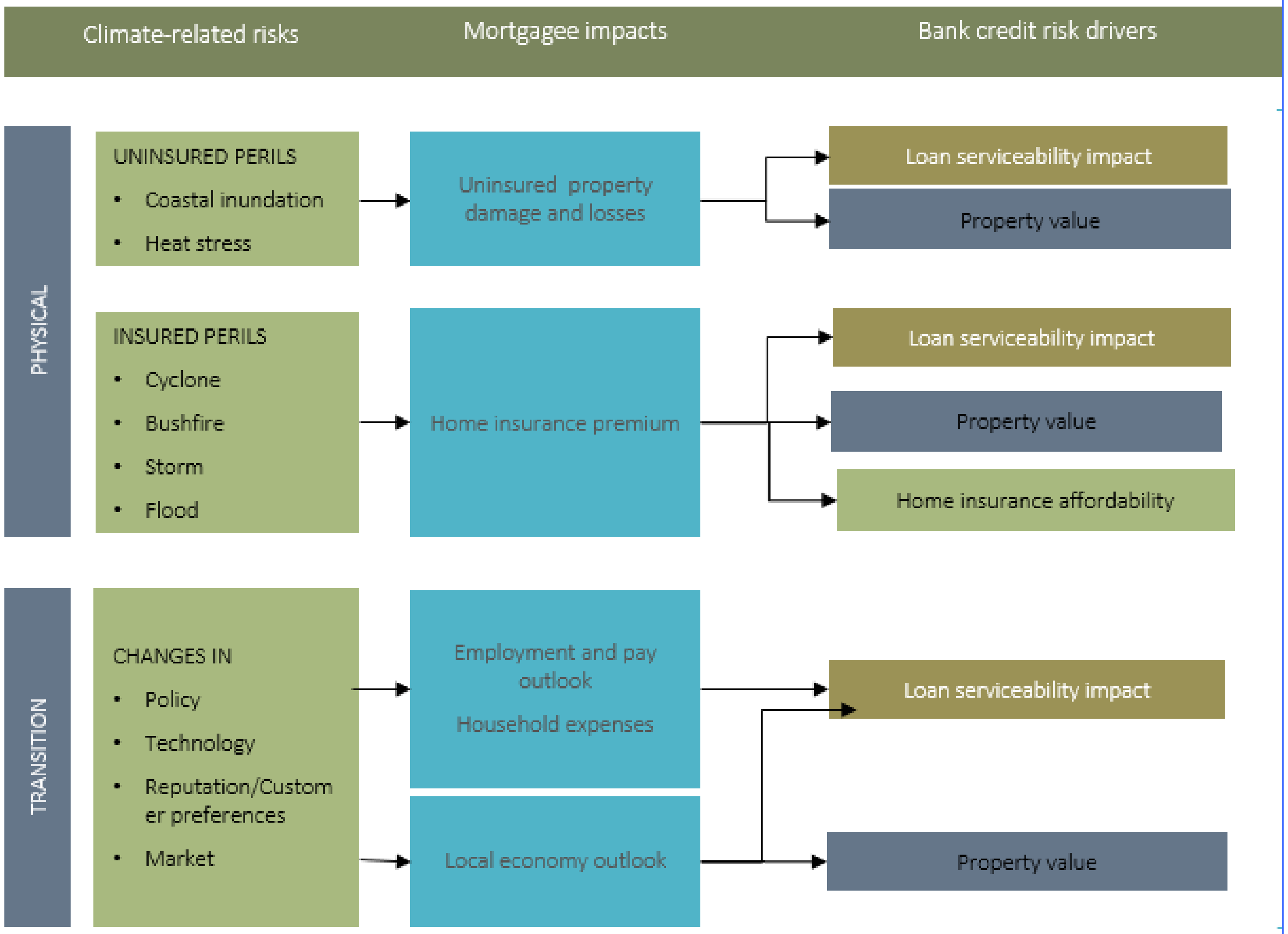
Types of climate risks



Source: APRA

Impacts on banks residential mortgage portfolios



Serviceability — Probability of default (PD)

Security — Loss given default (LGD)

Risk assessments

Progress

MEDIA RELEASES

APRA releases results of inaugural Climate Vulnerability Assessment

Wednesday 30 November 2022

The Australian Prudential Regulation Authority (APRA) has published the aggregated finding
Climate Vulnerability Assessment (CVA) of Australia's five largest banks.

Source: APRA

MEDIA RELEASES

APRA finalises prudential guidance on managing the financial risks of climate change

Friday 26 November 2021

The Australian Prudential Regulation Authority (APRA) has released its final prudential practice guide on climate change financial risks, following consultation on the draft Prudential Practice Guide CPG 229 Climate

manage the financial risks of
ons, but will instead assist
hin their existing risk

Source: APRA

Regulations / Understanding ESG / Treasury & Capital Markets

NGFS refines climate scenarios

Latest edition reflects impact of new policies, GDP and population data, geopolitical contexts, and technological advancements

The Asset
15 Nov 2023

The Network of Central Banks and Supervisors for Greening the Financial System (NGFS), an international network of 127 central banks and financial supervisors seeking to scale up green finance, has published the latest edition of its climate scenarios framework, reflecting changes in carbon emissions, climate policy changes and macroeconomic conditions.

Source: The Asset https://www.theasset.com/article-esg/50372/ngfs-refines-climate-scenarios

Challenges

- Led by regulatory exercises
- Designed for different purpose (financial system stability)
- Don't address property level nature of climate risk impacts (credit decisioning)

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Brief introduction to credit risk management for banks

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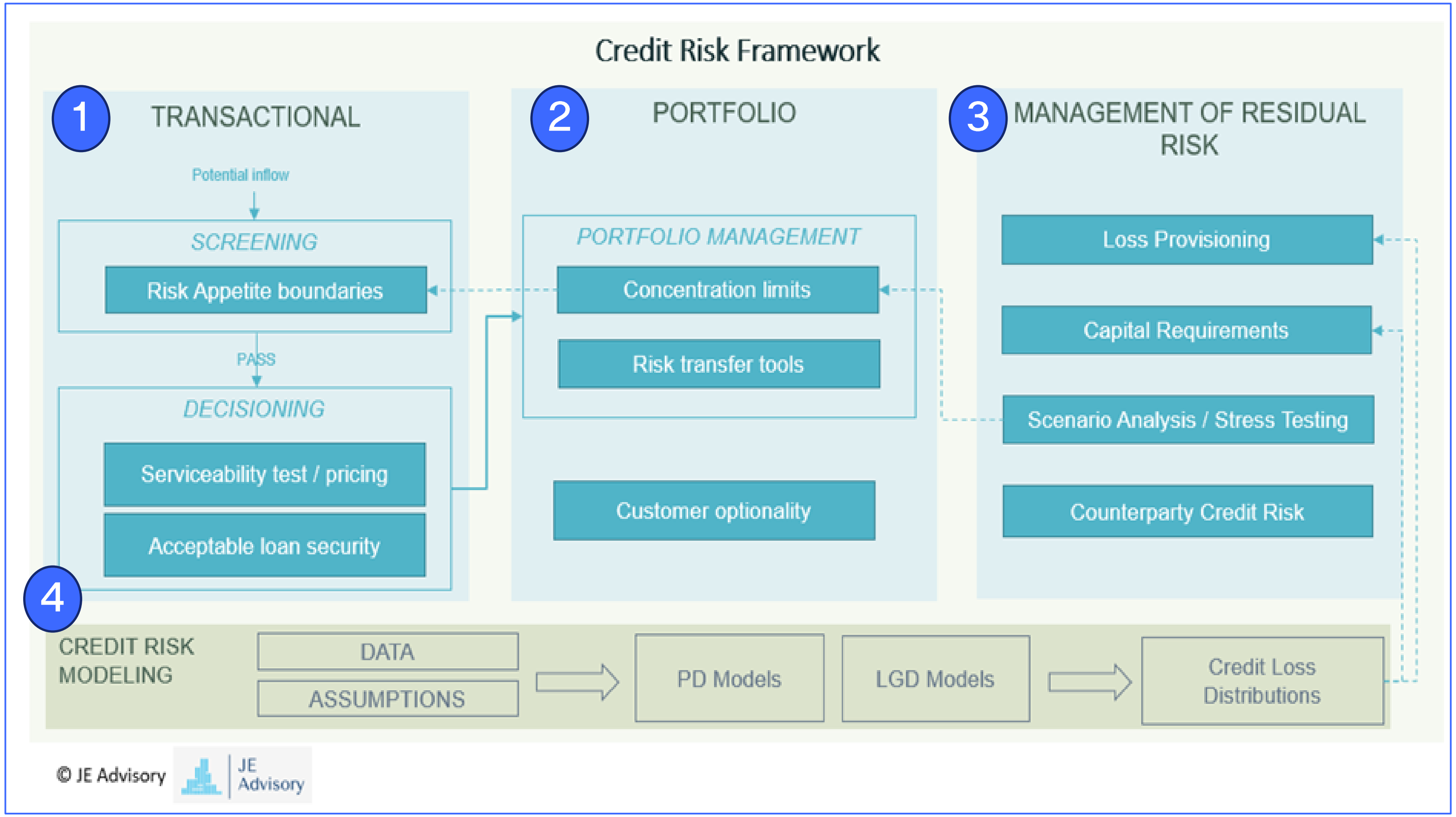
Credit Risk Management for Banks



Element purpose:

- **Transactional** – define who to lend to and on what terms
- **Portfolio** – maintain an acceptable portfolio mix – within appetite and not overly concentrated in high-risk loans
- **Management of Residual Risk** – ensure sufficient financial protection for the risk in the portfolio
- **Credit Risk Modelling** – establish the way to model potential future credit losses to inform decisions

Key actions for banks on residential lending

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Key practical actions

1. Understand potential impacts

2. Dial-down unwanted high risk originations

3. Update credit risk models

4. Improve data sources

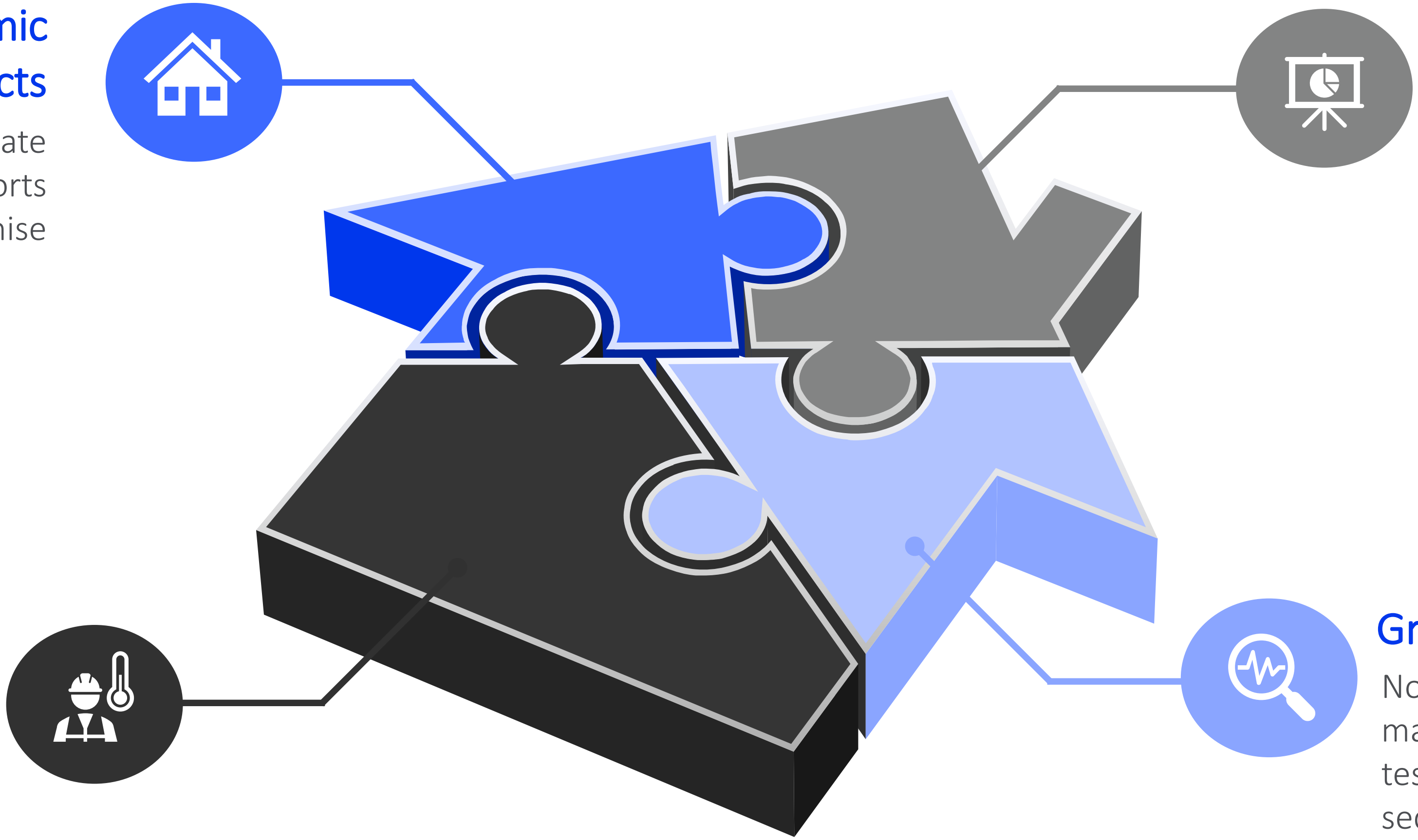
5. Know your properties not just your customers

6. Understand insurance

7. Engage your customers

8. Tell your stakeholders

1. Understand potential impacts for portfolio and uncertainties



Household economic impacts

From the climate changing and our efforts to decarbonise

Scenarios analysis and stress testing

Climate-specific, different to banks current processes

Physical and transition risk

Beyond traditional security assessments of credit risk

Granular specific risks

Not country-wide macroeconomic tests and testing the specific property securities within the portfolio

2. Dial down unwanted high-risk originations

Banks need to develop metrics to support the underwriting process to limit high risk originations. Metrics must apply at a granular enough level to enable banks to identify high-risk originations, without jeopardising growth aspirations.

Benefits

- Align risk taking with Risk Appetite
- Grow in line with business and strategic objectives
- Meet investor and regulator expectations

Challenges

- Avoid friction in the application process
- Acquire data and modelling capabilities for geospatial and climate
- Meet Responsible Lending obligations

2. Dial down high-risk originations – Risk treatment options

Banks can select from a range of options to apply in the underwriting process with implications for resource requirements and customer impact.

Easier to implement, low customer impact

Increasing complexity, higher customer impact

- Monitor proportion of high-risk properties originated against thresholds
- Incorporate realistic estimates of home insurance premiums
- Adjust collateral value for climate scenarios (physical and transition scenarios)
- Incorporate borrower climate risk exposure into PD and LGD estimates

2. Dial down high-risk originations – Types of controls

Banks can apply mitigants such as limits, adjusting serviceability metrics, or security requirements

• Lending limits	Broader geographic concentration limits can work for transition risk. Physical risk however may require address level metrics.
• Adjust serviceability metrics	Use climate adjusted serviceability metrics such as use of realistic home insurance premium in household expense estimate
• Security requirement	Reduce LVR requirement for high risk originations

3. Update credit risk models

Credit models may not accurately estimate credit losses if climate risk is not allowed for. Adjustments can be made in a number of ways, depending on existing modelling framework and nature of climate risk.

Credit model purpose	Impact of climate change	Approaches
Discriminate between or rank borrowers	Current models will not capture drivers of losses from climate or transition risk	Include borrower and collateral attributes that link to climate risk
Estimate expected losses	Expected level of losses may be higher than current model forecast	Review model to see if the level of risk is accurate at both aggregate and sub portfolio level.
Estimate down turn losses	The volatility and correlation between losses may be higher than implied by models	Consider impacts from increased vulnerability to down turns and potential for interactions between climate and macroeconomic conditions.

4. Improve data sources

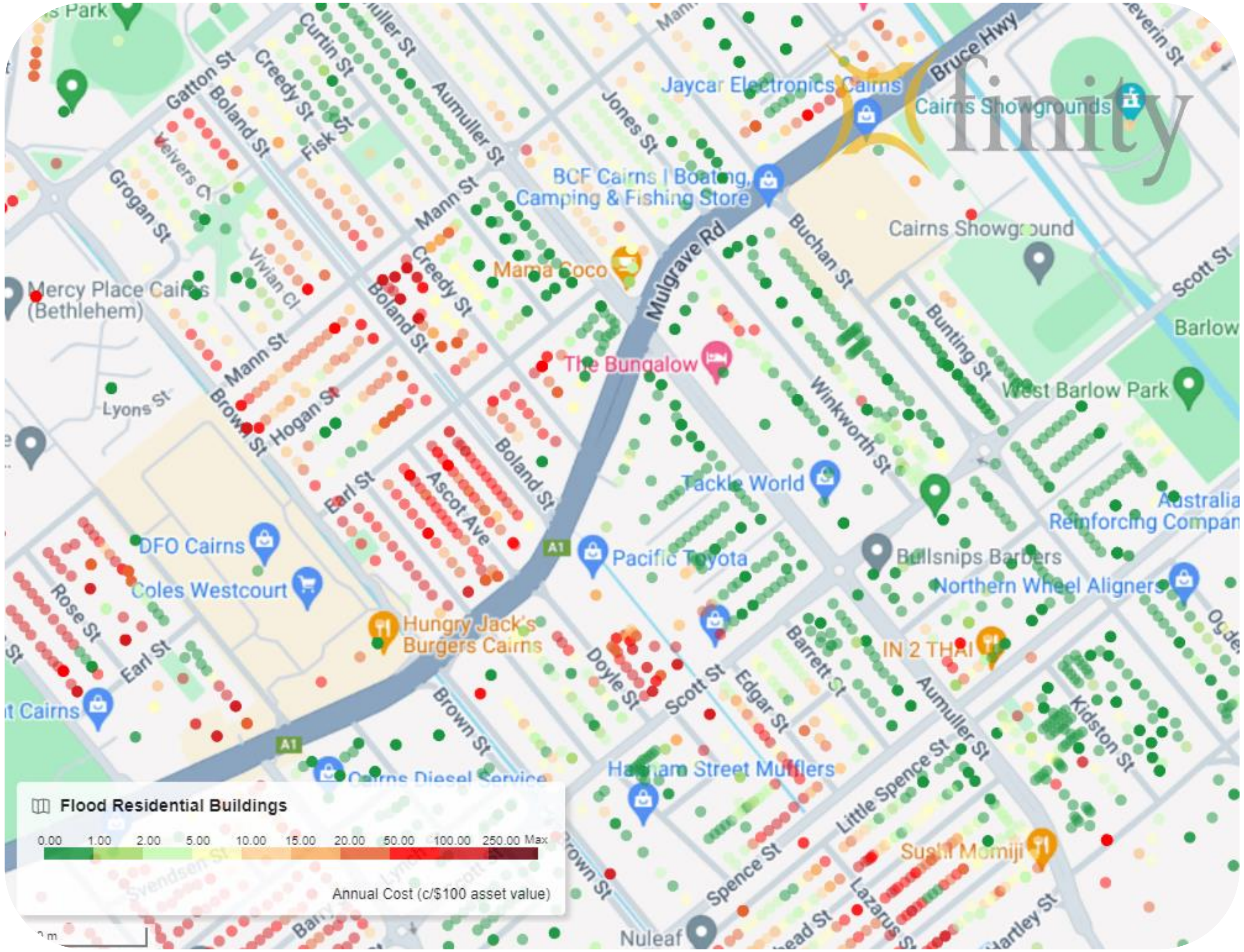
- Accurate address and hazard data for property securities now matters
- Accurate insurance costs and coverage data
- Climate transition risk at a local level – impacts on <u>local economy</u> and potential future scenarios – potentially as important as occupation & income
- Identifying actual hardship / losses caused by climate related events in order to validate models
- Market changes – what are your competitors doing?
- Tracking price impacts of disasters in high risk areas

5. Know your properties, not just your customers

Precise geolocation

Building characteristics

Home insurance is risk priced, not risk pooled



Source: Finity Central

6. Understand home insurance purchased by customers

Uninsured risks

- Home insurance fails to cover climate-related perils such as coastal hazards or heat stress

Unaffordable today

- Customer does not purchase insurance because it is unaffordable

Unaffordable future

- Changing climate drives up the cost of insurance making it unaffordable

Transition

- Transition to a net zero economy impacts on borrower's employment and income

Failure of insurance as a risk control for climate physical risk

- Insurance underpins the collateral securing a home loan
- Affordability is a problem well before availability
- Understand what is covered by insurance and what is not covered
- Consider annual validation of insurance cover for high risk customers

7. Engage with customers

New customers

- Climate risk assessment at origination – how do you explain?
- Help your customers avoid getting into trouble
- But may affect existing customers trying to sell
- Social license and

Existing Customers

- Refinancing is important!
- Consider using vulnerable customer framework
- Monitor customer insurance coverage
- Property value falls are a significant risk
- Social license and

New Products

- Resilience Lending - Reduce bank risk, increase bank lending, help customer!
- Securitise as climate bonds for potential concessional funding
- Resilient Buildings Council – Third party

8. Tell your stakeholders what you're doing (Disclosure)

- Customers
- Employees
- Community
- Shareholders
- Investors
- Regulators

Do I want to continue to do business with you in the way I have in the past?

that:

- Align with global best practice (comparable)
- Provide an understanding of ESG risks/opportunities and how these are being addressed
- Describe a strategic response plan, and progress vs

8. Tell your stakeholders what you're doing (Disclosure)

Climate Reporting Recommendations & Guidance

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Mandatory Sustainability / Climate Reporting

IFRS Sustainability

June 2023
IFRS S1
IFRS® Sustainability Disclosure Standard
General Requirements for Disclosure of Sustainability-related Financial Information

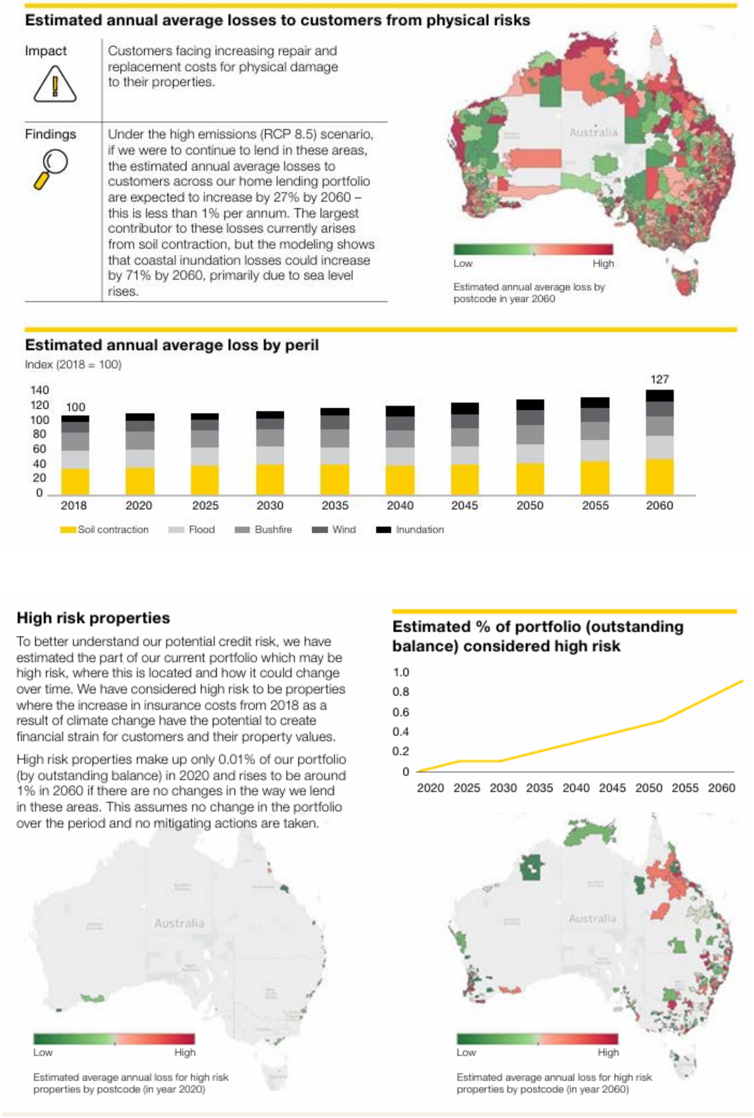
June 2023
IFRS S2
IFRS® Sustainability Disclosure Standard
Climate-related Disclosures

AASB Sustainability Reporting Exposure Draft
ED SR1
October 2023

ASRS1: General Requirements for Disclosure of Climate-related Financial Information

ASRS2: Climate-related Financial Disclosures

8. Tell your stakeholders what you’re doing (Disclosure)



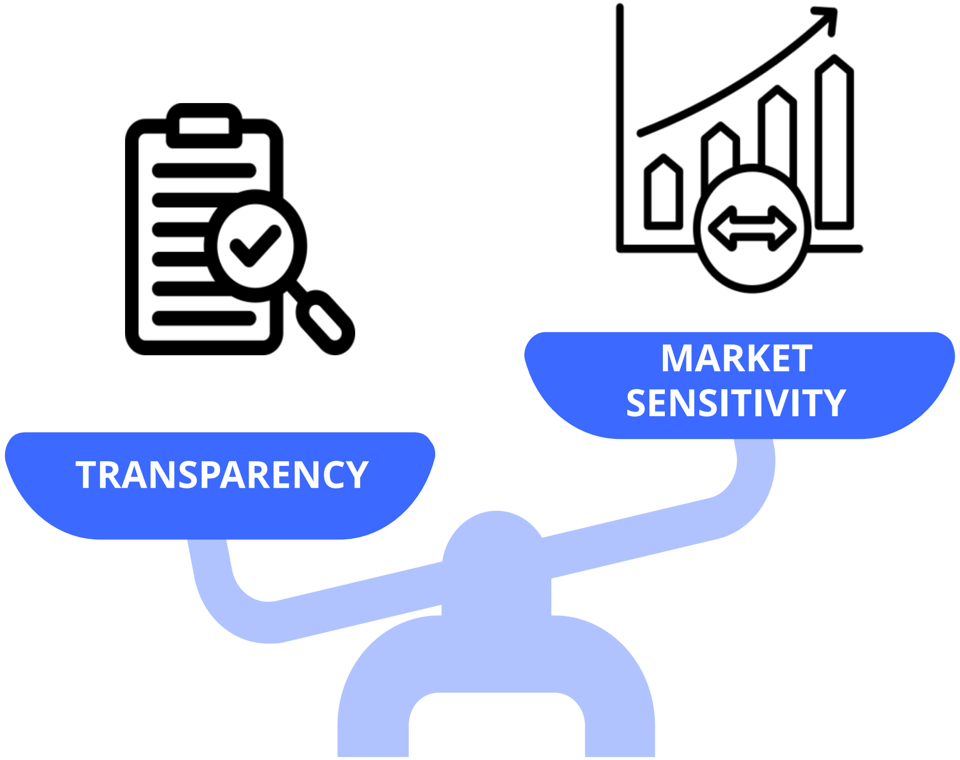
Estimated annual average losses to customers from physical risks

Impact	Customers facing increasing repair and replacement costs for physical damage to their properties.
Findings	Under the high emissions (RCP 8.5) scenario, if we were to continue to lend in these areas, the estimated annual average losses to customers across our home lending portfolio are expected to increase by 27% by 2060 – this is less than 1% per annum. The largest contributor to these losses currently arises from soil contraction, but the modeling shows that coastal inundation losses could increase by 71% by 2060, primarily due to sea level rises.

High risk properties

To better understand our potential credit risk, we have estimated the part of our current portfolio which may be high risk, where this is located and how it could change over time. We have considered high risk to be properties where the increase in insurance costs from 2018 as a result of climate change have the potential to create financial strain for customers and their property values.

High risk properties make up only 0.01% of our portfolio (by outstanding balance) in 2020 and rises to be around 1% in 2060 if there are no changes in the way we lend in these areas. This assumes no change in the portfolio over the period and no mitigating actions are taken.



Source: CBA 2018 Annual Report

Summary and Q&A

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Summary + Q&A

Understand potential impacts	Dial-down high risk originations	Update credit risk models	Improve data sources
Know your properties not just your customers	Understand insurance	Engage your customers	Tell your stakeholders

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Thank you