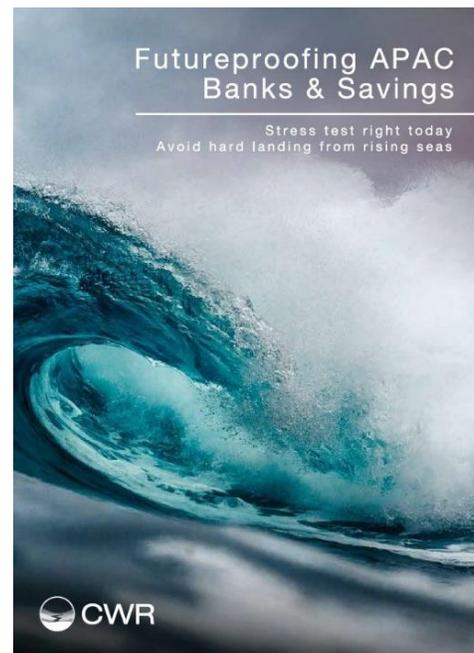


Media Pack:

Futureproofing APAC Banks & Savings:
Stress test right today, avoid hard landing
from rising seas

- **Press release**
- **How to read the report**
- **Key points from the 5 APAC country/territory factsheets**
- **HK Deep Dive case study**
- **About CWR**



Press Release

NEW REPORT! Futureproofing APAC Banks & Savings

A new report by CWR on how banks must stress test right today to avoid hard landing from rising seas

Hong Kong, 7th November 2022 – CWR releases “[Futureproofing APAC Banks & Savings: Stress test right today, avoid hard landing from rising seas](#)”, a new report to help the financial sector manage imminent and “*virtually certain*” chronic risks from rising seas. 17 major banks across developed APAC from Australia, Hong Kong, Japan, Singapore and South Korea with loan books totalling US\$7.9trn were analysed to reveal “triple whammy” concentrated risks from sea level rise (SLR). With around US\$5trn or almost two-thirds of loan books exposed to escalating SLR risks, the report cautions APAC banks and central banks/regulators to stress test right today to stay afloat tomorrow.

Rising seas could sink banks and over 115 central banks and regulators around the world, under the auspices of the NGFS, have recognised that physical climate risks can trigger systemic shocks that lead to global financial collapse. “*SLR is a pervasive high-impact risk as its sector-agnostic and geo-locational nature can over-ride traditional risk spread methods*” said Dharisha Miranda, the lead author of the report. Banks must pay attention as the “*domestic skew of loan/mortgage books amplifies risk clustering as does the concentration in multiple vulnerable sectors. Also, the coastal nature of APAC means that regional diversification offers little SLR protection*” she warned.

Across the analysed export hubs of Asia, global trade and supply chains will be disrupted as sector spread offers banks no shelter from rising seas. The financial impact will be significant: CWR’s new report also found that 62% of loan books of the 17 APAC banks are concentrated in sectors vulnerable to coastal threats: real estate (US\$3trn; 39%), wholesale & retail trade (US\$1trn; 13%), and manufacturing & industry (US\$0.7trn; 10%).

As climate risks are escalating, finance must wake up, especially in APAC. Globally, the region is the most vulnerable with over 200 million people at risk from just 1m of SLR. Worse still, future projections have shifted: previously, ~1m was considered the high-end worst-case scenario SLR by 2100, but now... the global scientific consensus under the IPCC is warning policy makers that 2-3m of SLR “*cannot be ruled out*” by 2100; and 5m by 2150.

The inclusion of these multi-metre levels indicates the importance of using these levels for “*low-regret*” adaptation planning as they may well be our reality if emissions and global warming continue. Sadly, according to the WMO, there’s now a 50:50 chance that global temperatures will breach 1.5°C by 2026 instead of the Paris Agreement target date of 2100. Overshooting 1.5°C some 70 years earlier will likely trigger tipping points that could result in rapid SLR by ~2060.

“*At 1.2°C of warming today, our 2100 climate future is already here. We now face multiple record-breaking events year-on-year from heatwaves to mega floods; even mighty rivers like the Colorado, Rhine, Po and Yangtze were running dry this summer*” said Debra Tan, the head of CWR. “*We are playing catch up with impacts – to get ahead, we must make adaptation a top priority; as it is we’re 70 years late*” she urged.

If we can’t “see” the extent of these risks, we cannot manage them. The NGFS has thus urged banks/central banks to perform stress tests under the worst-case scenario. “Seeing” the future risk landscape will help steer banks away from a hard landing and systems collapse. Yet, most central banks/regulators are not prescribing banks to use the multi-metre SLR levels to stress test loan books leading them to underestimate the risk. Indeed, flood maps in CWR’s reports show that impacts between the “worst-case” 1m and “low-regret” levels of 2-3m of SLR are vastly different so banks cannot afford to get this wrong.

On top of this, the new report highlighted that banks are using the wrong timeline, with most NGFS members running stress tests for a 30 year timeline or less whereas SLR only manifests in a rapid manner after 2050. As a result, most banks remain blind to the “triple whammy” concentrated loan book risks highlighted in the report. As Miranda warned, “*Banks continue to severely under-estimate SLR risks because they are not stress testing right – they are using short timelines, the wrong worst-case scenario, and are not analysing government adaptation action even though this can protect or further harm their loan books.*”

Even at much lower levels of SLR, the consequences for finance are severe. For example, the Hong Kong Monetary Authority (HKMA) pilot climate stress test in 2021 revealed that around HK\$1trn (US\$128bn) or 32% of property loan books of the 27 Hong Kong banks analysed would be at risk from around 0.55m of SLR by 2050. The HKMA warned that devaluation from physical damages could be more than 50% for some properties in vulnerable areas. These numbers are worryingly high, yet banks could face more stress as seas are rising faster than we’d originally thought, outpacing most governments’ adaptation efforts so far.

“*As traditional methods of spreading risks won’t work, the only way banks can be resilient is if cities and countries are resilient*” CWR’s Tan explained. Also, she cautioned “*as coastlines will be redrawn, dealing with multi-metre SLR demands transformative adaptation. Cities must start drawing up attack/defend/retreat adaptation plans today to avoid maladaptation and investments in areas that will no longer be defensible in the future*”.

So where are governments on adaptation? Here, action varies: Hong Kong and Singapore are island city financial hubs but have very different adaptation strategies. Singapore is adopting a “low-regret” approach: adapting for 2-3m of SLR by 2100 and is raising critical infrastructure to 5m+ above mean sea levels. In comparison, Hong Kong lags, adapting to a 1.5°-2°C future of at most ~0.5m of SLR by 2100.

The report’s deep dive case study on Hong Kong clearly shows that adapting to only 0.5m by 2100 instead of 2-3m as warned by the IPCC will put 24x more residential, commercial & industrial buildings at risk. This huge adaptation gap brings high exposure and could trigger systems collapse. *“Evidently, even sophisticated financial systems in developed Asia are exposed. In Hong Kong, banks/central banks and the government are on a “Double Blind Maximum Risk” path as none are acting to properly assess/adapt for SLR risks”* Miranda stated.

Can central banks steer away from systems collapse? According to CWR’s Tan, *“all paths to financial resilience starts with stress testing right today”* and *“futureproofing the financial sector against SLR risks requires banks and governments to align their adaptation strategies”*. Currently, according to the new report, their mismatched strategies fall into four broad pathways with different outcomes for the financial system. CWR hopes that the analyses in the report will help central banks steer away from a “Double Blind Maximum Risk” path toward “Transformative Adaptation”, the path that provides banks with the highest chance of staying afloat despite rising seas.

There is no running away from SLR risks; even if we manage to cut to zero emissions today, seas will continue to rise. Moreover, escalating risks and lagging adaptation mean that banks could be left carrying the risk, especially as the threat of “no insurance” also looms with compounding climate events; all the more reason to stress test right today. To facilitate this, the report includes a [“3-Step Guide to Stress Test Right for SLR Risks”](#) and an [“8-Step Checklist to Futureproof Banks from SLR Risks”](#). Also provided is a [“5 must-do checklist”](#) for central banks & regulators to avoid systemic shocks triggered by SLR.

CWR hopes these will help banks “see” the real risks, for when they do, they will understand why they need to act to 1) support proactive governments with funding for their transformative adaptation plans; 2) engage laggard governments to better their adaptation plans and avoid maladaptation; and 3) re-think their own carbon intensive loan book spread. Without stress testing right, banks will not have the impetus to change their behaviour. Right now, 9 out of the 17 banks analysed in the report rank within the top 60 most polluting banks globally; together these 9 APAC banks have provided US\$560bn in fossil fuel financing since the Paris Agreement.

As the individual factsheets for the five countries/territories in the report show, each location faces unique risks be it physical or related to government action/inaction. Thus, there will be no one-size fits all solution. The road towards “Transformative Adaptation” is long – for both banks and governments – but it is a journey that must start immediately as SLR is here to stay.

As Miranda succinctly summed *“APAC banks must stress test right today because they are facing a lethal combination of 1) a “triple whammy” from loan books clustered in vulnerable domestic and regional locations, and sectors; 2) accelerating SLR risks, and 3) lack of government adaptation action, which could trigger financial systems collapse if not addressed immediately.”*

Hopefully, the banking sector and regulators are listening. Otherwise, we are all in for a hard landing from chronic risks stemming from rising seas.

For more information on how rising seas will affect the 17 APAC banks from Commonwealth Bank of Australia and Mitsubishi UFJ Financial Group to HSBC, OCBC and KB Financial Group see the **full report** [here](#).

Quick Access to our Hong Kong deep dive:

- See Section IV of the report **“HK Double Blind Maximum Risk Case Study”** [here](#).
- Access **“Save HK Banks From Sinking”** factsheet [here](#).
- Access **“8-Factsheet Survival Guide for HK to survive rising seas”** [here](#).

Media

For more information, please contact: Dharisha Miranda

Email: dmi@chinawaterrisk.org

How to read this report

The IPCC has warned policy makers that multi-metre sea level rise (SLR) cannot be ruled out by the end of this century. Yet, banks are not using multi-metre SLR levels to stress test loan books – this together with 1) accelerating SLR risks, and 2) lack of government adaptation action is a lethal combination that can trigger financial systems collapse. At the moment, both central banks and government adaptation action lag that of accelerating SLR risks exposing banks to triple whammy concentrated SLR risks exposure. As a result, even sophisticated financial systems in developed Asia are exposed as banks/central banks are on a “Double Blind Maximum Risk” path. As geo-locational SLR risks are sector agnostic, traditional methods of spreading risks won’t work – the only way banks can be resilient is if cities and countries are resilient. We therefore write this report to make an urgent case for banks to stress test right because only once banks “see” the real risks of multi-metre SLR, will they be able to support proactive governments and push laggard governments to put in place transformative adaptation plans and steer the financial sector away from “Systems Collapse” to “Managed Risk”.

CHEAT SHEETS

TO DO

- Path to staying afloat starts with stress testing right
- 5 must do’s for central banks & regulators to avoid systemic shocks triggered by SLR
- 8-Step Checklist to Futureproof Banks from SLR Risks

BANKS BEWARE

- 4 strategy pitfalls to avoid – don’t shoot yourself in the foot!
- Banks can’t rely on insurers as climate risks escalate & compound
- Banking on wishful thinking + stupid money = loan books at risk

ADAPTATION

- Transformative adaptation: 5 tips summarised from IPCC
- Government action on adaptation: CWR APACCT 20 Index
- HK Rising Seas Adaptation Is Way Behind New York & Singapore

ESCALATING SLR

- Sea levels – Rising faster than you think!
- 2-3m vs. 1m of SLR: significantly different impacts
- Tipping points may be triggered = rapid SLR by ~2060

AT-A-GLANCE FACTSHEETS: BANKS’ SLR EXPOSURE

- 5 country/territory factsheets: Australia, Hong Kong, Japan, Singapore, and South Korea
- Save HK Banks From Sinking (more detailed analysis on government, banks, and central bank)

SECTION I: Triple whammy! Concentrated loan book risks to SLR could sink savings

- Triple whammy due to sector agnostic geo-locational SLR risk explained;
- Recommendations to spread SLR risk; and
- 5 country factsheets - at-a glance view of the risks facing the different countries/territories & their major banks.

SECTION II: Adaptation decides financial resilience! Banks must drive government action by stress testing right

- Analyses of government decarbonisation and adaptation strategies;
- Strategy pitfalls to avoid; and
- Matrix and flowchart showing path to resilience starts with banks stress testing right.

SECTION III: CWR 3-Step Guide to Stress Test Right for SLR Risks: Avoid hard landing & catalyse transformative adaptation

- In-depth steps on how to stress test right with longer timelines, using the “low-regret scenario”, and assessing government action; and
- Analysis of what triggering tipping points could mean for SLR.

SECTION IV: HK Double Blind Maximum Risk Case Study! HKMA & HK banks face systems collapse from huge SLR adaptation gaps

- Analyses of what’s at stake in HK from physical SLR risks & the lack of government adaptation action; and
- Highlights need for HKMA and HK banks to step up and lead, by first stress testing right to ensure their portfolios and HK are safe.

Key points from the 5 APAC country/territory factsheets

AUSTRALIAN BANKS & RISING SEAS

Banks analysed:

- ✓ Commonwealth Bank of Australia
- ✓ Westpac
- ✓ NAB
- ✓ ANZ

- Impact may look low in Sydney, but Australia's Climate Council estimated that AU\$226 billion in assets in coastal zones are at risk from just 1.1m of SLR.
- Coastal population (70%) & GDP skewed to vulnerable sectors (54%).
- Loans books domestic (83%) & skewed to vulnerable sectors (79%).
- Gov't adaptation not great: ranked 11 of 20 cities in CWR APACCT 20 Index.
- Since the Paris Agreement, all 4 banks lent US\$40bn to fossil fuels (2016-21).

HONG KONG BANKS & RISING SEAS

Banks analysed:

- ✓ HSBC
- ✓ Standard Chartered
- ✓ Bank of China (HK)
- ✓ Bank of East Asia

- 70% commercial & 27% pop clustered in reclaimed land; Port & airport hit.
- Coastal population (100%) & GDP skewed to vulnerable sectors (63%).
- Loan books domestic (39%) & also skewed to vulnerable sectors (77%).
- HSBC (HKs biggest bank) has profits that are highly reliant on HK (>90%).
- Gov't adaptation not good: ranked 12 of 20 cities in CWR APACCT 20 Index.
- Since the Paris Agreement, HSBC & Stand Chart lent US\$170bn to fossil fuels (2016-21).

JAPANESE BANKS & RISING SEAS

Banks analysed:

- ✓ Mitsubishi UFJ Financial Group
- ✓ Sumitomo Mitsui Financial Group
- ✓ Mizuho Financial Group

- Impacts material in Osaka & Aichi/Nagoya; even Tokyo loses port & airport.
- Coastal population (69%) & GDP skewed to vulnerable sectors (64%).
- Loan books domestic (62%) & also skewed to vulnerable sectors (77%).
- Govt adaptation action: Osaka does better, ranking 8 of 20 cities in CWR APACCT 20 Index, but Tokyo and Aichi/Nagoya lag, both ranking 14th.
- Since the Paris Agreement, MUFG & Mizuho lent US\$337bn to fossil fuels (2016-21).

SINGAPORE BANKS & RISING SEAS

Banks analysed:

- ✓ Overseas-Chinese Banking Corp
- ✓ DBS Group Holdings
- ✓ United Overseas Bank

- Gov't sees SLR risks as existential – adapting critical infra to 5m+.
- Coastal population (100%) & GDP skewed to vulnerable sectors (72%).
- Loan books domestic (46%) & skewed to vulnerable sectors (82%).
- Govt adaptation action: Excellent ranking 1st of 20 in CWR APACCT 20 Index.
- Singapore is the largest oil refueler in the world, handling over 50mn tonnes of bunker oil in 2021; Singapore's maritime industry accounts for 7% of its GDP.

SOUTH KOREAN BANKS & RISING SEAS

Banks analysed:

- ✓ KB Financial Group
- ✓ Shinhan Financial Group
- ✓ Hana Financial Group

- Vulnerable airport & port put manufacturers at risk as trade is 69% of GDP.
- Coastal population (40%) & GDP skewed to vulnerable sectors (72%).
- Loan books domestic (92%) & also skewed to vulnerable sectors (65%).
- Gov't adaptation not good: ranked 16 of 20 cities in CWR APACCT 20 Index.
- Since the Paris Agreement, KB Financial lent US\$13bn to fossil fuels (2016-21).

Hong Kong Deep Dive Case Study!

CWR's deep dive case study on Hong Kong clearly shows that adapting to only 0.5m of sea level rise (SLR) by 2100 instead of 2-3m, which the IPCC warns “cannot be ruled out”, will put 24x more residential, commercial & industrial buildings at risk in Hong Kong. Yet, the HK government is defending the SAR to the low-to-medium emissions scenario – in short 0.49m of SLR by 2100.

But even at lower levels the risks for Hong Kong banks are high – the Hong Kong Monetary Authority’s (HKMA) pilot climate stress test showed that around a third of Hong Kong banks’ property loan books are vulnerable to climate risks, especially floods and typhoons. As at most 0.55m of SLR was used to assess risks in the stress test, the percentage of loan books at risk from 2-3m of SLR will be substantially higher.

This huge adaptation gap brings high exposure and could trigger systems collapse.

“Evidently, even sophisticated financial systems in developed Asia are exposed. In Hong Kong, banks/central banks and the government are on a “Double Blind Maximum Risk” path as none are acting to properly assess/adapt for SLR risks” CWR’s Dharisha Mirando, the lead author of the report stated.

CWR hopes that the analyses in the chapter will help central banks steer away from a “Double Blind Maximum Risk” path toward “Transformative Adaptation”, the path that provides banks with the highest chance of staying afloat despite rising seas.

Central banks can also use this section as a case study on how to stress test for SLR as currently there are no concrete examples or case studies on how banks should stress test for rising seas, which are chronic and long term compared to acute one-off events that most banks are stress testing for.

The section includes the following:

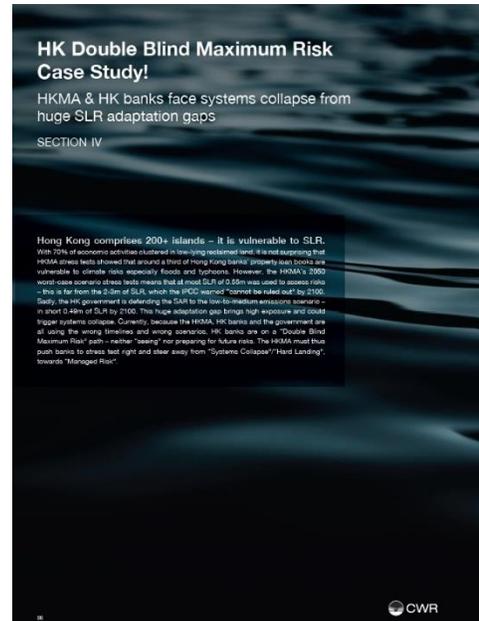
- Highlights the risks at various scenarios and explains why it is important to analyse the right timeline and scenario;
- Analyses of what’s at stake in HK from physical SLR risks & the lack of government adaptation action;
- Highlights need for HKMA and HK banks to step up and lead, by first stress testing right to ensure their portfolios and HK are safe.

The chapter also includes a new **“Save HK Banks From Sinking” factsheet**.



- Analyses of overall HK loan book exposure to domestic market and vulnerable sectors, and in more detail for Bank of China (HK), Bank of East Asia, HSBC, and Standard Chartered;
- 3D map highlighting property at risk from 2-3m of SLR; and
- Comparison of HK government coastal adaptation action against Singapore and New York.

To access the Hong Kong Deep Dive, which explores the risks facing HSBC, Standard Chartered, Bank of China (HK), and Bank of East Asia in more detail, click [here](#).



About CWR

CWR (China Water Risk) is a non-profit think tank that aims to create a world where water and climate risks are embedded in business & finance. Since its launch in 2011, it has worked from its Hong Kong base to engage with global business and investment communities in understanding and managing various types of water risks in China and across Asia. CWR's collaborative reports with financial institutions, IGOs, scientists as well as government related bodies have been considered ground-breaking and instrumental in understanding Asia's water challenges. They are widely cited by the media, academia, IGOs and finance as well as the IPCC. CWR also works with corporates and the financial sector to help them assess, strategize and adapt to water-related climate risks. Together, we can make better decision-making today for a water secure tomorrow. Join the conversation at www.chinawaterrisk.org

ASSESS

Understand the new risk landscape | Assess water & climate threats | Identify clustered risk hotspots & compound risks

STRATEGIZE

Align ESG & risk strategies | Plan sensible net zero & resilience strategies | Leverage risks to identify opportunities

ADAPT

Protect & prepare for locked-in climate impacts | Ideate flexible innovations | Be ready to survive & thrive

CWR

Contact us: info@chinawaterrisk.org

We drive the global water & climate risk conversation with...



Disclaimer

This document ("Document") has been prepared by China Water Risk (CWR) for general introduction, overview and discussion purposes only and does not constitute a comprehensive statement of any matter and it should not be relied upon as such. The Document should not be regarded by recipients as a substitute for the exercise of their own judgment. Information contained on this document has been obtained from, or is based upon, third party sources believed to be reliable, but has not been independently verified and no guarantee, representation or warranty is made as to its accuracy or completeness. All statements contained herein are made as of the date of this Document. CWR makes no representation or warranty, expressed or implied, with respect to the accuracy or completeness of any of the information in the Document, and accepts no liability for any errors, omissions or misstatements therein or for any action taken or not taken in reliance on this Document. None of China Water Risk, its sponsors, affiliates, officers or agents provide any warranty or representation in respect of information in this Document. In no event will China Water Risk be liable to any person for any direct, indirect, special or consequential damages arising out of any use of the information contained on this Document. This Document, graphics and illustrations must not be copied, in whole or in part or redistributed without the written consent of China Water Risk (copyright © China Water Risk, 2022, all rights reserved).