



# Persistent Changes, Emerging Threats and Potential Opportunities

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# Top Risks : Environmental & Technological

## Environmental

**Extreme weather events**

**Stress imposed on earth systems**

**Biodiversity loss, ecosystem attrition**



## Technological

**Cyber security incidents**

**Artificial Intelligence**

**Misinformation & disinformation**

**Adverse outcome for vulnerable groups**

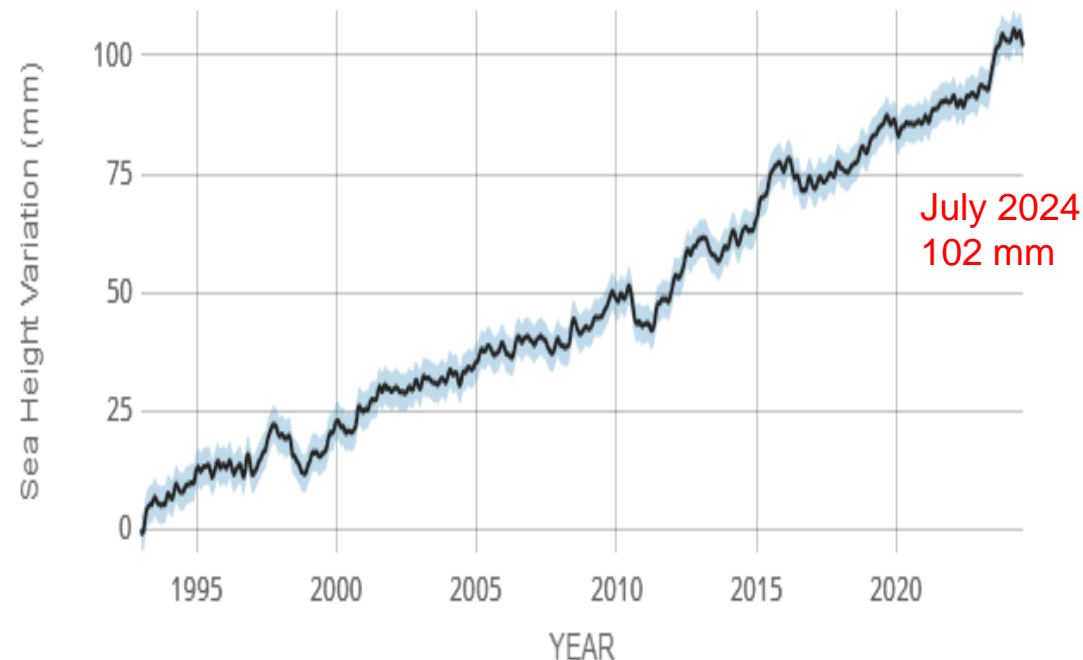
# Update on Climate Change

## Temperature Matching or Breaking Record in 2023



Source: Aon

## Sea Levels Rising 4.4 mm Annually



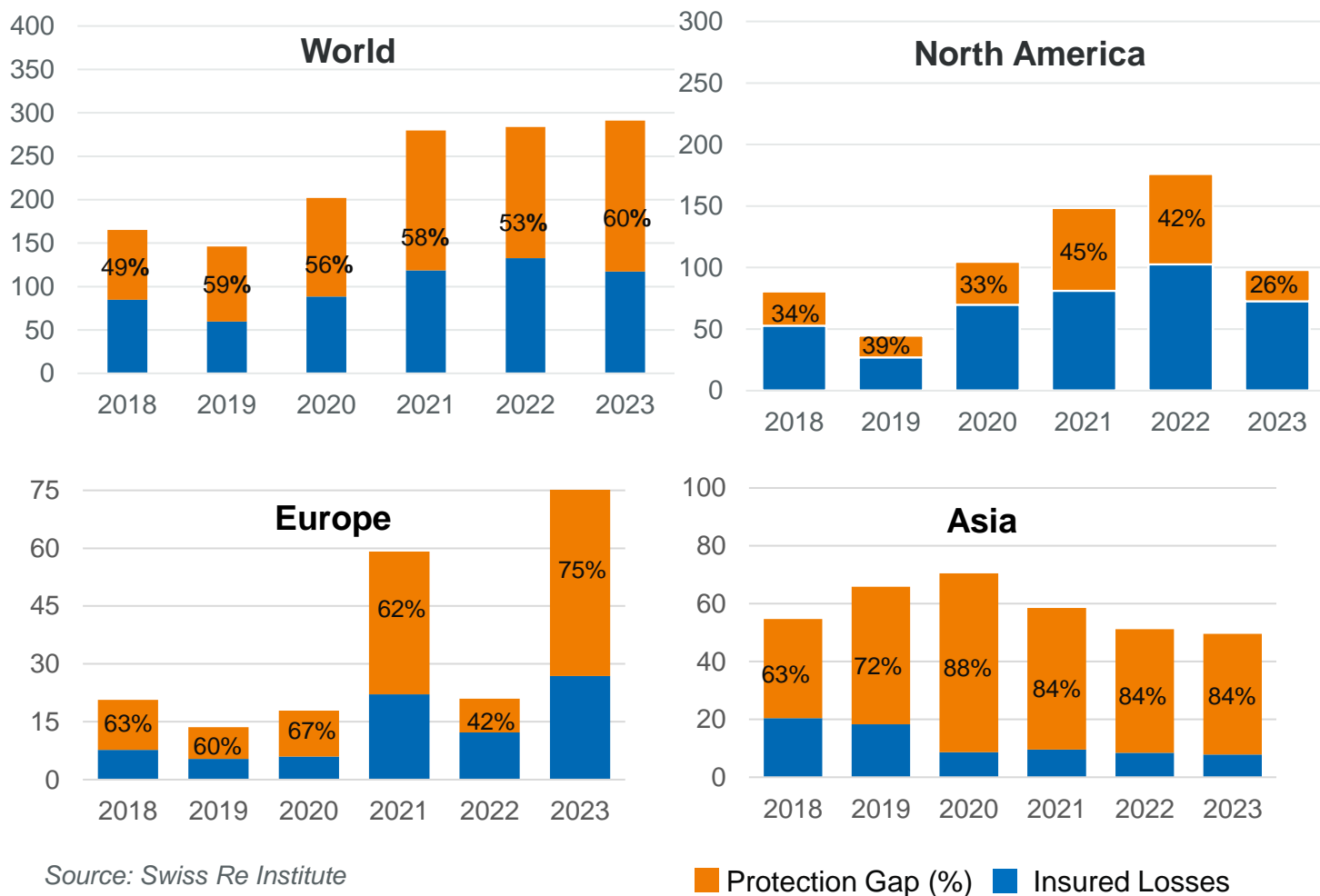
Source: NASA

Temperature Risen by 1.5°C in the Past Few Decades

Sea Levels Risen by 10 cm since 1993

# Consequences of Ignoring Climate Change

## Nat Cat Protection Gap by Region, US\$ Billion (2018 – 2023)



Source: Swiss Re Institute



**Risk of sudden and frequent economic losses**



**Adverse claims experience**



**Funding for post-disaster recovery**



**Aggravated fiscal burden**



**Cross-sector impact on morbidity and mortality, business disruption, and property damage**

# Consequences of Ignoring Climate Change

## Latent Health Risks

Source: World Health Organization

### Vulnerability factors

- Demographic
- Geographical
- Biological factors & health status
- Sociopolitical
- Socioeconomic
- Health system capacity
- Gender & equity

### Climate-related hazards

- Extreme weather events
- Heat
- Sea level rise
- Air pollution
- Vector distribution & ecology
- Water scarcity
- Reduced food production

### Exposure

- People & communities
- Health workforce
- Infrastructure
- Energy systems
- Water systems
- Food systems
- Health systems

### Health Outcomes



Injury & mortality from extreme weather events



Heat-related "illness"



Respiratory illness



Water-borne diseases



Zoonoses



Vector-borne Diseases



Malnutrition & food-borne diseases



Noncommunicable diseases (NCDs)



Mental & psychosocial health

### Health Systems & Facilities

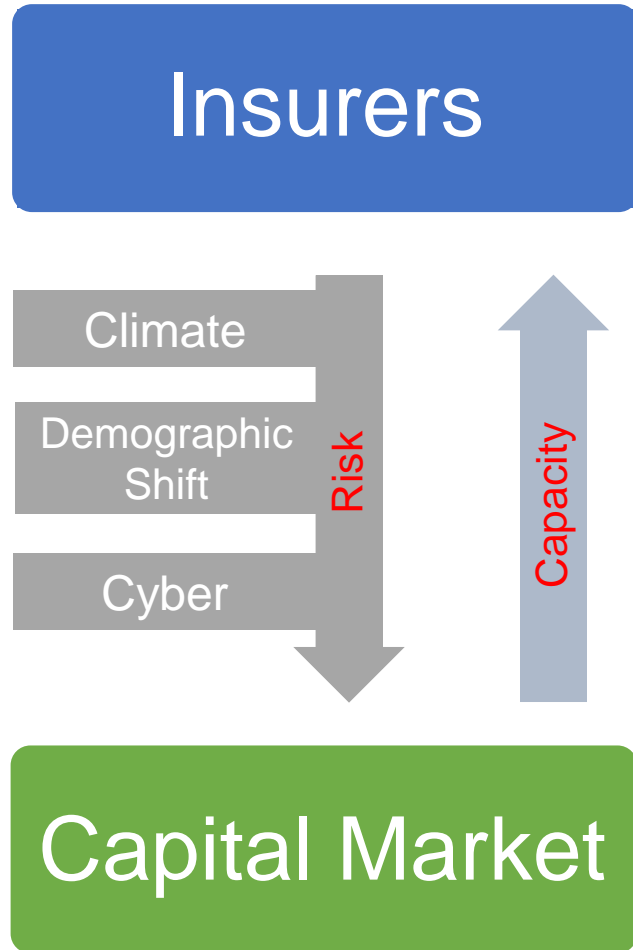


Impacts on health care facilities

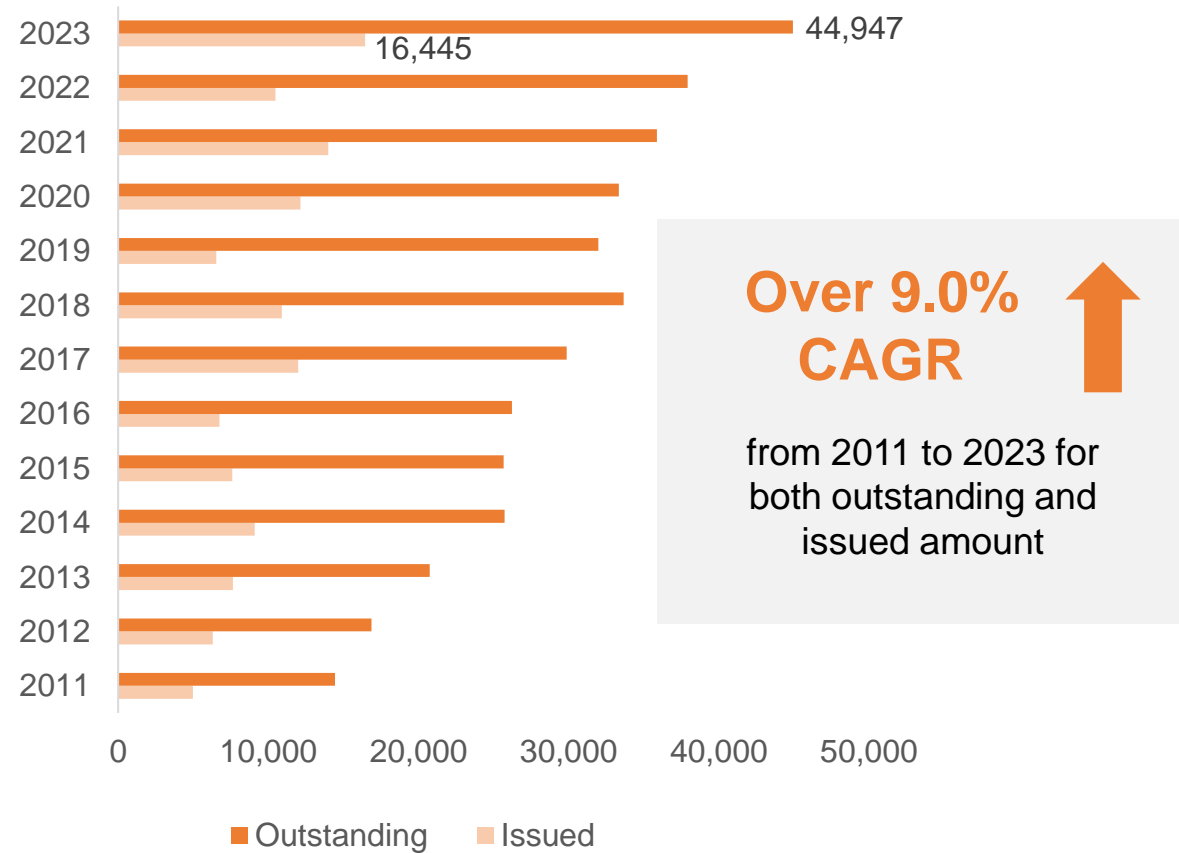


Effects on health systems

# Alternative Risk Transfer Solutions



Global Insurance-linked Securities (ILS) Market (US\$ Million)



Source: Artemis

# Vibrant Ecosystem

Promote Awareness of Institutional Investors

Enrich Risk Types

Widen Product Structures



**Success Factors**

Identify Potential Sponsors

**Availability of Data**

Support International Organisations and Assist Developing Economies

01

Reliable Data Source

02

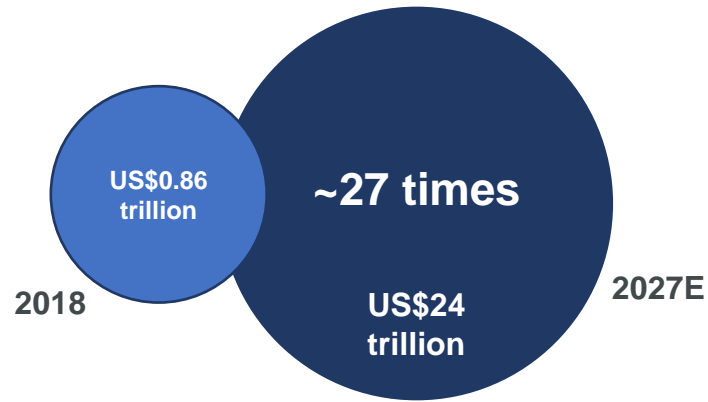
Trustworthy Model

03

Product Innovation

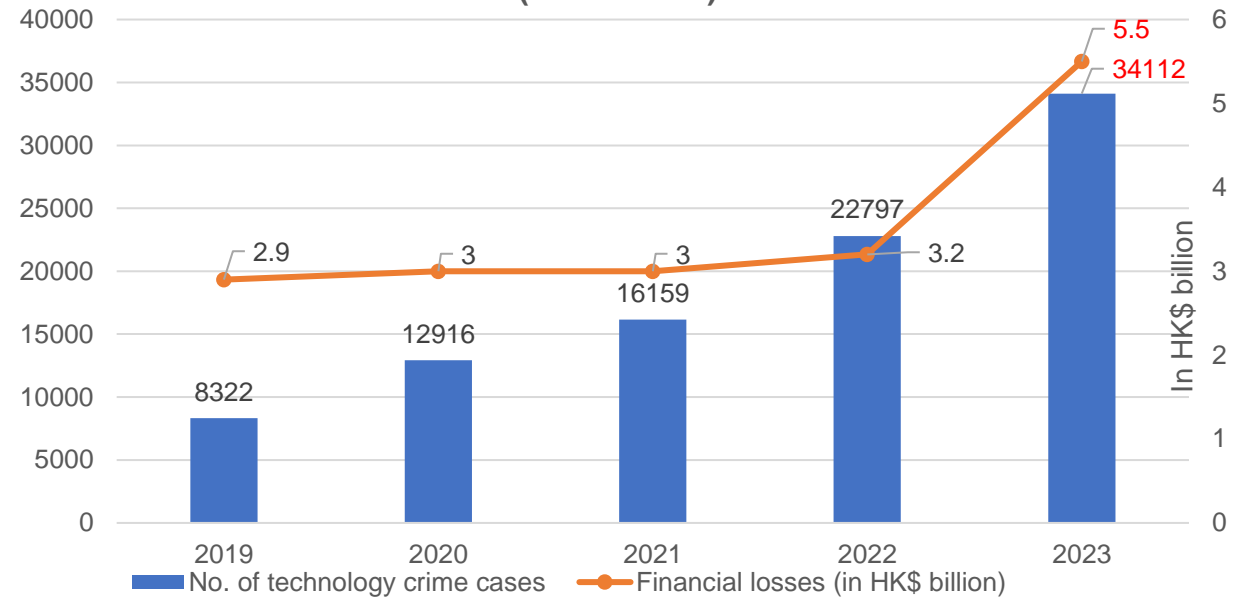
# Update on Cybersecurity Threats

Cost of Cybercrimes Worldwide

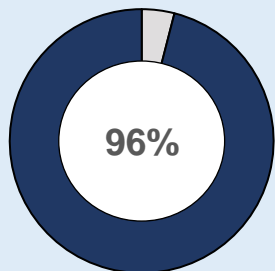


Source: Statista Technology Market Outlook, National Cyber Security Organizations, FBI, IMF, World Economic Forum

Technology crimes and financial losses in Hong Kong (2019 – 2023)



96% of local companies experienced phishing attacks in 2023



Local companies and residents reported

> 34,000 cybercrime cases in 2023

Local companies and residents lost

> HK\$5.5 billion in 2023



# Consequences of Ignoring Cybersecurity Threats



**Sensitive data  
breach**



**Disruption of  
internal  
operations**



**Spill-over to  
other FIs**



**Reputation  
damages**



**Disruption of  
critical external  
service**



# Cyber Resilience Assessment Framework

01

## Inherent Risk Assessment

Evaluates insurers risk rating in three-tiers:  
- High / Medium / Low



## Maturity Assessment

Includes 90 to 221 maturity controls  
spinning across 7 domains

02



03

## Remediation Plan

Submits of improvement roadmap with  
action plan and target completion date



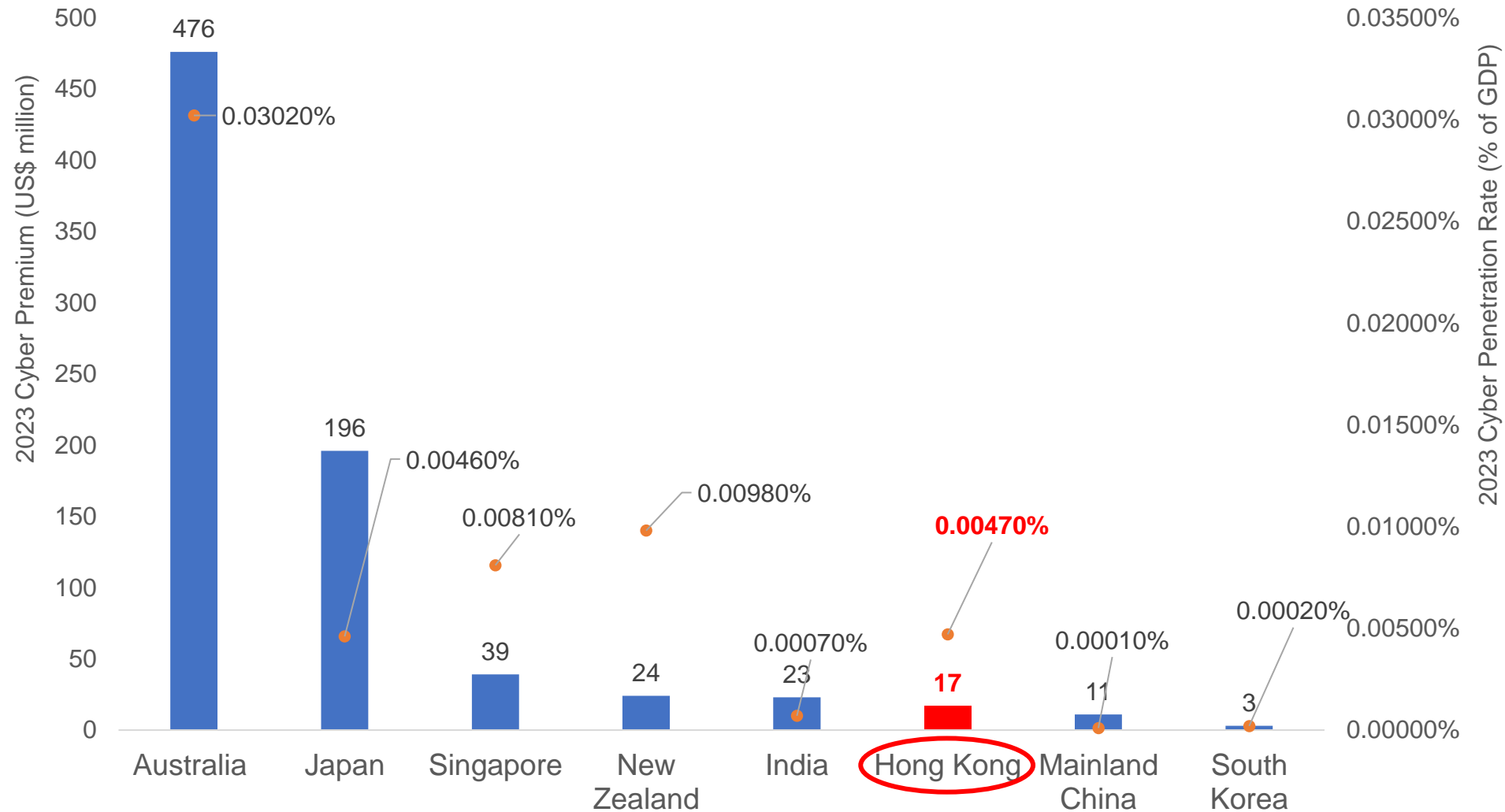
Jan  
2025



Cybersecurity guideline  
ready to be launched

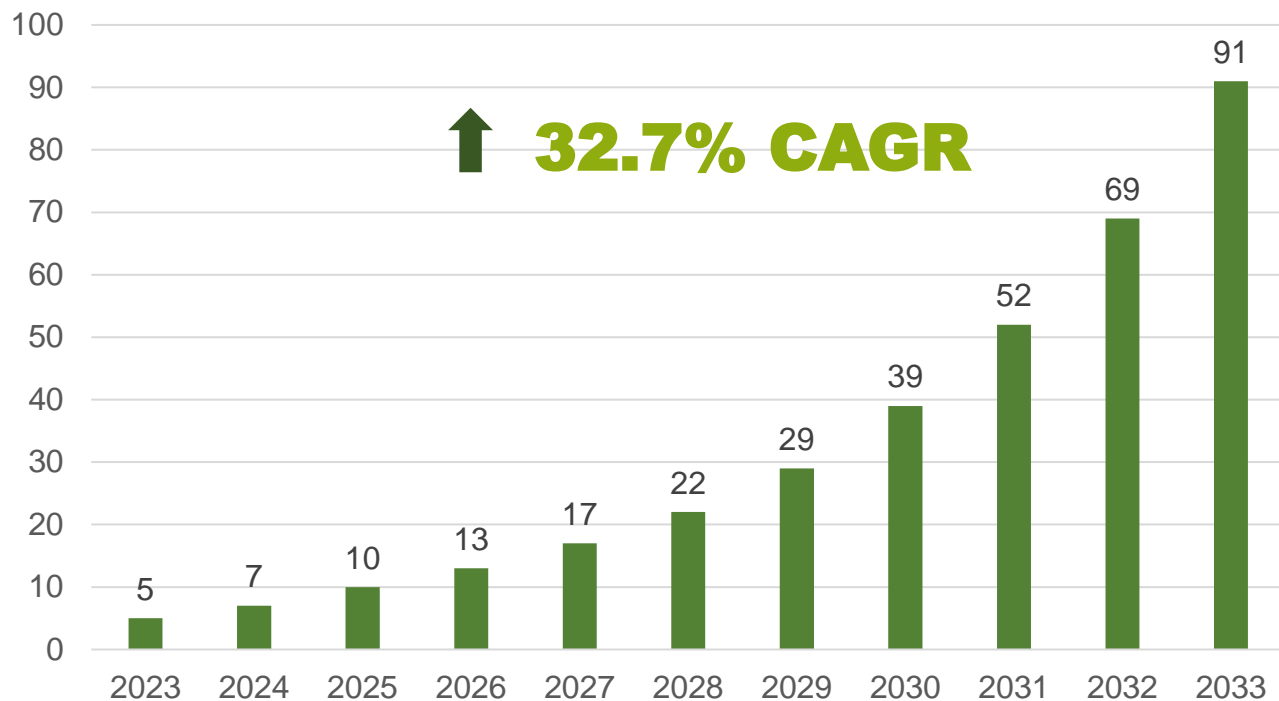
# Market Potential in Hong Kong

### APAC Cyber Insurance Market in 2023



# Trends of AI Adoption

## Global Expenditure by Insurers on AI (US\$ Billion)



Source: market.us

### AI Applications in Insurance

Risk Modelling & Assessment

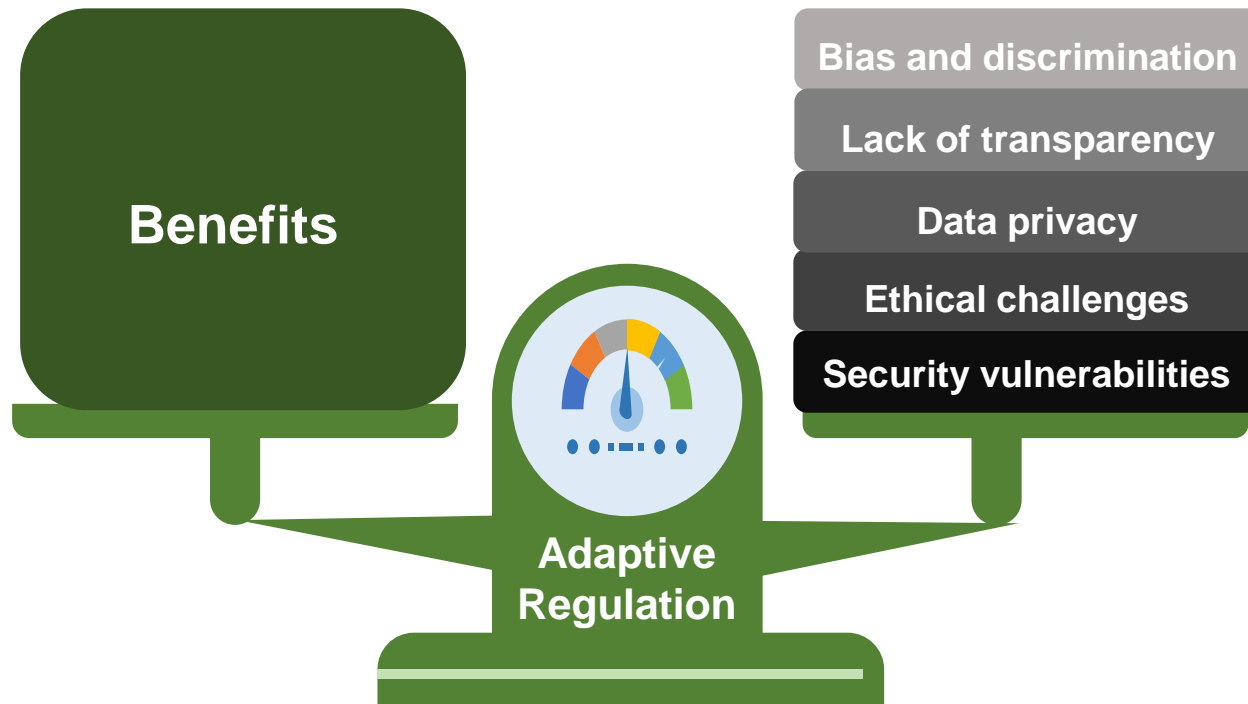
Automated Underwriting

24-hour Robo-advice/  
AI-based mental health support apps

Automated Claims

Fraud Detection

# Approach to Promote AI Adoption



## Consideration

- **Human in the loop**
- **Investment across the value chain**
- **Caution in automated modelling: financial exclusion and discrimination**
- **Robust data governance framework**

## Way Forward

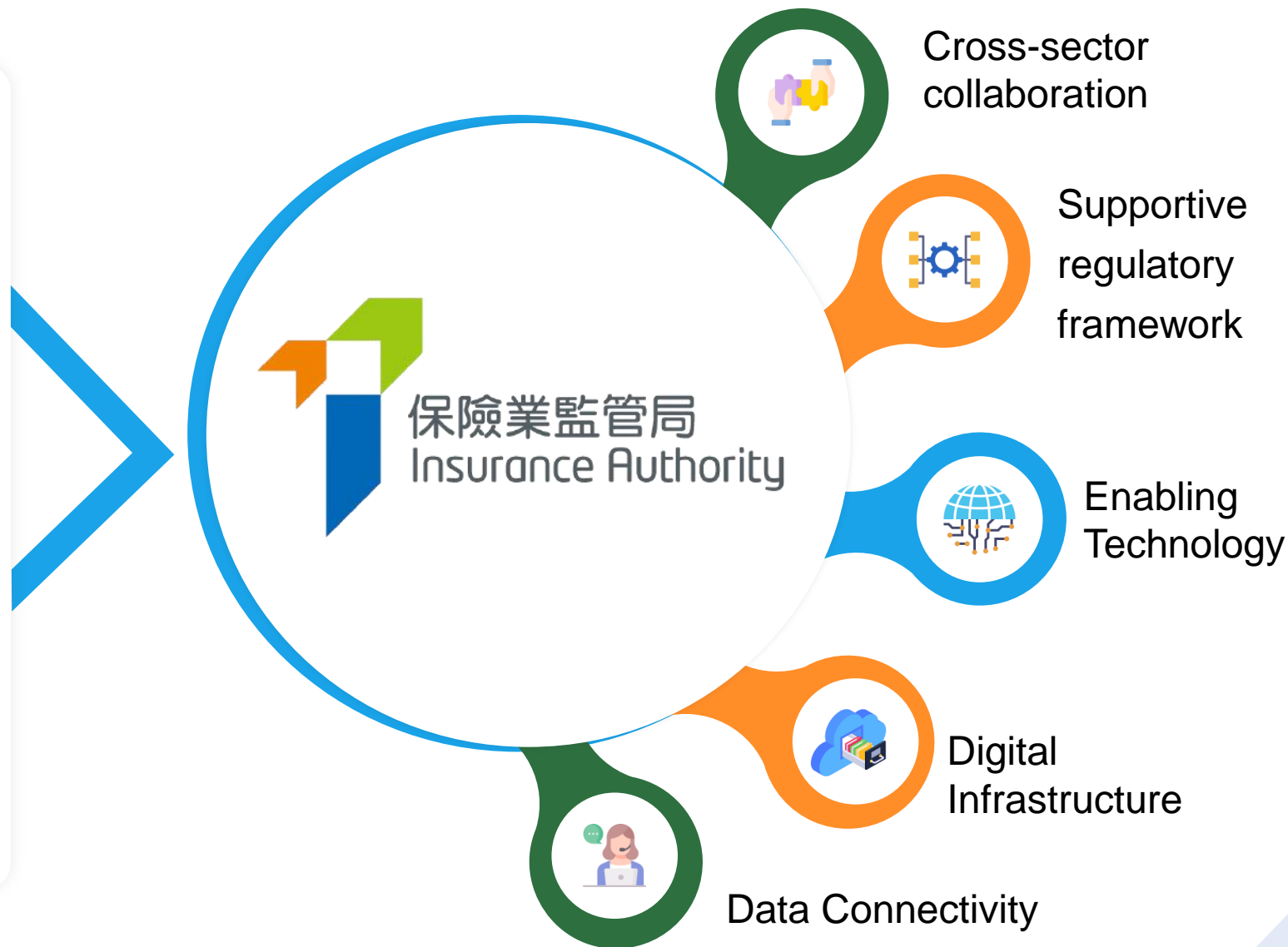
- **Fintech adoption survey**
- **Clear regulatory requirement**

## To align with IAIS Strategic Themes

Strengthening supervisory  
response to climate change

Adapting to increasing digital  
innovation and cyber risks

Supporting insurance to serve its  
societal purpose of building  
resilience





# Thank You

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