



Key Topics

Cyber Risk: An evolving and emerging risk.

Operational Risk: Developing Cyber Resilience.

Underwriting Risk: The Underwriting of Cyber Insurance.

The Regulatory Response



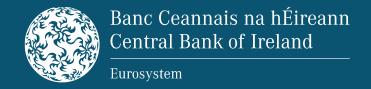


Digital Environment: an evolving and emerging risk Central Bank of Ireland - CONFIDENTIAL

An evolving and emerging risk

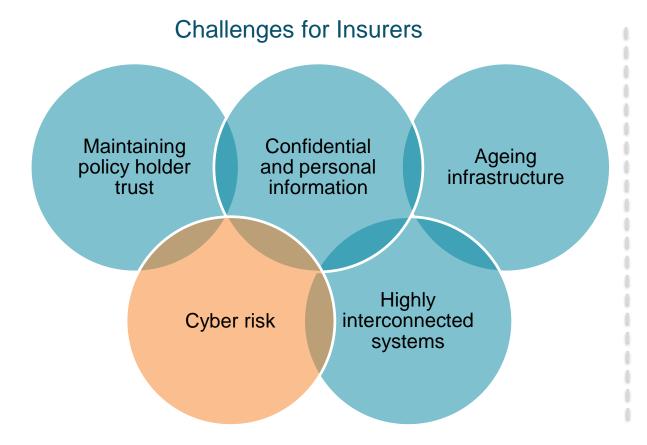
Top 5 Global Risks in Terms of Likelihood

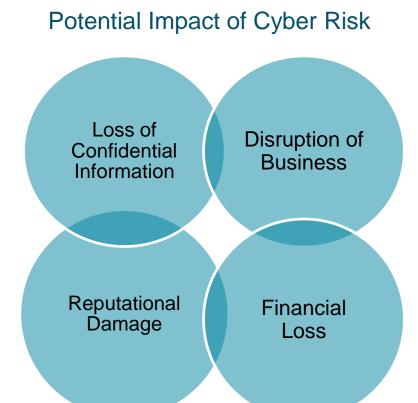
2012	2013	2014	2015	2016	2017	2018
Severe income disparity	Severe income disparity	Income disparity	Interstate conflict with regional consequences	Large-scale involuntary migration	Extreme weather events	Extreme weather events
Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events	Large-scale involuntary migration	Natural disasters
Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governance	Failure of climate- change mitigation and adaptation	Major natural disasters	Cyberattacks
Cyber attacks	Water supply crises	Climate change	State collapse or crisis	Interstate conflict with regional consequences	Large-scale terrorist attacks	Data fraud or theft
Water supply crises	Mismanagement of population ageing	Cyber attacks	High structural unemployment or underemployment	Major natural catastrophes	Massive incident of data fraud/theft	Failure of climate- change mitigation and adaptation

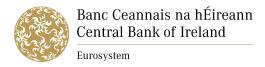




Increased Exposure & Increased Impact







Recent regulatory activity by the Central Bank of Ireland

2012

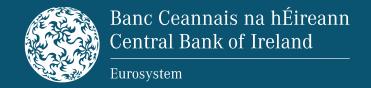
Financial Institution

- Prolonged IT failure impacting over 600K customers
- Fined €3.5m for regulatory failings combined with €59m redress scheme for customers.
- **Key Factor**: Failure to put in place robust governance arrangements surrounding IT outsourcing to parent company.

2018 Managamai

Asset Management Firm

- Clients' email compromised by hackers who impersonated client.
- Instructed a number of transactions resulting in the loss of €650,000 in clients' funds
- **Key Factor:** Failure of security and regulatory controls with respect to the management of client assets.





Key challenges for Cyber Insurance Underwriters

Limited availability of historical data

Accumulation Risk

'Silent' Cyber Exposures



Cyber Insurance: Risk Mitigation







Regulation in a rapidly changing environment



Cyber Risk: Key regulatory priorities for 2018

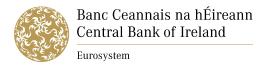
'For a more competitive and innovative financial market'



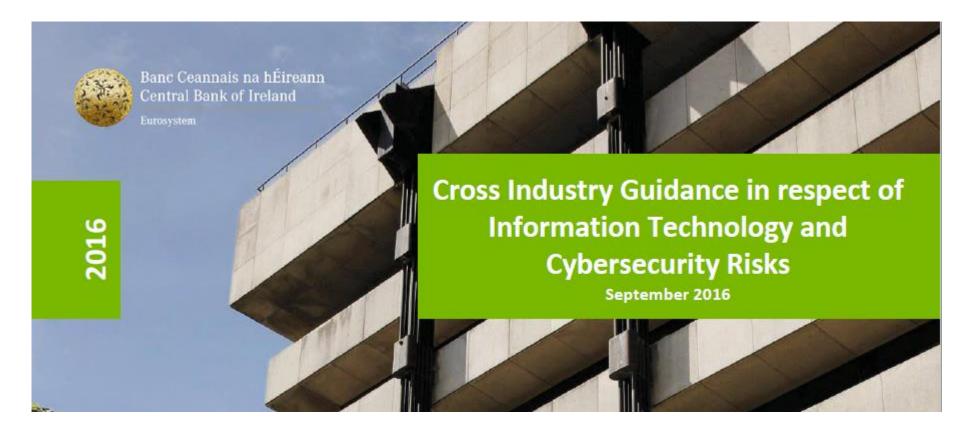








Cyber Risk: Central Bank of Ireland



Other Collaborative Measures



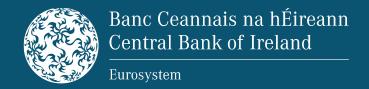
Understanding Cyber Insurance: A structured dialogue with Insurance Companies

2018 Stress Test: Gathering information on Cyber Risk and Cyber Insurance Underwriting



EU-US Insurance Dialogue Project
Bilateral dialogue to share information and knowledge regarding
Cyber Risk and Cyber Insurance





Thank you!

