EUROPEAN CENTRAL BANK

EUROSYSTEM

What is the Eurosystem's cyber resilience strategy?

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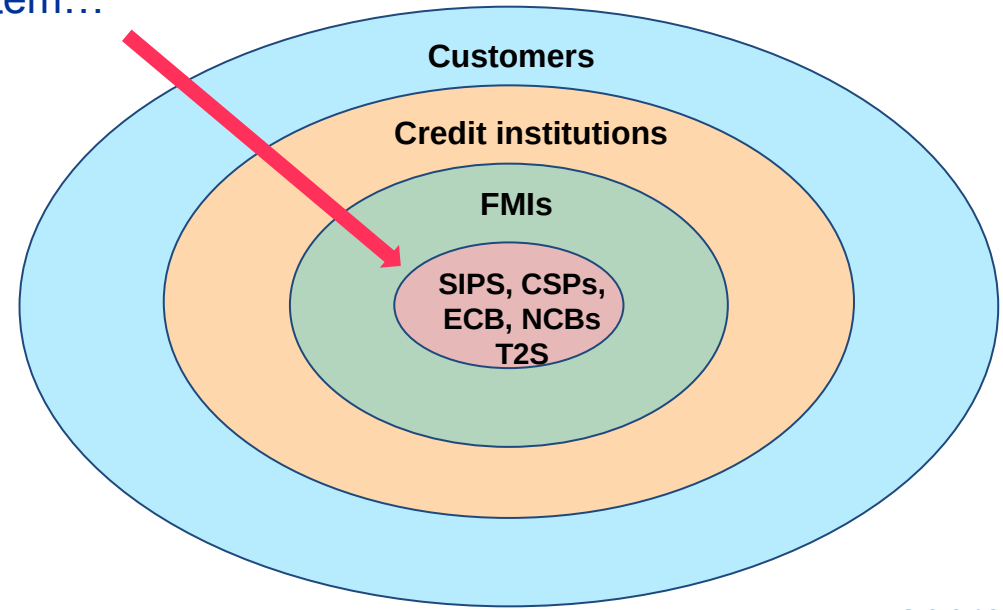
European Central Bank

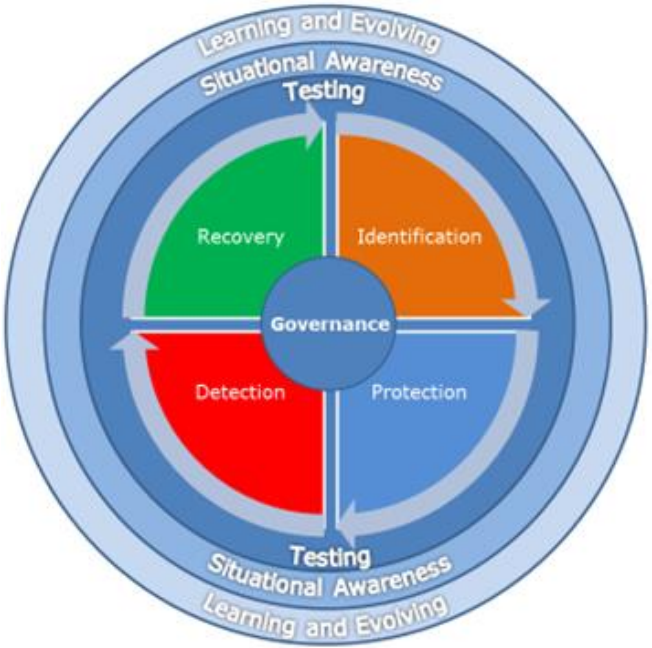
Ensuring cyber resilience of FMIs in Europe: an urgent need

Cyber attackers penetrating the financial system…



… step by step approaching the core…

CPMI-IOSCO Guidance on Cyber Resilience for FMIs June 2016

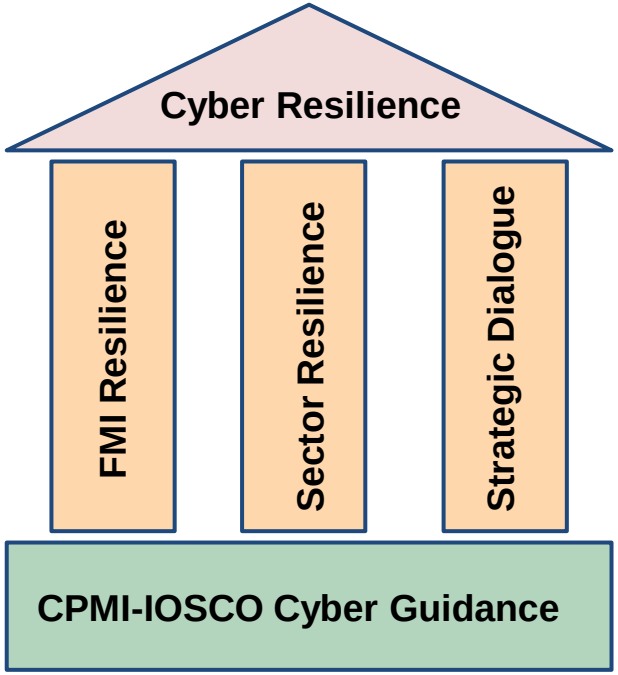


5 risk management categories
3 overarching components

"FMIs should immediately take necessary steps (….) to improve their cyber resilience, taking into account this Guidance."

CPMI-IOSCO Guidance on Cyber Resilience for FMIs (June 2016)

Eurosystem cyber resilience strategy for FMIs March 2017



The strategy will be rolled out
in the period 2017 - 2019
at Eurosystem and national level

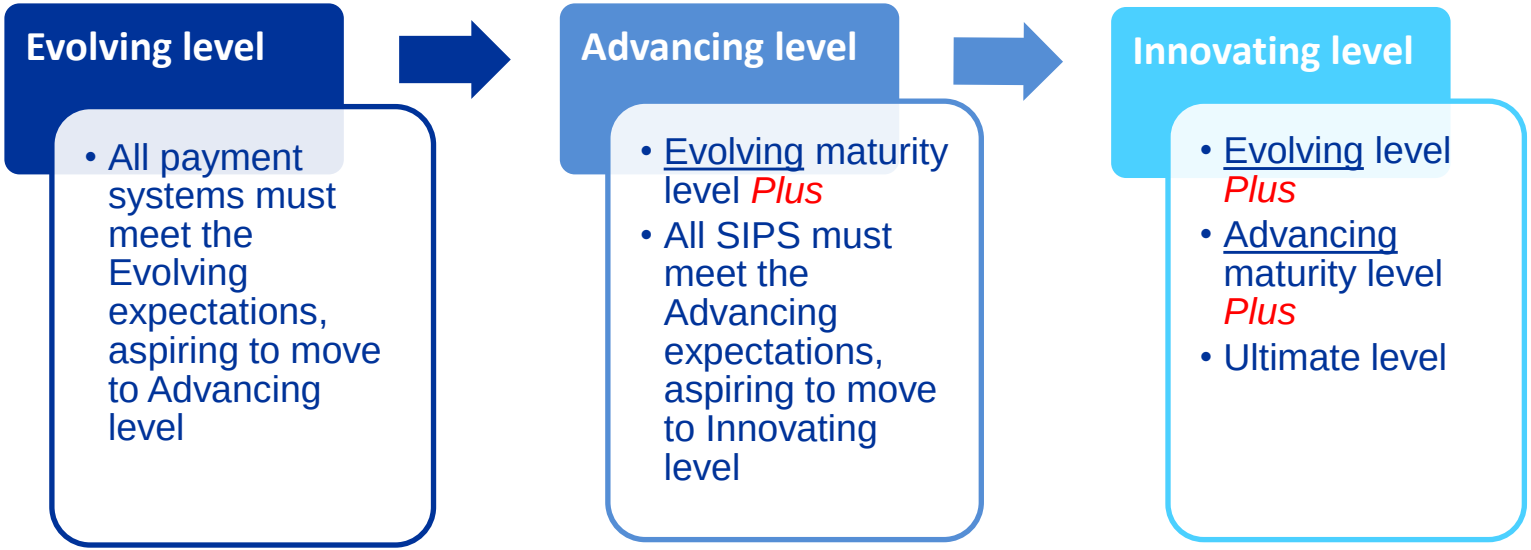
Pillar 1: FMI Resilience

- **Cyber survey for payment systems, CSDs and CCPs**

Governance	Detection	Situational awareness
Identification	Response and recovery	Learning and evolving
Protection	Testing	

Pillar 1: FMI Resilience

- **Cyber Resilience Oversight Expectations (CROE):** defining the three levels of an FMI's cyber maturity



Pillar 1: FMI Resilience

- **TIBER-EU**
  EU Threat **I**ntelligence **B**ased **E**thical **R**ed teaming

Definition of ethical hacking/ red-teaming

Recommendations how to do it

Guidelines how to hire ethical hackers

Pillar 2: Sector resilience

- **UNITAS** - market-wide exercise
  Scenario: cyber attack on financial infrastructures; loss of data integrity and knock-on effect

Observe reactions

Draw conclusions

Provide recommendations

Pillar 2: Sector resilience

- **Info-sharing network**
- **Sector mapping**

Pillar 3: Strategic regulator-industry engagement

- **Euro Cyber Resilience Board for pan-European FMI**

Who?

- pan-European FMIs
- critical service providers
- different European authorities

What?

non-technical discussion at Board level about cyber-related topics

Pillar 3: Strategic regulator-industry engagement

- **Euro Cyber Resilience Board for pan-European FMI**

Objectives:

- **foster trust and collaboration** among FMIs and between FMIs and authorities
- **catalyse joint initiatives** to enhance sector capabilities and capacities, to develop solutions and increase cyber awareness
- decisive, but not necessarily formally decision-making

The international perspective

Cyber resilience is a high priority in the international working groups. The ECB is actively involved in the different work streams:

- CPMI-IOSCO Cyber Working Group
- G7 Cyber Expert Group
- FSB Cyber Lexicon Working Group
- CPMI End-point Security

Policies, standards and initiatives from the international arena help inform the Eurosystem overseers and vice versa.

- Cyber risk, cyber crime will not go away no matter what we do
- Cyber resilience of the financial ecosystem is a joint effort of institutions, infrastructures and authorities, but …
- … the responsibility to ensure cyber resilience is and stays with the respective financial institutions and financial market infrastructures

Questions

Useful links

CPMI-IOSCO "Guidance on cyber resilience for financial market infrastructures"
www.bis.org/press/p160629.htm
www.bis.org/cpmi/publ/d146.pdf

TIBER-EU Framework
www.ecb.europa.eu/press/pr/date/2018/html/ecb.pr180502.en.html
www.ecb.europa.eu/pub/pdf/other/ecb.tiber_eu_framework.en.pdf

TIBER-EU Services Procurement Guidelines www.ecb.europa.eu/pub/pdf/other/ecb.1808tiber_eu_framework.en.pdf

Mandate ECRB
www.ecb.europa.eu/press/key/date/2018/html/ecb.sp180309_1.en.html
www.ecb.europa.eu/press/key/date/2018/html/ecb.sp180309_1/ecb.sp180309_1_ECRB_mandate.pdf

CPMI Report "Reducing the risk of wholesale payments fraud related to endpoint security"
www.bis.org/press/p180508.htm
www.bis.org/cpmi/publ/d178.pdf

G7 Fundamental Elements of Cyber security in the Financial Sector
https://ec.europa.eu/info/publications/g7-fundamental-elements-cybersecurity-financial-sector_en

ECB Cyber Resilience Oversight Expectations (CROE, public consultation document)
www.ecb.europa.eu/press/pr/date/2018/html/ecb.pr180410.en.html
www.ecb.europa.eu/paym/pdf/cons/cyberresilience/cyber_resilience_oversight_expectations_for_FMIs.pdf

FSB Cyber Lexicon Consultative document
www.fsb.org/2018/07/cyber-lexicon-consultative-document/