

Digital Supervision at DNB

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Workshop on "Big Data & Machine Learning Applications for Central Banks"

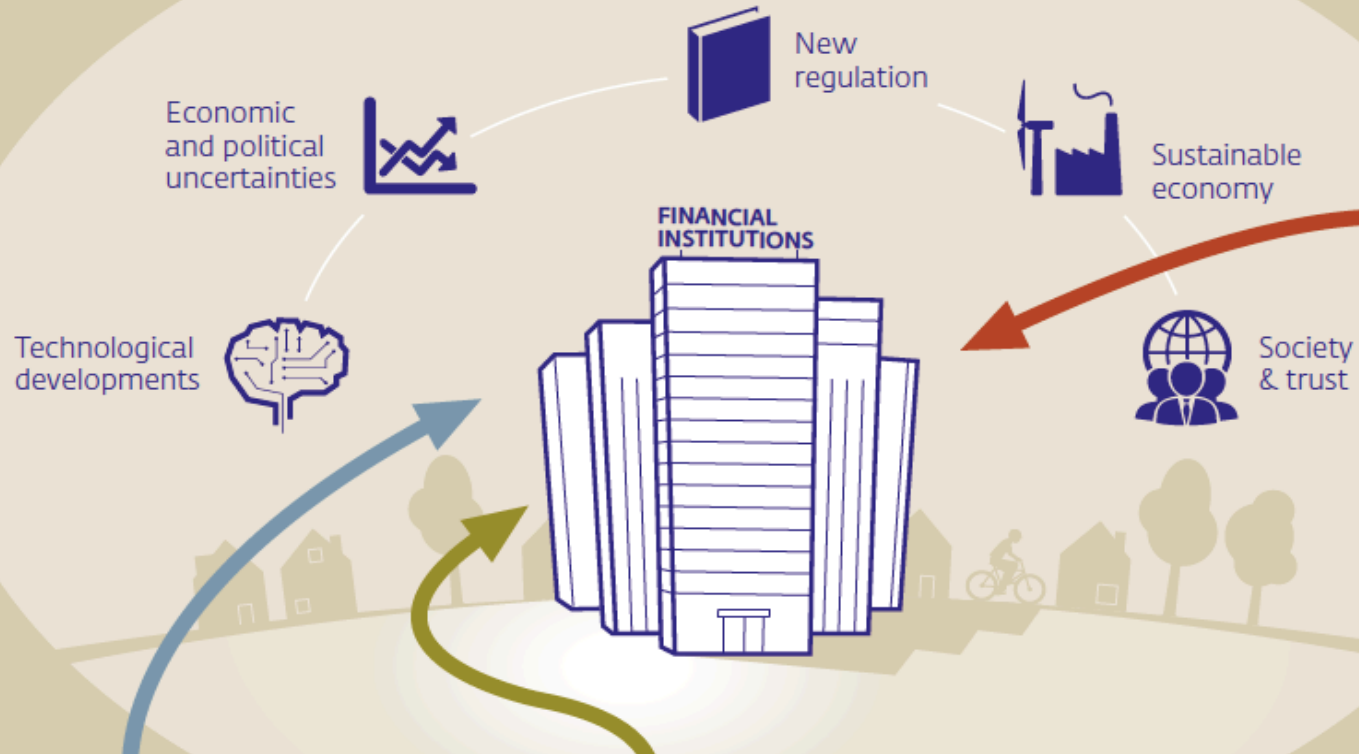
Rome, 21-22 October 2019

DeNederlandscheBank

EUROSYSTEEM

Supervision strategy 2018-2023

Trends & risks



1 Responding to technological innovation



2 Fostering a forward-looking and sustainable sector



3 Taking a hard stance on financial and economic crime



Suptech beliefs at DNB

- I. **Empower** an IOS to set, manage and track the digital agenda
- II. **Develop** portals as a platform for digital supervision tooling
- III. **Collaborate** in developing and implementing suptech strategies

Empower an **Innovation Office Supervision** to set, manage and track the digital agenda

- **Technology** is the key driver for change in the financial sector
- Enhance DNB's **internal coordination** to become a Smart Supervisor in 2015
- The **innovation office supervision** reports directly to the Board



Develop portals as a platform for digital supervision tooling



1. Portals provide easy access to relevant information

Supervisors can choose which supotech applications they want to see in their **home screen**

2. Portals are derived from the digital ambition

Multi-disciplinary, agile teams build supotech applications the users need. Portals are mutually **compatible** so that information flows easily from one portal to another

3. Portals require a data-driven culture

Supotech applications require a '**data first**' culture. Supervisors are involved right from the start of the development to ensure that portals match user demands

Collaborate in developing and implementing supotech strategies



What have we learned so far?

Getting the follow questions right is the key to success:

- What are your agencies' (digital) supervision beliefs?
- How can you prioritize and implement digital supervision initiatives efficiently?
- What is the 'supervision profit' of your digital supervision strategy?
- How can partnerships fasten the realization of our digital supervision strategy?



Example I: Machine learning in AML/CFT supervision

Problem

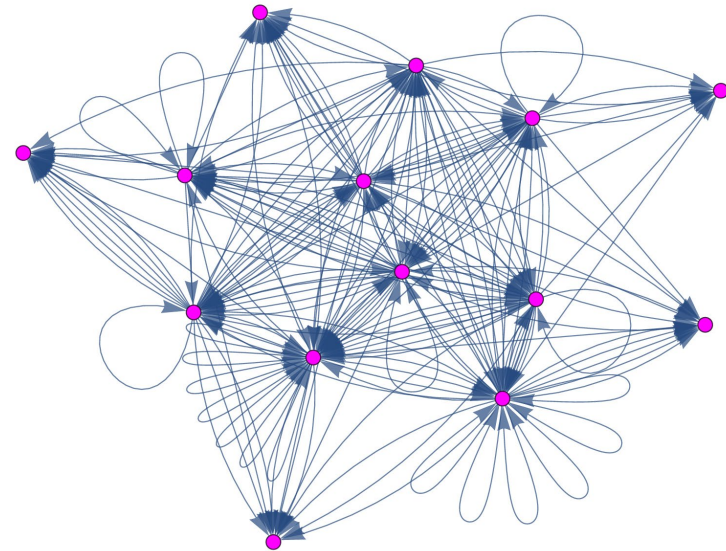
- Money transfer organizations under supervision have a high ML/TF risk profile
- Suspicious transfers depend on transaction and client profile and detected network

Objective

- Verify whether MTs check and report sufficiently on suspicious transfers

Result


- DNB detects unusual transfer patterns using supervised machine learning
- DNB finds more suspicious transfers combining multiple data sources




Example II: Real-time supervision: from collect to connect

Real-time supervision

- Continuous **access** to critical information of financial institutions
- Generate instantaneous **alerts** based on automated analysis
- Initiate supervision **actions** based on a judgment call of these alerts

 Real-time supervision boosts efficiency and effectiveness:

- Allows supervisors to **initiate** and control reporting
- Identifies **emerging risks** more quickly
- Reduces regulatory **arbitrage**
- Increases time supervisors devote to **judgement**

 Real-time supervision also comes with challenges:

- Computational constraints, **black box nature**, false signals
- Regulatory **overreach** and regulatory capture
- **Moral hazard** and gaming
- Op-risk and **ethics**, data security
- Regulatory **feedback** loop