Nordea

Challenges in Managing Financial Risk in the Future: A Practitioner's Perspective

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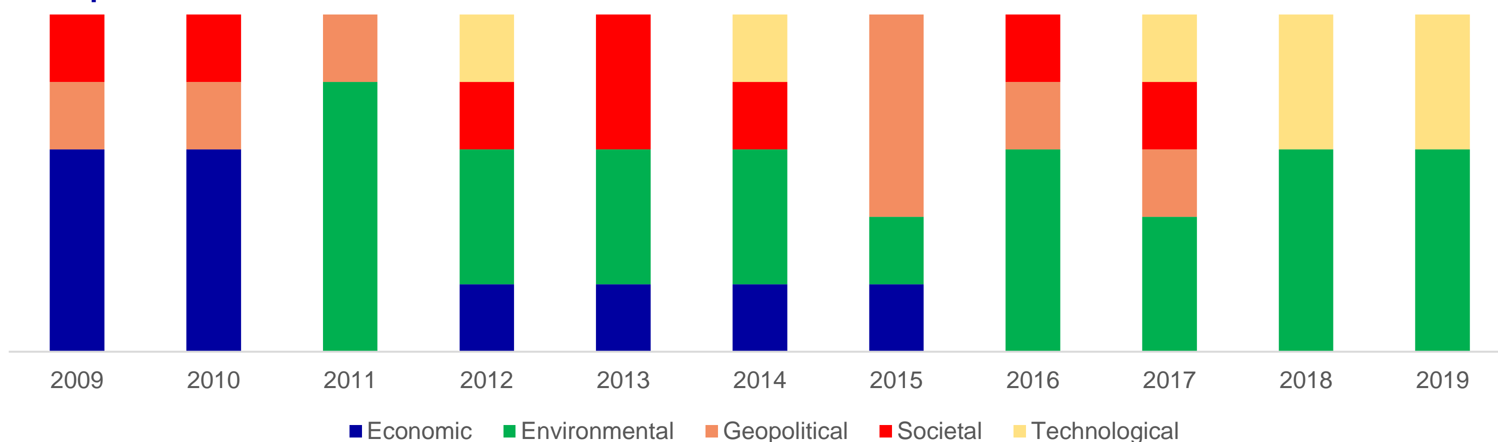
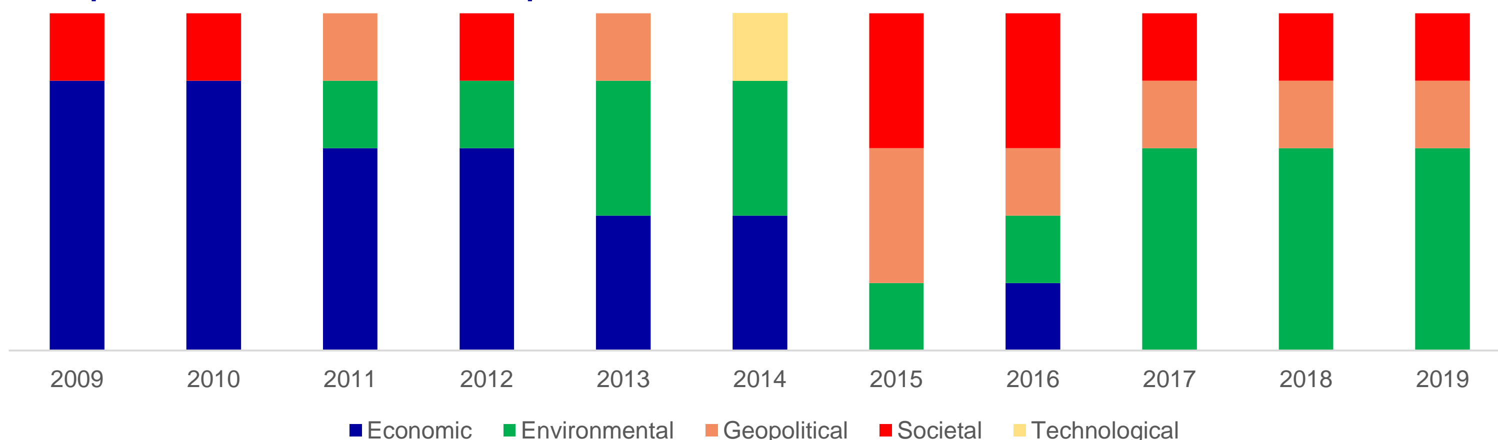
Focus on three key themes from a practitioner's perspective

- Consideration of non-financial risks in financial risk management
- Impact of digitalisation on financial risk management
- A shift in perspective: development of business model risk

The evolution of the risk landscape since the financial crisis





(Source for table: World Economic Forum, Risk Report, 2019, p. 6)

1. Increasing perceived importance of non-financial risks over the last 10 years.

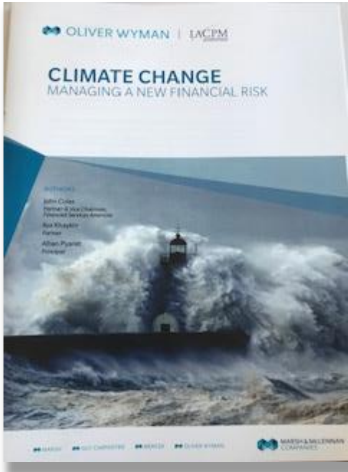
- In 2009 almost all the key risks, either by likelihood or impact, were of economic nature (in blue)
- In 2019 all the key risks are non financial, mainly environmental (in green)

2. Development of a more mature approach to non-financial risks, which are traditionally hard to quantify

What is the implication for financial risk management?

Climate risk as a financial risk

Climate risk is typically classified as a non-financial risk. However, it can have major implications for financial risk management



Based on a global survey recently conducted with the Association of Credit Portfolio Managers, Oliver Wyman notes that:

1. “Banks should treat climate change as a financial risk, not just as a reputational one.
2. Banks should integrate climate considerations into financial risk management.”

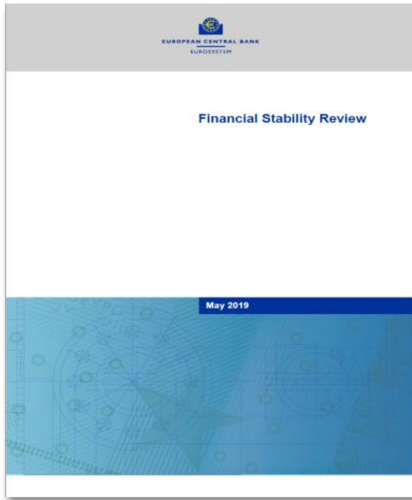
(Oliver Wyman, “Climate Change: Managing a New Financial Risk”, 2019, p. 1)

The PRA expects banks and insurers to:

1. Embed the consideration of the financial risks from climate change in their governance arrangements;
2. Incorporate the financial risks from climate change into existing risk management practice;
3. Use (long-term) scenario analysis to inform strategy setting, and risk identification and assessment; and
4. Develop an approach to disclosure on the financial risks from climate change.

(Prudential Regulation Authority, “Enhancing banks’ and insurers’ approaches to managing the financial risks from climate change ”, Policy Statement PS 11/19, April 2019, p. 1)

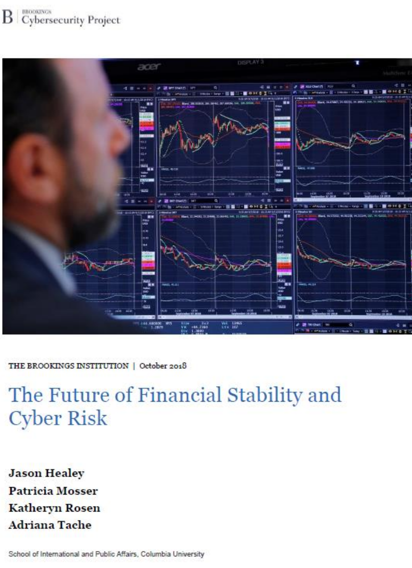
Non-financial risks and financial stability: Climate risk and cyber risk



The latest Financial Stability Review of the ECB includes a special feature on “Climate change and financial stability”. The report states that:

“Physical risks, when they materialize, can significantly erode collateral and asset values and have an impact on insurance liabilities in particular”

(European Central Bank, “Financial Stability Review”, May 2019, p. 122)



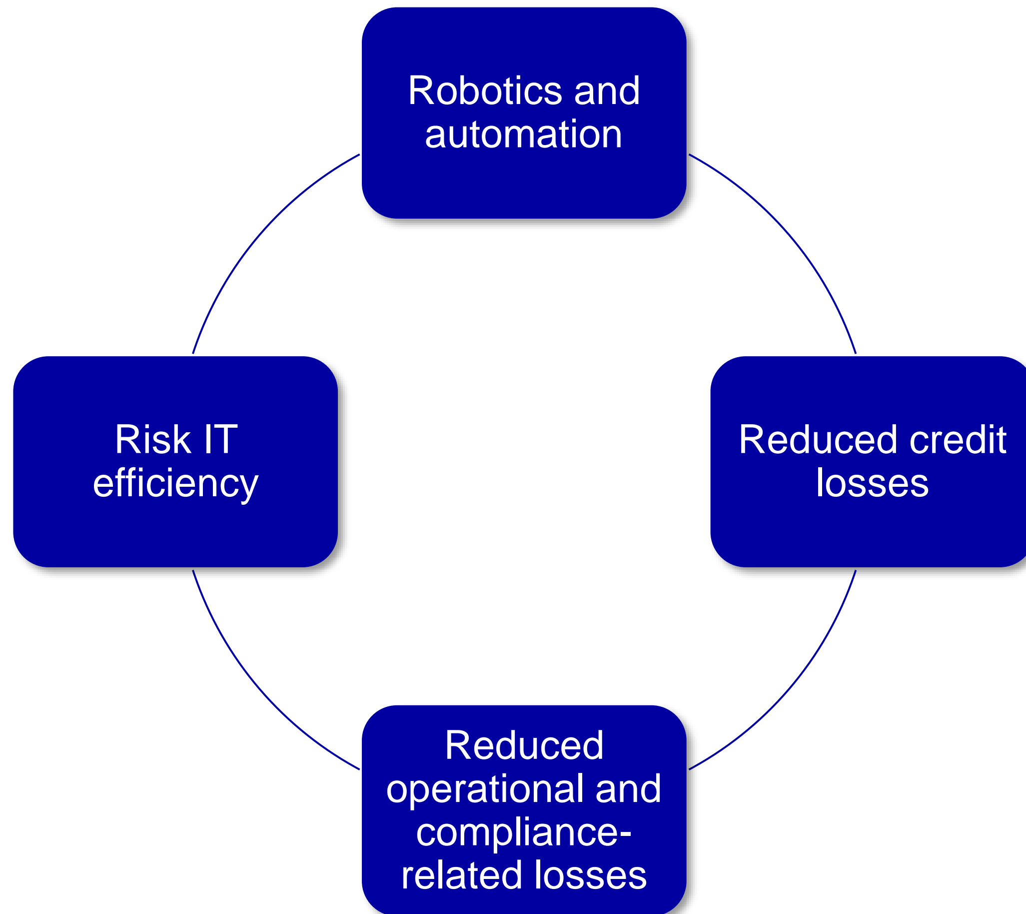
Recent research considers how cyber risk and financial risks interact to cause systemic crises.

Four major concerns are identified:

- Adversaries – Deliberately aim for, or unintentionally cause, financial instability;
- Lack of understanding – Very little information and analysis on the potential intersection of cyber risks, financial contagion channels and possible amplifiers within those channels;
- Fragmentation of efforts – Lack of coordinated policies and regulations;
- New technologies – Some may dampen risk, but others may accelerate risk (e.g. cloud computing increases dependence on a few providers).

(The Brookings Institution, “The Future of Financial Stability and Cyber Risk”, October 2018, p. 12)

Digitalization can benefit the management of financial (and other) risks…



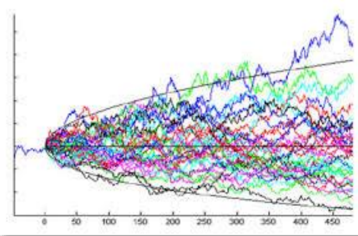
The financial implications of digitalization on risk management can be substantial. These include:

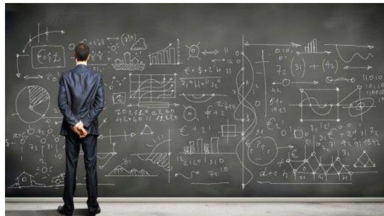
- Increased productivity, especially in credit risk and reporting functions
- Use of larger quantity and more complex data and enhanced analytical engines to achieve higher predictive power than current credit models
- Automation can reduce human error and new surveillance techniques can improve the detection of inappropriate employee behaviour

(Based on McKinsey "The future of risk management in the digital era" (October 2017)

…but it presents new challenges – Focus on Artificial Intelligence (AI)/Machine learning (ML)

New Potential Weapons of Math Destruction





Identification
Anything, Anywhere, Unaware

Robustness
Performance, sensitivity

Risk Delineation
Significant non-modelling model related risks

Matureness
Documentation quality, prototypes

Infrastructure
Compute, Data

Recruitment
Demand for experienced staff exceeds supply

Exposure
Sensitive applications, indirect but massive exposure

Funding
Cost savings, Cost transfers

The challenges include:

- Identification of AI/ML activities
- Governance surrounding development and use – potential premature adoption
- Maturity of developers and users
- Explainability of output
- Possibility of gaming adaptable ML systems
- Securing computational and data infrastructure

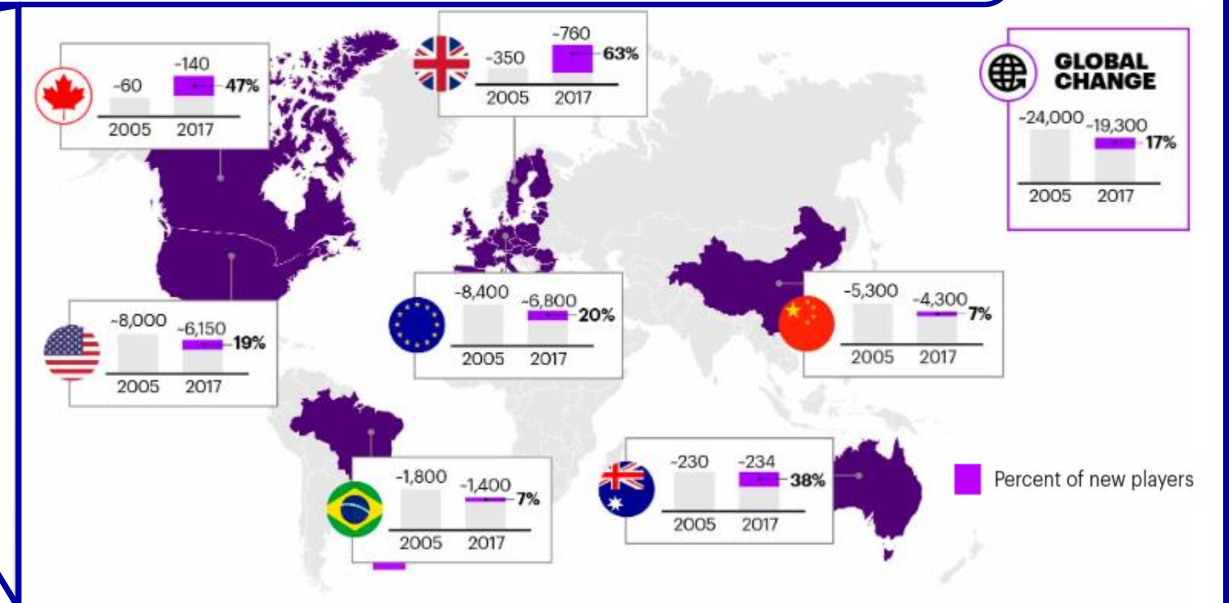
(Based on S. Mørk “AI/Machine learning in Nordea”, internal document, Nordea, March 2019)

Impact of digitalization on the financial industry

Trends that affect the financial industry include:

- Digital disruption and rise of challenger banks
- PSD2 and the Open Banking movement
- Transition to cloud and SaaS (Software as a Service)

63% of banking and payments institutions in the UK are new entrants (since 2005)…together they capture 14% of total banking revenues



(Accenture, "Star Shifting: Rapid Evolution Required", 2018, p. 7

A traditional way of looking at risk management is not sufficient

(Based on G. Ludvikkson, ''The evolution of Fintech and Digital Banking. Meniga's point of view", Meniga, May 2019

A new approach to financial risk management is required - Focus on business model risk

The traditional suite of risk management tools takes the current business model as a given

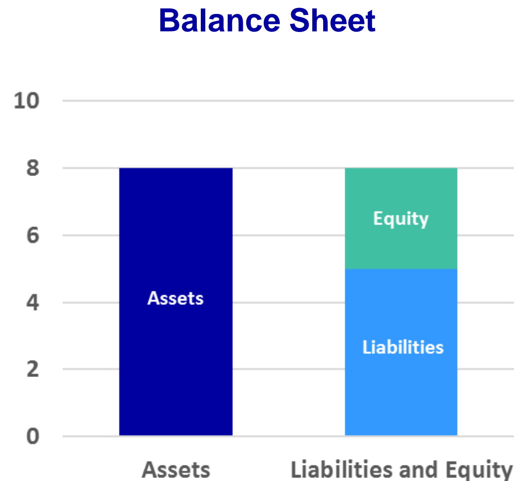
Traditional risk management (mainly backward looking view)

Protects current Balance Sheet Equity and expected future P&L already "on the books"

Traditional risk management includes:

- Credit risk
- Market risk
- Counterparty risk
- Operational risk
- Liquidity risk
- Model risk
- Insurance risk
- (Other risks)

Balance Sheet



Profit & Loss

Business Model risk management (forward looking view)

Further protects Equity and "on the book" business plus considers future new business

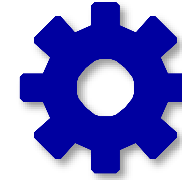
Business Model risk management considers:

- The approach adopted by the business to create, provide and capture value.
- The profitability drivers of the business and how these affect the balance between revenue and cost structure.

(Based on M. Bishop "Business model risk", internal document, Nordea, April 2019)

Business model risk management

Business model risk management considers commercial risks to a financial firm's future profitability and viability



Business model risk can be defined as:
"The risk to a bank's balance sheet and profitability from potential adverse developments in the commercial aspects of its business."

This can impact the profitability of both new and existing business, as follows:

New business risk

Competitive pressure could lead to:

- Margin cuts which maintain sales volumes but reduce future profitability.
- Lower sales volumes which increase per-unit costs.
- Higher ongoing costs, e.g. though investments in new platforms.

Existing business risk

Competitive pressure could lead to:

- Margin cuts to stop/reduce customer withdrawals / lapses.
- Higher per-unit costs if "on book" business reduces.
- Higher ongoing costs, for example:
  - A key supplier negotiates higher fees.
  - Marketing costs when seeking to retain customers.

(Based on M. Bishop "Business model risk", internal document, Nordea, April 2019)

Financial risk management looking forward – how to address the challenges?

- Consideration of non-financial risks in financial risk management
- Impact of digitalisation on financial risk management
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Develop an Interdisciplinary approach and collaboration across functions and between business and risk management staff

Establish a common language and effective communication across specialists and with C-suite and Board

Need to think outside the box and develop a ”learning” organization

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Thank you!