



EaSI Technical Assistance

Risk Management in Digital Era

EMN Webinar under EaSI Technical Assistance

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Session One

Emerging and evolving risks in digital finance



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What do we mean by “digital”?

- Overall data governance
- Data quality
- Consistency processes
- Operating models

To enable the capture and use of vast amounts of data — both structured and unstructured.

Data management



- Computers streamlined
- Standardized
- Efficiently executed

Routine tasks (such as data collection and entry).

Process and workflow automation



- Advanced statistical techniques
- Algorithms
- Artificial intelligence

To help managers extract insights, make better predictions, and choose more helpful interventions.

Advanced analytics and decision automation



What do we mean by “digital”? (cont’d)

- A modernized data environment, including the data architecture and underlying systems, becomes flexible through the use of techniques such as data lakes, virtualization, and the hybrid cloud.

Cohesive,
timely, and
flexible
infrastructure



- Tools and applications present users with data, such as self-service reports, interactive dashboards, and even augmented reality.

Smart
visualization
and interfaces



- Partnerships provide market-leading digital capabilities developed with established peers, utilities, start-ups, and others.

External
ecosystem



- People combine traditional business and technology knowledge and experience with modern data, analytics, and digital expertise.

Talent and
culture



Challenges to digital risk

Conducting digital risk transformation is complex as a result of several other issues as well.

The main challenges that risk managers highlight are legacy IT systems and a lack of easily accessible, high-quality data.

IT systems are often patchworks and can degrade data quality.

The contradiction involved in being encouraged to seek additional and creative data sources, even as trusted internal data cannot be fully mined given challenges with legacy IT systems.

The risk manager tends to be appropriately conservative in outlook and not yet fully comfortable with digital delivery models.

Risk staff often lack the most up-to-date knowledge of analytics and next-generation technologies that will be needed as the risk function evolves.

Emerging and evolving risk types

a. Cyber risk

- Losses and damages resulting from the misuse and theft of intellectual property or from the disruption of business.
- It is the main emerging risk on the minds of risk leaders, given the large volume of data held by banks and the extraordinary costs of a breach.
- Data breaches often involve millions of records. This risk is unlikely to subside.



Emerging and evolving risk types

b. Model risk

- Refers to losses arising from the **incorrect use** of models, defective models, **incorrect or outdated assumptions**, or underlying **data issues**.
- With models increasingly integrated into business processes, the number of models rising by 10 to 25 percent a year at large institutions and models becoming **increasingly complex**, the appropriate management of model risk will be critical.
- There can be **huge financial losses** for MFIs/Banks as a result of inaccuracies in risk measurement resulting from a flawed value-at-risk model.
- Further, as banks build more models, they sometimes automate decisions that actually require some **human judgment**.

Emerging and evolving risk types

c. Contagion risk

- Refers to the risk that negative developments in one entity will **spread** to others and result in financial losses **across the financial system**.
- The **interconnectedness** of business is increasing because of the ease of doing business with automated and digital processes. This poses a material risk, since failure in one corner of the value chain can easily ripple through an entire industry.
- Contagion risk in the financial system has been a critical focus of **regulators**.



Concluding remarks: Session 1

- While not all of these risks are new, their emergent speed, growing importance, and the amplitude of their repercussions has fundamentally changed.
- Very early identification of these risks and intelligent insights on mitigation measures will not be possible without thorough use of technology.



Session Two

Changing role of risk management function and risk owners

Role of risk executives

The risk function, which is both the **enabler and benefactor** of the digital risk transformation, would evolve in the following ways.

- From wrestling with small decisions to making and enabling strategic decisions. As routine work is automated away, risk executives would **focus on decisions with greater strategic implications and higher value.**
- They would deploy advanced-analytics capabilities to help other stakeholders (such as the business) make **more informed strategic decisions faster.** These would be based much more on forward-looking views, would anticipate risk evolutions, and would offer insights into trade-offs.

Role of risk executives continued

Risk executives, having zoomed out from the daily operational grind, could then further contribute to analyses that help the MFIs/banks optimize decisions and offerings. Additionally, they could design algorithms that give the front line detailed risk-based information on the customer's propensity to buy certain products.

The role would evolve from a highly manual risk function to leading a smarter and smaller group. Risk would oversee staff with skill sets that are much more geared towards data science and analytics. The group could be organized by these and other skills rather than by expertise in credit, market, or operational risk. As employees focus less on manual exceptions, risk executives would be able to rely on staff to make nimbler decisions.

Role of risk management function

From manually setting risk limits to dynamically setting and updating them through an automated nerve centre.

From reactively managing operational risk to using precise, preventive control mechanisms. Risk management function would use advanced analytical tools to strengthen its grasp on operational risks through a robust control framework.

Risk function would design, build, and oversee automated credit- and market-risk engines with on-demand, live decision-making capabilities. These decision engines would be tightly connected to a central nerve centre that sets risk limits, derived from the risk appetite.

Techniques from behavioural economics might flag the potential for such behaviour, with debasing methods used to mitigate it. Furthermore, the very processes that these controls monitor would be designed with "built-in compliance": wherever processes are digitized, they are much harder to tamper with, making it nearly impossible to, say, open accounts without customer consent.

Changing roles of CEOs and business heads in risk management

CEOs/heads of business would review strategic and automated advice on capital allocation and risk-oriented business decisions.

From making often qualitative business decisions to making quantitative and tailored business decisions.

From slogging through paper-based, number-heavy reports to visualizing portfolios on real time basis.



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Changing Roles of Regulators

From consuming reports to analyzing granular portfolio details quick and painlessly.

Having direct access- the provision of data would be timely and painless..

From scrutinizing MFIs/banks (mostly) to overseeing a level playing field for banks/NBFIs.

Nonbanks would in all likelihood account for an increasing share of trading and lending activities

Regulators may leverage their own advanced analytical capabilities to pinpoint emerging systemic risks.

From taking punitive measures to preventing noncompliant actions.

Regulators might be able to stop certain noncompliant activities as they happen or before they occur.

With a real-time view of MFIs/bank activities, regulators could flag and help prevent problems.

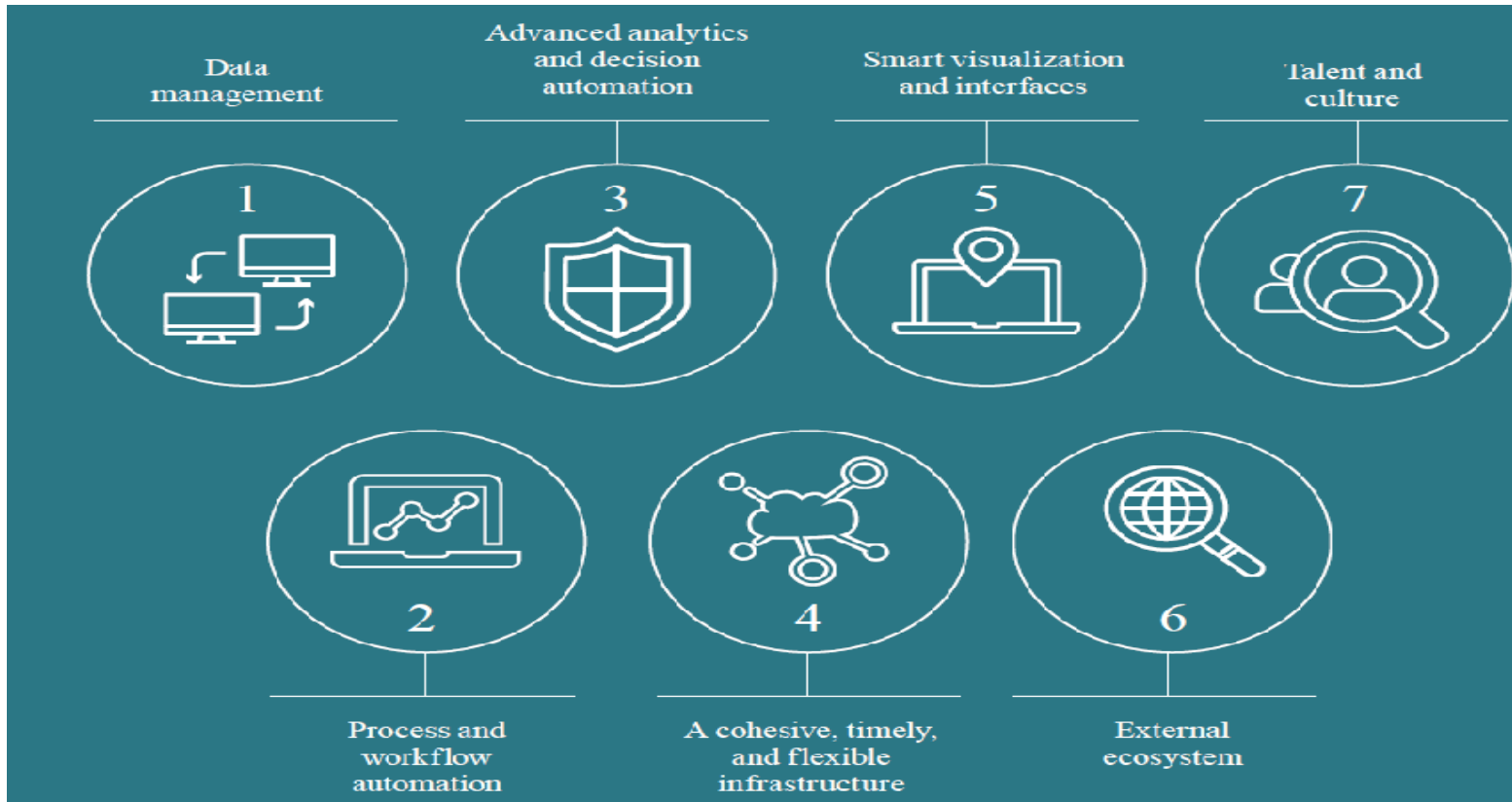
Concluding remarks: Session 2

- As a result of obtaining automatically generated risk insights and strategic advice, CEOs and heads of business will be able to provide strategic and automated advice on capital allocation and risk-oriented business decisions.
- Regulators will move from consuming reports to receiving near-live data.
- Regulators could oversee nonbanks.

Session Three

Seven building blocks of digital risk

Seven building blocks



1. Data management

- Enhanced data governance and operating models will improve the quality of the data, make risk and business decisions more consistent, and ensure responsiveness to risk's data needs.
- One important enhancement is the need to consider data risk as a key element of the risk taxonomy, linked to a specific risk-appetite statement and data-control framework. Another is to accommodate far more varieties of data.



2. Process and work flow automation

- As risk automates tasks such as collateral data entry, often through robotic process automation (RPA), it can combine several of them into smart workflows: an integrated sequence performed by groups of humans and machines across an entire journey (for instance, credit extension fulfilment).
- In addition to greater efficiency, smart workflows create a more seamless and timely experience for customers.



3. Advanced Analytics and Decision Automation

- Sophisticated risk models (for instance, those built on machine-learning algorithms) can find complex patterns (such as sets of transactions indicative of invoice fraud) and make more accurate predictions of default and other risk events.



4. A Cohesive, timely and flexible infrastructure

- The risk infrastructure will evolve to support several other building blocks: innovative data-storage solutions, new interfaces, easier access to the vendor ecosystem, and so on. It will use techniques like application as a service, obtained from application service providers (even on open banking platforms).
- “No code” and “low code” solutions will put control further in the hands of risk executives and reduce the number of end-user computing tools.

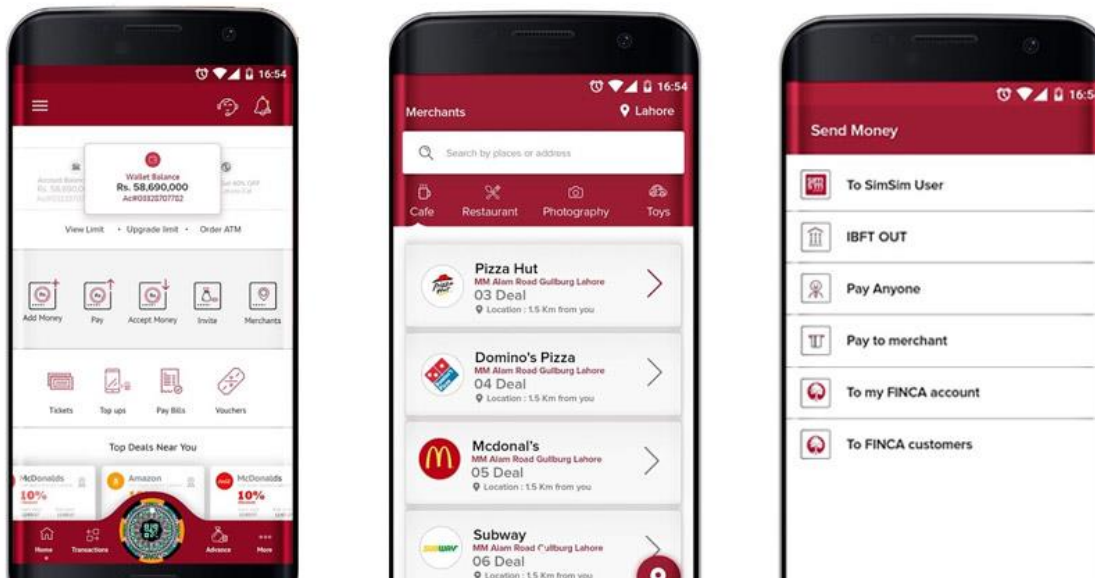




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5. Smart visualization and interfaces

- Risk will deliver its insights in more intuitive, interactive, and personalized ways through risk dashboards, augmented-reality platforms for customers, and other interfaces.



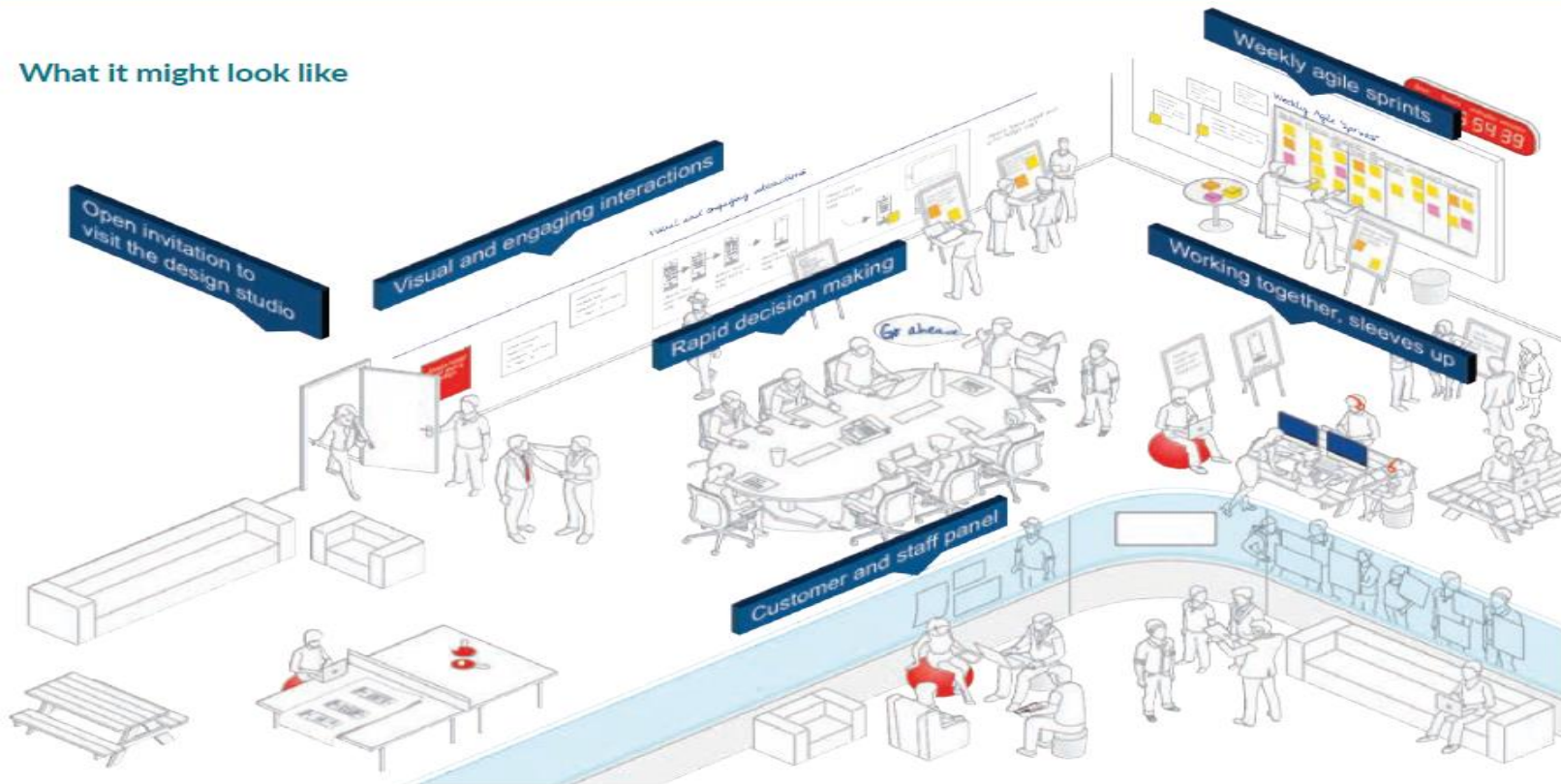
7. Talent and culture

- Risk will have a far greater share of digital-savvy personnel with fluency in the language of both risk and the business, operating within an agile culture that values innovation and experimentation.
- The new profiles seen as most critical in a digitized risk function include data scientists and modelling experts.
- Many risk leaders think that their teams will need to develop these skills rather than hire non risk professionals and expect them to learn risk.



A Digital Factory!

What it might look like



SOURCE: McKinsey

Concluding remarks: Session 3

Every MFI will need to assess its strengths in each of the seven building blocks, and the importance of each to its strategy. This will reveal gaps and priorities, which must be filled through a program of action.

Session Four

Managing culture in organizations on digital risks

Cultural changes and how to effectively manage them while undergoing digital revolution

Talent is a crucial building block for achieving the vision of digital risk.

Digital risk will require increasingly analytical skills from its personnel.

Core risk-management skills will remain crucial for interpreting raw data and deriving appropriate insights.

MFIs can be even more inventive.

Risk needs to be flexible on qualifications.

A culture of innovation based on three pillars: a test-and-learn mind-set, a more external orientation, and a less hierarchical structure.

Concluding remarks: Session 4

- Identifying a diversity of talent—particularly the optimal blend of analytical and digital skill sets to supplement the existing risk expertise.
- A culture of innovation, another component of this building block, should prevail in the whole organization, not only the risk function.
- The culture of innovation has three pillars: a test-and-learn mind-set, a more external orientation, and a less hierarchical structure.



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The author of this presentation takes full responsibility for its contents. The opinions expressed do not necessarily reflect the view of the European Commission.

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