



EUROPEAN CENTRAL BANK

BANKING SUPERVISION

# Centrality of Data Risk Aggregation

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Tackling the challenges  
ahead

European Supervisory Initiative (ESI), Munich

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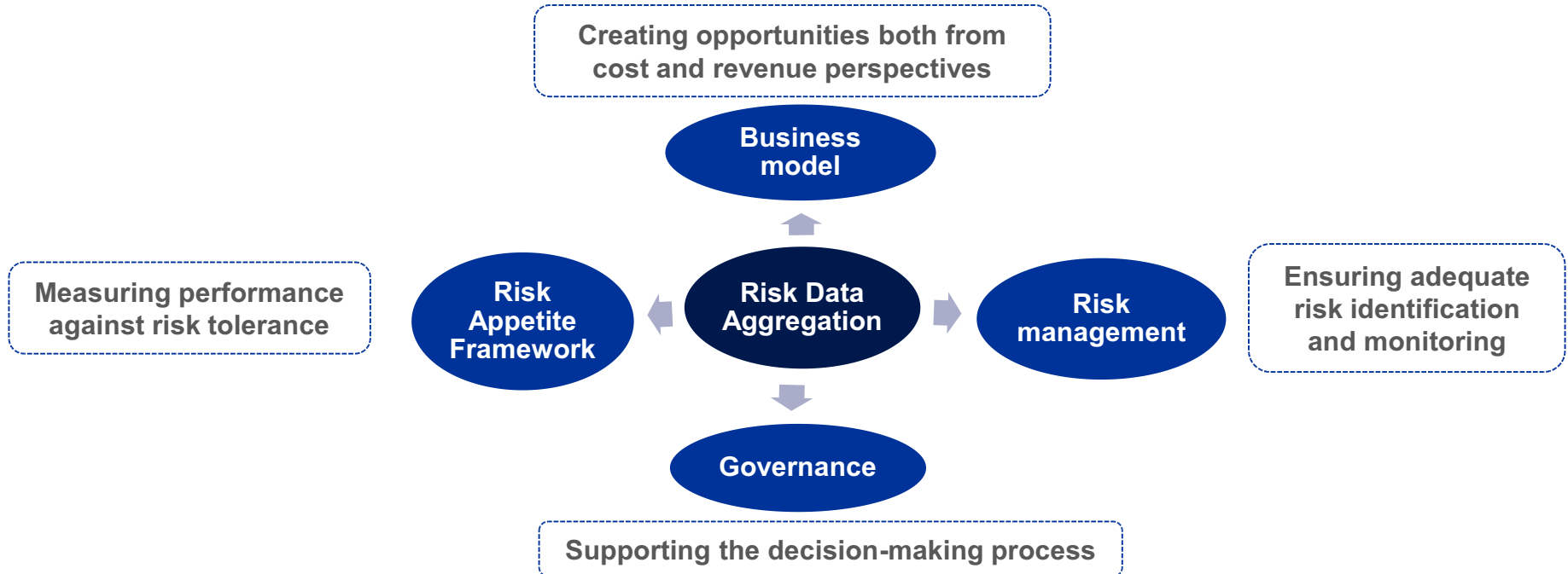
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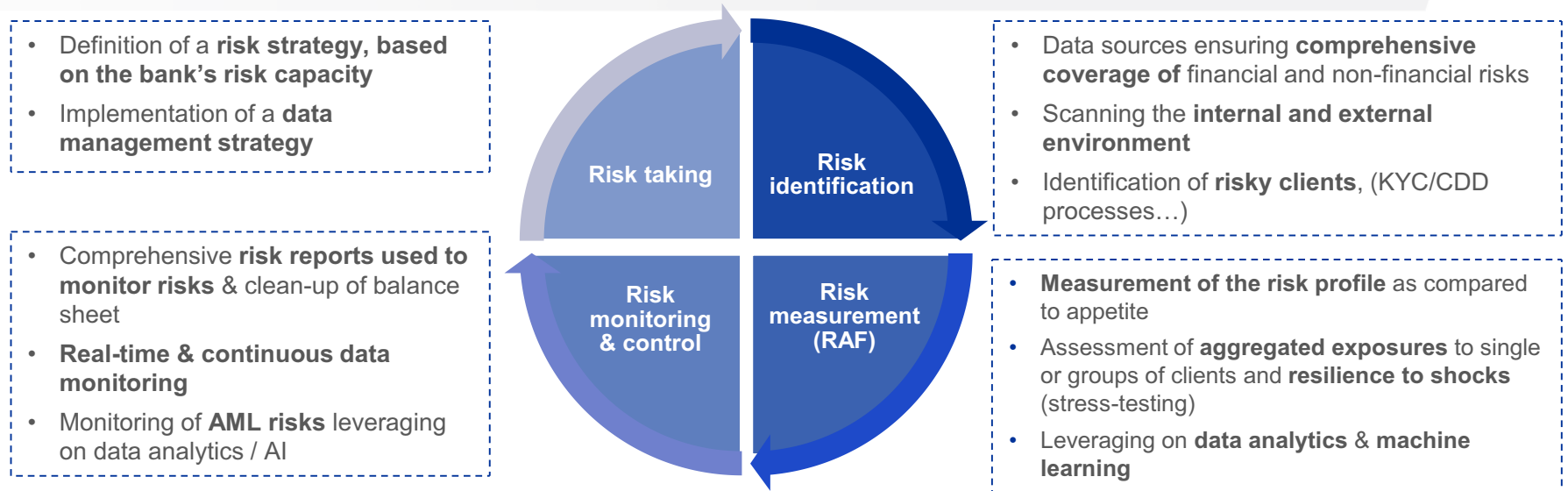
# Overview

- 1** **Centrality of risk data aggregation for banks**
- 2** Risk data aggregation: where do banks stand?
- 3** Conclusions

# Risk data aggregation capability has implications on various dimensions of banks' management



# Data aggregation, a key factor of success of efficient risk management



- **Sound data quality** is needed at all stages of the **risk management cycle**.
- This is all the more relevant at a **turning point in the cycle** in order to identify, measure and manage **concentrations** and other areas of vulnerabilities.

# Good data for good governance. Good governance for good decisions.

- Good data supports the bank's **board and senior management to take the right decision** and to provide necessary **oversight of the bank's risks and exposures**.
- Since its inception, **the SSM has raised the bar in governance**:
  - Better **oversight and challenging capacity** of the board over senior management & control functions.
  - Improved **quality of the documentation and risk reports**
  - Enhanced inclusion of **risk-perspective** in the decision making-process, reinforcing the bank's **risk culture**
  - Better **suitability of the management body members** and key function holders



# Risk data aggregation: supporting the sustainability of banks' business models

- Sound data aggregation capabilities help banks to **improve cost efficiency, generate business opportunities** and therefore **face competition** with other banking & non-banking players.
- Allowing for **better understanding of income and cost drivers** and enhanced capabilities for its monitoring and steering

| Cost side   | Revenue side   |
|---|--|
| <ul style="list-style-type: none"> <li>▪ <b>Optimization of operational and IT costs</b> obtained through rationalization of data management and tools</li> <li>▪ Lower costs through more <b>automation</b></li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>Higher client retention rate</b> by gaining better insights into customer expectations</li> <li>▪ <b>Better informed decisions</b> on budget allocation</li> <li>▪ <b>Enhanced innovation</b> (e.g. creation of <b>new products</b> and services)</li> </ul> |

- Interplay between **data aggregation capabilities, data analytics and machine learning** methodologies can generate **new opportunities**, for example understanding better consumer behavior and fostering product cross selling based on the profiling

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# Supervisory expectations

- In 2013, the Basel Committee of Banking Supervision (BCBS) published a set of principles to **strengthen banks' risk data aggregation (RDA) capabilities and internal risk reporting practices** (BCBS 239).
- Effective implementation of these Principles is expected to **enhance risk management and decision-making processes** at banks.

## Structure of the BCBS239 principles

| Governance & infrastructure |   | Risk data aggregation capabilities |              |            |              | Risk reporting practices |                   |                        |           |              |
|-----------------------------|---|------------------------------------|--------------|------------|--------------|--------------------------|-------------------|------------------------|-----------|--------------|
| 1                           | 2                                       | 3                                  | 4            | 5          | 6            | 7                        | 8                 | 9                      | 10        | 11           |
| Governance                  | Data architecture and IT infrastructure | Accuracy and Integrity             | Completeness | Timeliness | Adaptability | Accuracy                 | Comprehensiveness | Clarity and usefulness | Frequency | Distribution |

- The ECB makes use of the BCBS 239 principles as a benchmark of the best practices in its ongoing supervisory activities to **assess RDA** (internal and external reporting)
- JSTs assess risk data aggregation capabilities and risk reporting practices, including any improvements, in the context of the annual **SREP assessment**



# Risk data aggregation: a priority for ECB Banking supervision

- In 2016, the ECB performed a **thematic review** of 25 large banks on adoption of BCBS239 principles. The thematic review approach was also extended to SIs not under the perimeter of the assessment
- A **detailed assessment methodology** was developed. 2 main **tools** were used
  - **Fire Drills**: assess the capabilities of banks to aggregate and report a dataset on a short notice in an accurate, comprehensive and timely manner
  - **Data lineage**: follows the data path via a process map from the original source to the reporting layer on various aggregation levels
- The Thematic Review raised **severe concerns** and showed that risk data aggregation capabilities and risk reporting practices within the sample of significant institutions were not satisfactory.
- Banks were requested to provide an **action plan** to remediate the weaknesses identified. Material findings have been reflected in the **SREP**.
- Some institutions have also undergone a **thorough follow-up assessment** in 2019.

# Risk data aggregation: identified weaknesses

- **Despite the progresses** made by banks in improving their processes and infrastructure, most of them are still **far from compliance** with the BCBS principles.
- This is one continued **driver of weak overall governance scores**.

## Governance & infrastructure

- ❌ Lack of a **strategic and multi-year vision on how data should be managed**
- ❌ **Lack of comprehensive IT strategy including an allocation of financial and human resources**
- ❌ **Delay in the implementation of roadmaps**

## Data Architecture

- ❌ **High cost of IT infrastructure projects**
- ❌ **Data aggregation risks following mergers or acquisition**
- ❌ **Inability to restore their largest databases within the recovery time objectives**

## Data aggregation & reporting

- ❌ **Overreliance on manual intervention and detection** in the data control environment



- Given these concerns, ECB published and sent a letter to SIs in June 2019 pushing banks to **improve their risk aggregation & reporting** capabilities.
- ECB committed to increasingly pay **closer attention** on institutions' data quality, RDA and risk reporting capabilities

# Risk data aggregation: good practices

- However, ECB Banking Supervision acknowledges that **some banks are putting effort in adopting the requirements** provided in BCBS239 guidance
- Some institutions are **close to alignment with some principles**, whose procedure are best peers among the industry. Examples of good observed practices

## Governance & infrastructure

- ✓ **Enhanced governance for risk data management** (e.g. clear roles, incentive schemes and responsibilities)
- ✓ **Senior management involvement** in RDA implementation
- ✓ Appointment of **Chief Data Officers (CDOs)**
- ✓ **Unique Golden Source of information**

## Data Architecture

- ✓ IT tool covering all entities, establishing a **unified data base of holding regulatory reports by country**
- ✓ Fully **automated processes** requiring no **manual interventions**
- ✓ **Escalation processes in place to rectify detected errors**

## Data aggregation & reporting

- ✓ **Comprehensive list of controls** to data accuracy covering all material business lines
- ✓ Risk reporting procedures to **ensure full coverage both at geographical level and by type of risk**

# Conclusions

- Sound RDA capabilities are a **competitive advantage** for banks in the current challenging financial landscape
  - ✓ Ensuring adequate risk identification and monitoring, especially at a turning point of the macroeconomic cycle
  - ✓ Creating new opportunities to face increased competition, with the support of data analytics & artificial intelligence
- Banks need to **accelerate their efforts** to improve their IT infrastructure, data management framework and data accuracy.
- The ECB will continue **fostering the implementation of data aggregation and reporting principles** for all significant institutions, taking into account size, business model and complexity of institutions under the proportionality principle.