Recent evolution of the supervisory data quality framework

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Supervisory Reporting Conference

Outline

1. **Risk Data Aggregation, Risk Reporting and Data Quality**

2. **ECB Banking Supervision (BS) Data Quality**

   Immediate forwarding of supervisory reports and the impact on the

   ECB data quality assessment

3. **Recent developments: Enhancing accountability**

   The management report on data governance and quality

4. **Concluding remarks**
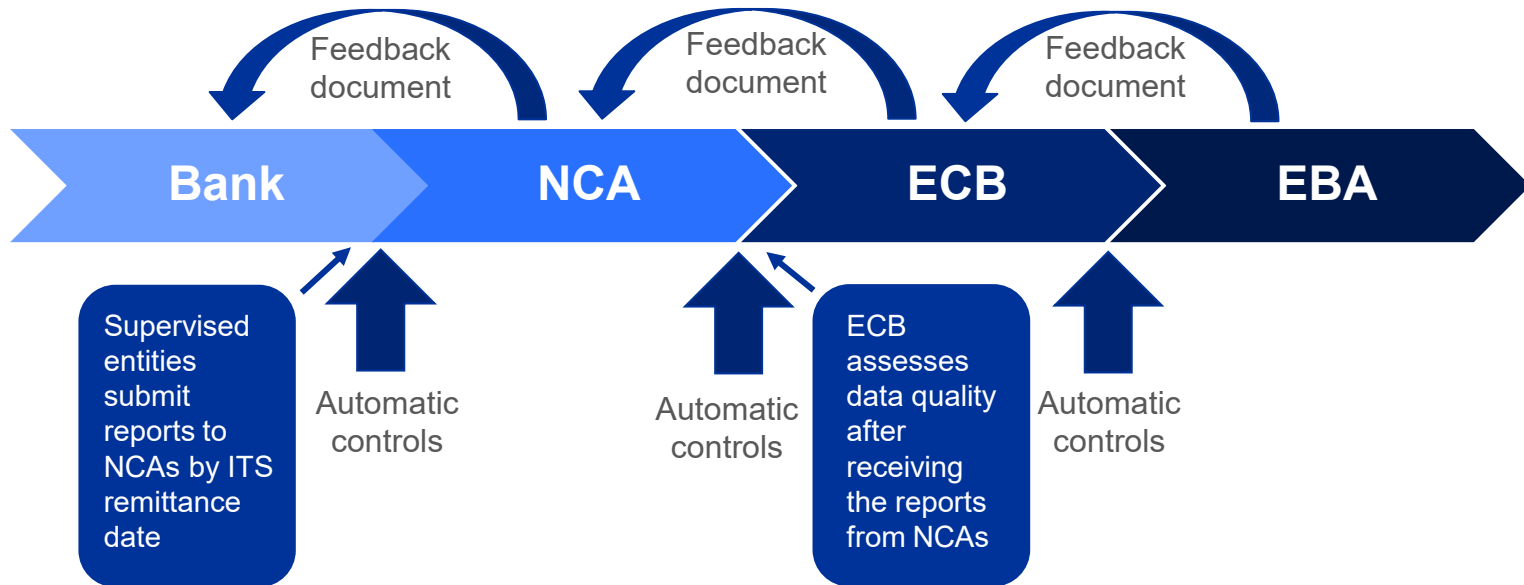
1. Risk data aggregation and data quality at SIs: Cross cutting theme and long standing priority

Non exhaustive examples

Main scope of data quality considerations		Main assessments	
Banks' internal risk reporting	• **All material risk reports and indicators** for banks' decision making • Key risk **models** • Reporting on **data quality**	**On site inspections**	• Dedicated **methodology** • Targeted **DQ Management** and **BCBS239 inspections** • DQ assessment also covered in other non-dedicated missions
Supervisory reporting	• Regular **FINREP/COREP** reporting • Supervisory **stress tests** • **Pilar 3** reports • Other thematic or ad hoc data requests **(e.g., Covid-19)**	**Ongoing, off site supervision**	• **Thematic review** 2016/17(incl. fire drills, benchmarking) • **Expectations published** in 2019 • Integrated in **annual risk reviews (SREP)** • **International collaboration**
Financial reporting	• Risk/finance **reconciliation** • **Financial statement's** analysis	**Banking Supervision Data Division in DG Statistics**	• Established **data quality reporting** since 2017 • **Escalation** and follow-up process • New **Management Report on Data Governance and Quality**

2. ECB BS Data Quality - Recap

ECB Banking Supervision's data quality framework seeks to ensure that **supervisory assessments and actions are based on timely, reliable and high quality data**, as measured in terms of punctuality, completeness, and accuracy.

Feedback document

Feedback document

Feedback document

Bank | **NCA** | **ECB** | **EBA**

Supervised entities submit reports to NCAs by ITS remittance date

Automatic controls

Automatic controls

ECB assesses data quality after receiving the reports from NCAs

Automatic controls

2. ECB BS Data Quality – Process changes
Immediate forwarding of supervisory reports by NCAs to ECB

Before:

Feedback · Feedback · Feedback

Bank → **NCA** → **ECB** → **EBA**

ITS remittance date (**T**)

Up to 10 days

The ECB assesses compliance and scores banks based on the data available at T+10

Now:

Feedback · Feedback · Feedback

Bank → **NCA** → **ECB** → **EBA**

Immediate

The ECB assesses compliance and scores banks based on the data available at T

2. ECB BS Data Quality - Dimensions

"Hard" checks

- Reporting requirements
(*punctuality, completeness*)

- EBA validation rules
(*accuracy*)

- Additional checks published on the ECB website
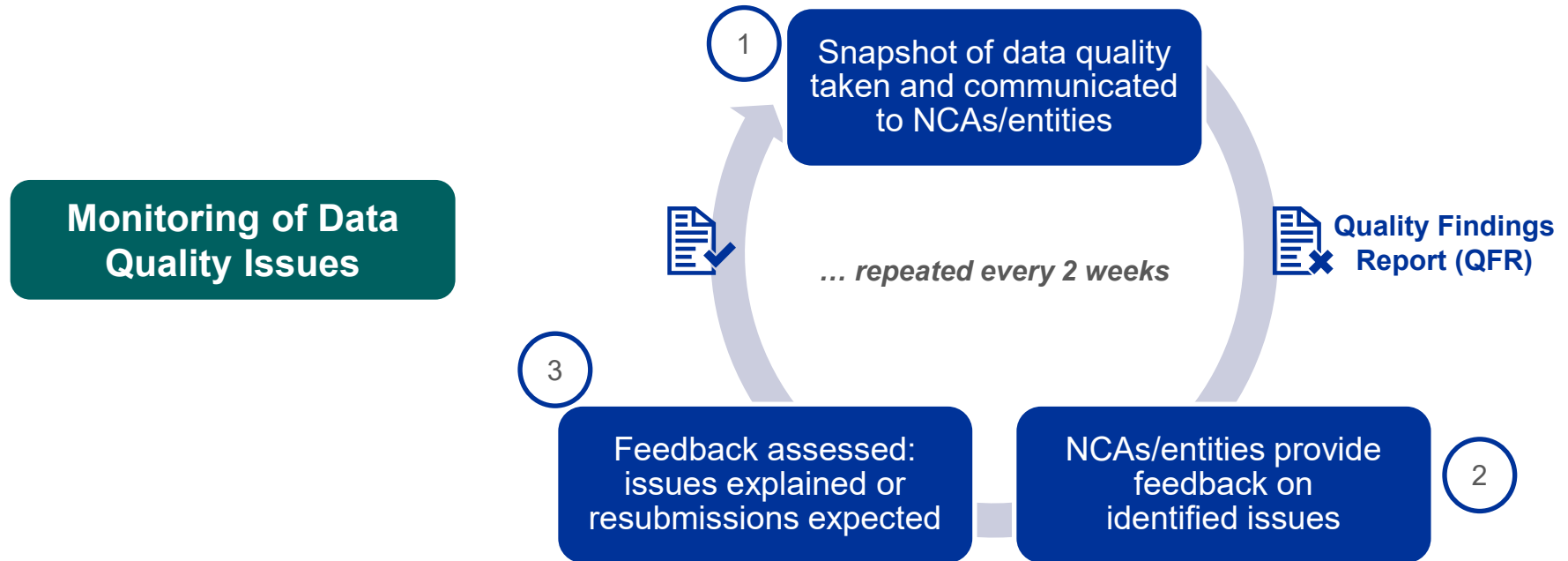(*accuracy, completeness*)

"Soft" checks

- Additional "request for information" checks defined by the ECB **E**xpert **G**roup on **D**ata **Q**uality (EGDQ)

- Outliers detection (to be justified)

Data Quality Indicators (DQIs)

Monitoring of Data Quality Issues

2. ECB BS Data Quality – Monitoring

Continuous feedback to and from NCAs and supervised entities

Monitoring of Data Quality Issues

1 — Snapshot of data quality taken and communicated to NCAs/entities

Quality Findings Report (QFR)

… repeated every 2 weeks

2 — NCAs/entities provide feedback on identified issues

3 — Feedback assessed: issues explained or resubmissions expected

2. ECB BS Data Quality – DQI

The **Data Quality Indicator** (DQI) is an harmonized and composite indicator which gives JSTs a uniform way of assessing entities' supervisory data quality as part of the annual SREP

| 1 | 2 | 3 | 4 |

DQI
ITS and STE

Quality Findings Report (QFR)

Punctuality
Was the report made available on time?

Completeness
Does it include all required templates / datapoints?

Accuracy
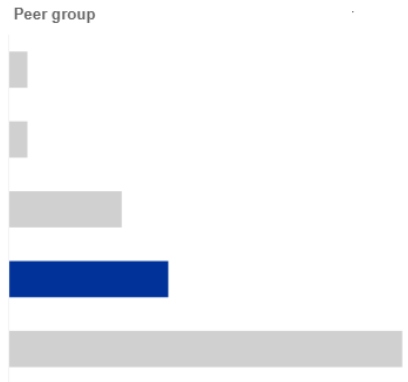Are reported values consistent, fulfilling all validation rules?
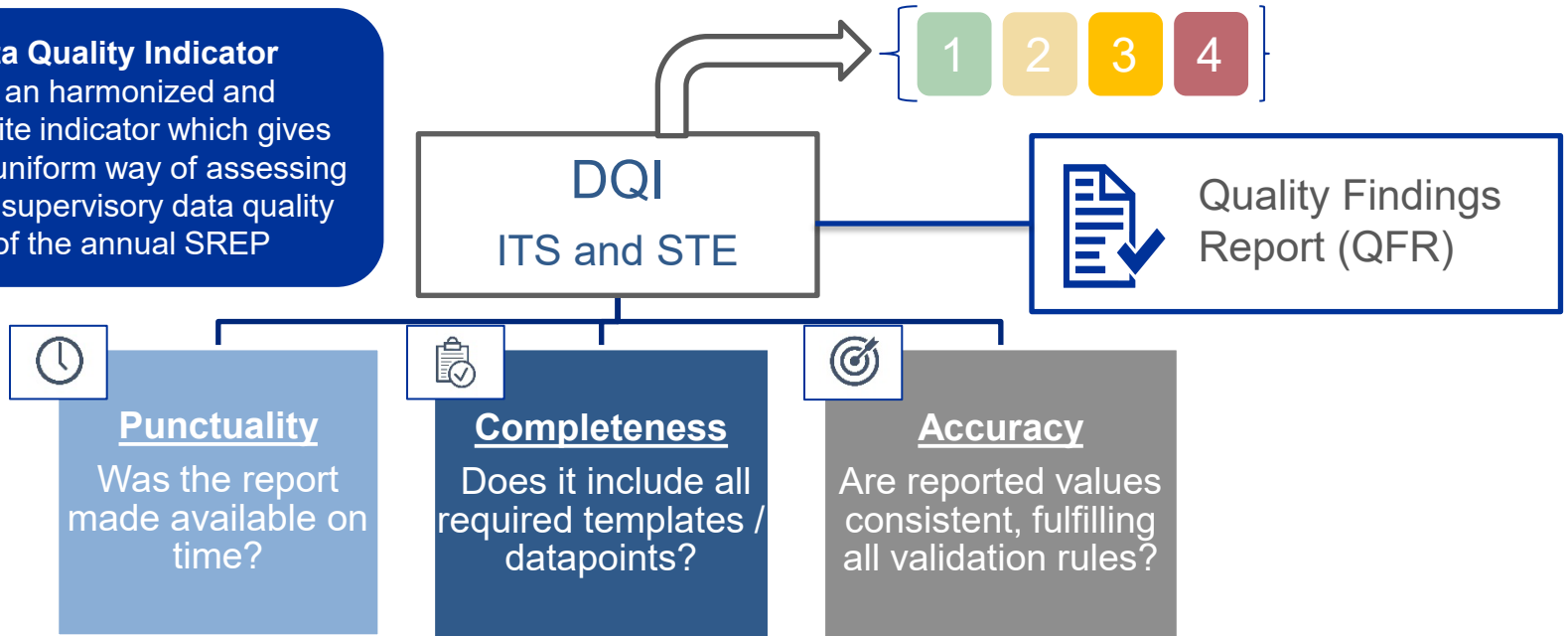
DQI will be shared consistently with all significant supervised entities via ASTRA in the upcoming months

2. ECB BS Data Quality – DQI
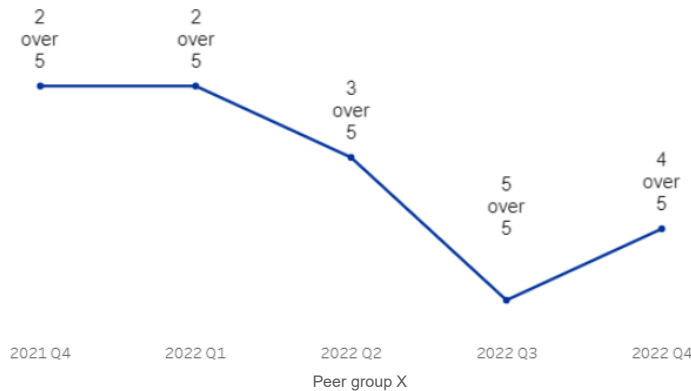
Overall DQI Score and ranking among peers

Peer group

3

Non-compliant

DQI Breakdown

	COREP OF	COREP LR	LE	LCR	NSFR	ALM	FINREP	AE	STE	Dimension DQI
Accuracy	2	1	1	1	1	1	1	1	2	2
Completeness	1	1	1	3	1	2	1	1	1	3
Punctuality	1	1	1	2	1	2	1	1	1	2
Module DQI	2	1	1	2	1	2	1	1	2	
Peer group average	2	2	2	2	2	2	2	1	2	

DQI Score over time

- Fully compliant
- Partially compliant
- Non-compliant
- Serious concerns

2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4
2	2	2	2	3

Ranking over time

2 over 5 — 2021 Q4
2 over 5 — 2022 Q1
3 over 5 — 2022 Q2
5 over 5 — 2022 Q3
4 over 5 — 2022 Q4

Peer group X
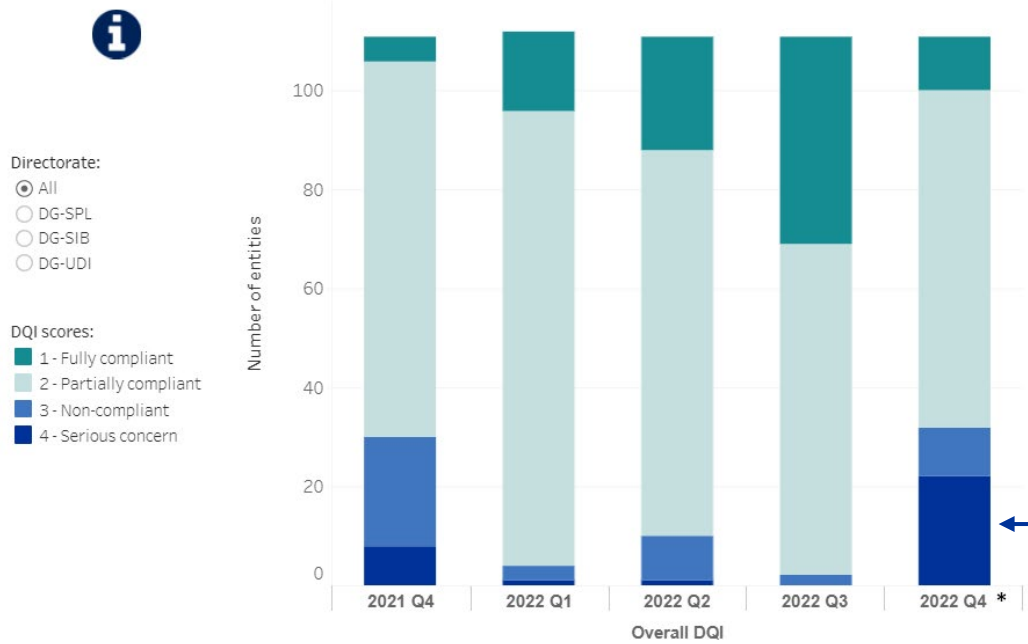
2. ECB BS Data Quality
Impact on the DQI of immediate forwarding by NCAs

Data Quality Indicator distribution (includes ITS and STE data)

Directorate:
- ⦿ All
- ◯ DG-SPL
- ◯ DG-SIB
- ◯ DG-UDI

DQI scores:
- 1 - Fully compliant
- 2 - Partially compliant
- 3 - Non-compliant
- 4 - Serious concern

Average **% of missing and delayed reports** across all institutions notably increased to 4.75% from values between 0.1% and 0.2% in previous reference quarters

Increase in the share of banks with a **DQI score** of 4 (serious concerns)

*The DQI score up to 2022 Q3 is based on the data quality assessment carried out at the ECB remittance date (ITS remittance date +10). From 2022 Q4 onwards, the DQI score is based on the ITS remittance date. Please note that the DQI distribution for 2022 Q4 is still preliminary and may be subject to changes as a result of feedback received from supervised entities and national competent authorities.

3. Management report on data governance and data quality

"In terms of good governance, there should be an adequate level of accountability of banks' senior management in the processes related to supervisory data reporting, production and transmission"

Supervisory Board Decision SB/20/144/12.

→ Implemented through the **Management Report on Data Governance and Data Quality**

3. Management report on data governance and data quality

What

- Fostering increased accountability of banks' senior management.

Objectives

- **Define supervisory expectations on the role** for banks' senior managers in the production and transmission of supervisory data.
- **Improve the traceability of** banks' senior management **role** regarding the submission of supervisory data.
- **Identification of possible signals** of weaknesses in the institution's data aggregation capabilities.

How

- **Request for feedback** on mitigation/remediation plans to address issues identified.
- **Focused declaration** on the quality and reliability of the data.

3. Management report on data governance and data quality

PRE-POPULATED SECTION	QUESTIONNAIRE
This part is prepopulated by the ECB based on metrics produced in the context of its annual IT Risk Questionnaire and Supervisory Data Quality assessment: therefore, no additional burden on the reporting entity.	The institution is requested to provide feedback on the issues identified and the actions taken to address such issues.

PRE-POPULATED SECTION

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IT risk self-assessed indicators

e.g. IT data integrity, Data Quality Maturity level

Is the data of sufficient quality to support and inform supervisory decisions?

Completeness: is all expected information available?

Accuracy is the information compliant with the validation rules?

Punctuality Was it reported on time?

Reliability Were values significantly revised without a clear explanation?

Monitoring - How promptly were the issues solved?

% of issues solved completeness / accuracy

Benchmarking - How does the institution perform in data quality compared to other institutions?

Data Quality Indicator / Ranking

QUESTIONNAIRE

The institution is requested to provide feedback on the issues identified and the actions taken to address such issues.

Questions

Underlying causes for the completeness/accuracy/punctuality/reliability issues.

Mitigation/remediation plans in place to address the quality issues.

Extent of manual steps in the reporting process.

Describe data governance framework

Timeliness to produce main risk reports

Use of data quality indicators on internal risk data

Acknowledgement of issues

C-level executive sign-off on management body responsibility to ensure data quality and on existence of appropriate verification measures aimed at cross-checking data

Management report on data governance and data quality
Indicators from the annual IT risk self-assessment questionnaire

ECB
Banking Supervision
ECB_Supervisory.Statistics@ecb.europa.eu
bcbs239@ecb.europa.eu

Management report on data governance and data quality
Supervisory data quality summary

ECB
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Questions from the IT risk self-assessment questionnaire

	Bank value 2020	Bank value 2021	SSM average 2020	SSM average 2021	Peer group average 2020	Peer group average 2021
Self-assessment score for IT data integrity risk level	2.0	2.0	2.5	2.6	2.1	2.3
Self-assessment score for data quality level maturity level (Risk Control)	2.0	3.0	2.6	2.5	2.7	3.0
Self-assessment score for data architecture model maturity level (Risk Control)	3.0	3.0	2.6	2.6	2.9	2.9
Nr. of end user computing applications (EUC) [1]	3,578	3,058	741	838	1,223	1,338
Nr. of cases of incorrect submissions in the supervisory reporting [2]	360	296	32	39	56	68
Nr. of incidents leading to significant invalid data modifications [3]	5	5	-	-	-	-
Nr. of critical findings related to IT data integrity are open for more than a year [4]	0	0	-	-	-	-

	Bank answer 2020	Bank answer 2021	SSM % yes 2020	SSM % yes 2021	Peer group % yes 2020	Peer group % yes 2021
Roles and responsibilities regarding data quality are clearly defined	Yes	Yes	78.1%	81.1%	70.0%	73.3%
Data quality management procedures also apply to end user computing applications (EUC) [5]	Yes	Yes	49.1%	51.4%	33.3%	36.7%
The supervised entity has defined and documented its data architecture, data models and data flows, and validated them with relevant business and IT stakeholders [6]	Yes	Yes	89.5%	91.9%	90.0%	93.3%

Data Quality Indicator

		2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2
Score	DQI score	3	2	3	2	3
Ranking	Ranking across peer group	6	4	10	7	11
	Total nr. of institutions	*14*	*14*	*14*	*14*	*14*
	Ranking accross SSM institutions	27	54	44	63	25
	Total nr. of institutions	*117*	*116*	*111*	*112*	*111*

Data Quality Assessment

Compliance		2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2
Completeness	% of missing templates	0.0%	0.0%	0.0%	0.8%	6.0%
Accuracy	Nr. of validation rules failing	5	0	3	0	1
	Peer group average	7.3	2.7	5.0	0.7	2.0
Punctuality	% of missing modules	0.0%	0.0%	0.0%	0.0%	1.0%

| Monitoring		2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2
Completeness	% of unsolved issues completeness	100.0%	100.0%	100.0%	100.0%	0.0%
Accuracy	% of unsolved issues accuracy	0.0%		0.0%		100.0%
Reliability	Nr. of resubmitted modules	15	6	15	8	1
	Nr. of expected modules	*8*	*8*	*8*	*8*	*8*

Example of pre-populated template (<u>non exhaustive</u>)

3. Management report on data governance and data quality
Preliminary observations

Methodological approach

- o Analysis of the root causes behind data quality issues (i.e. Q1 to Q4)

- o Further assessment of questions related to compliance with BCBS239 principles
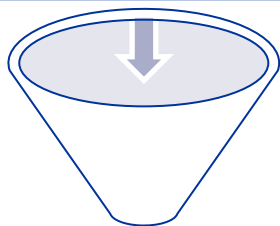
Analysis feeds into the 2023 RDARR SREP scores

Preliminary findings for the JST

⚠ Issues attributable to **software providers/IT systems** have severely impacted the reliability and the completeness of the data

⚠ Recurrent **operational/human error** causing numerous accuracy issues often leading to failing EBA validation rules/EGDQ checks

⚠ Recurrent misinterpretation of the regulation, raising doubt on the ability of some entities to provide meaningful data

⚠ Some banks lack transparency in terms of root cause behind the data quality issues identified

Concluding remarks

- ECB Banking Supervision continues to pay **close attention** to significant institutions' supervisory **data quality** as part of 2023-2025 SSM priorities

- Recent changes to the ECB data quality assessment process allow **ECB to have full sight on significant institutions compliance with EBA ITS Regulation –** appears to have **considerable impact on DQI scores**

- Preliminary **findings from the Management Report** pilot exercise proven useful and where relevant will be **incorporated in the 2023 SREP scores**

- Upon conclusion of pilot phase, lessons learnt will be taken into account for 2024 version of the Management Report

Annex
Immediate forwarding of supervisory reports – Legal basis

Forwarding of supervisory data of **Significant Institutions** from NCAs to the ECB:

Amendment to ECB Decision ECB/2014/29

→

*NCAs shall submit to the ECB the information referred to in Implementing Regulation (EU) 2021/451 and Implementing Regulation (EU) 2021/453 and reported to them by the supervised entities […] **upon receipt of data submissions**, and after performing the initial data checks specified in Article 6, NCAs shall submit all information to the ECB **without undue delay** […]*

Immediate forwarding
(implemented for Q4 2022 submissions onwards)

Thank you

Questions or observations

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