



EUROPEAN CENTRAL BANK

BANKING SUPERVISION

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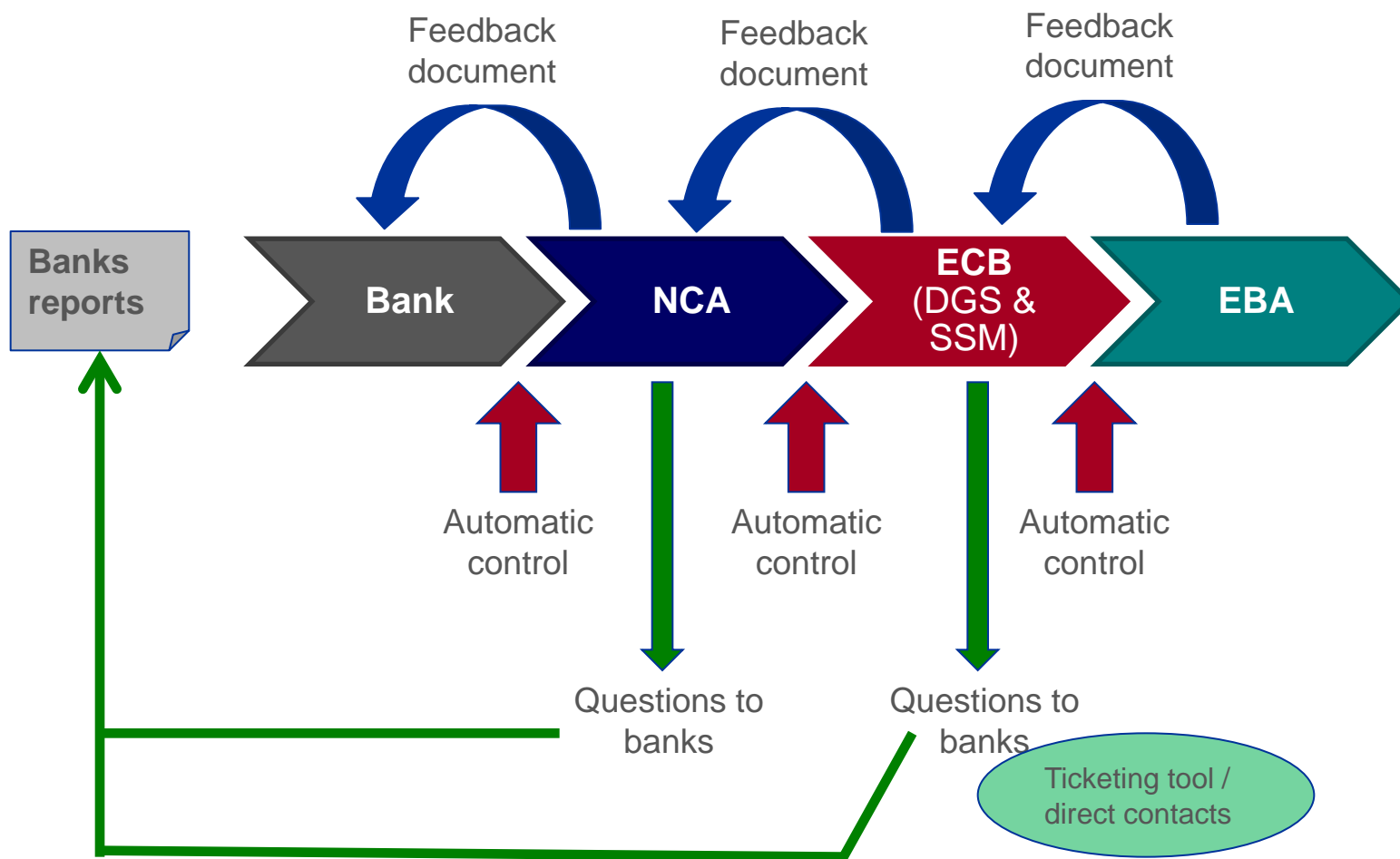
Update on the management of supervisory reporting from the ECB: A SUPERVISOR'S PERSPECTIVE

20th XBRL Europe day

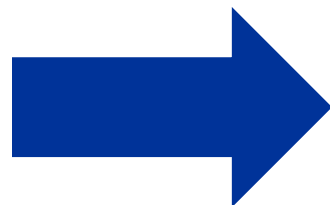
Copenhagen 1st February 2018

- 1 Introduction and sequential approach :where do we stand
- 2 BCBS 239 and data quality assessment : state of play
- 3 Giving feedback to the industry and the public: next steps
- 4 What about the future?

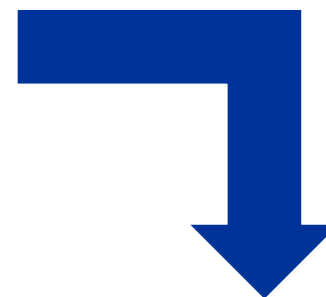
Levels of data quality validation under the lead of DGS



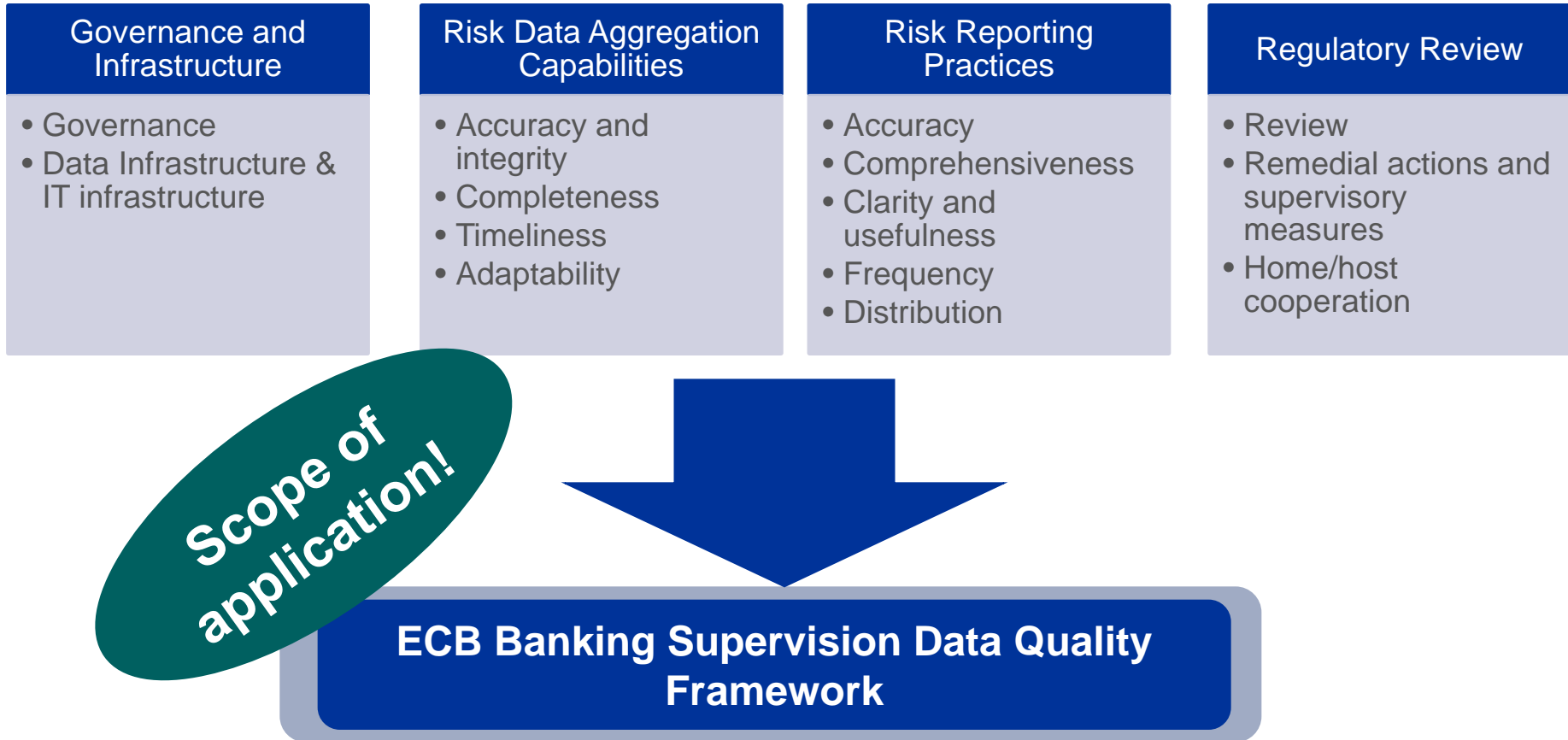
Harmonisation of the Sequential Approach



Harmonised Practices



Since 2015, the Working Group on Supervisory Statistics has been mandated to work on the harmonisation of the national practices to establish a level playing field for the data quality assessment of the reporting institutions.



Data Quality Framework – How is DQ assessed?

Hard checks

Punctuality

- Refers to the lag in time between the ECB remittance date and the actual reception date of the data.

Accuracy

- Is interpreted as the absence of mistakes and exact correspondence of the reported values with the underlying concept for each data point.
- Accuracy is ensured by a set of validation rules that have to be respected by the reported data.

Completeness

- Is defined as the availability of the required information.
- Completeness checks are carried out to detect missing information.

Stability

- It is examining changes between periods in the total number of data points reported per module and template.
- In addition to key data points for supervision, the number of countries that have been reported in the geographical breakdowns are analyzed.

Plausibility

- Plausibility checks aim to detect outliers in the reported data.
- We look at values with:
 - extremely high (or extremely negative) growth rates and
 - extremely high (or extremely negative) levels.

Reliability

- Also referred to as resubmissions analysis.
- Based on the analysis of the difference between preliminary and revised reported values

DQIs

Individual Dashboard

Soft checks

Individual Dashboard: an example



Individual Dashboard: an example

European Central Bank, DG-Statistics, Banking Supervision Data Division

Overall view | ITS score breakdown | STE score breakdown

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Entity

Name

Select one reported period:

2016 Q4

2017 Q1

2017 Q2

2017 Q3

Select a consolidation level:

Consolidated

Significance ID

Accounting framework

Peer group

Country

Cut-off date ITS

Number of peers

Cut-off date STE

Accuracy over time

Number of validation rules failing

2016 Q4: ~10 failures (median), range 0-15

2017 Q1: ~2 failures (median), range 0-5

2017 Q2: ~10 failures (median), range 0-60

2017 Q3: ~2 failures (median), range 0-30

Accuracy

	COREP	LE	LCR	NSFR	FINREP	AE	ALM
Validation rules failing	3	0	0	0	0	0	0
peer-group average	0.9	0.0	0.0	0.0	1.6	0.0	0.0
of which: blocking	0	0	0	0	0	0	0
peer-group average	0.3	0.0	0.0	0.0	1.5	0.0	0.0
Data points failing	4	0	0	0	0	0	0
peer-group average	17.0	0.0	0.0	0.0	25.9	0.0	0.0
Ras impact	3			0	0	0	
peer-group average	0.5			0.0	2.6	0.0	

Punctuality

	COREP	LE	LCR	NSFR	FINREP	AE	ALM
Delay With Errors (days)	0	0	0	0	0	0	0
peer-group average	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Fully Valid (days)	1	0	0	0	0	0	0
peer-group average	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Rejections	0	0	0	0	0	0	0
Accepted Submissions	1	1	1	1	1	1	1

Completeness

	COREP	LE	LCR	NSFR	FINREP	AE	ALM
Missing templates	0	0	0	0	0	0	0
peer-group average	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Missing data points	0	0	0	0	1	0	4
peer-group average	1.5	0.0	0.1	0.7	1.3	0.9	1.7
Missing data points involved in RAS	0	0	0	0	0	0	0

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DQIs introduced for SREP 2017

- ✓ JSTs' SREP Element 2 assessment in sub-category "Risk Infrastructure, Data & Reporting"



IMAS Screenshots

Display Key Risk Indicators

Risk Assessment Indicators

Display indicators for the past **quarters**

Data Point	Name	2017 Q1	2016 Q4	2016 Q3
DQ11	Overall data quality indicator (Unit)	2.00	2.00	2.00
DQ12	Punctuality – data quality indicator (Unit)	1.00	1.00	1.00
DQ13	Completeness – data quality indicator (Unit)	2.00	2.00	2.00
DQ14	Accuracy – data quality indicator (Unit)	2.00	2.00	2.00

- ✓ MSD's SREP horizontal analyses

- ✓ Supervisory Dialogues with banks

4.3.2 SREP 2017 - Element 2 - IG&RM - Data quality

25 SREP with data quality issues in several areas revealed by the improved set of tools for JSTs.

- JSTs are now equipped with a set of tools to monitor, assess and improve the data quality.
- These tools allow us to identify data quality issues from different perspectives.

25 institutions¹ face data quality issues in more than one area:

- Data quality score Q4 2016
- ISSUE: stress test 2017
- Stress test 2016
- ISMP / IAMP 2016 / 2017
- BCBS 239 Thematic Review
- CRMI Liquidity Monitoring Exercise
- Other (see TR99)

2.5.1 Example of Zoom: Risk and data infrastructure

Risk Infrastructure, Data and Reporting

Data quality strengths and weaknesses

Findings of the BCBS 239 TR which are valid for all banks are displayed at the bottom right JST.

- to recap bank-specific issues encountered with respect to data quality, e.g. BCBS 239 but also CRMI liquidity monitoring exercise, On-site inspections, TRM, RGA, Stress test, etc.
- to reset the overall data quality indicator (DQI) for [example bank] disclosed in MAS, under Element 2 → Combined Element 2 → Display Key Risk Indicators

7/5/16 Data quality indicator¹ (Q4 2016)

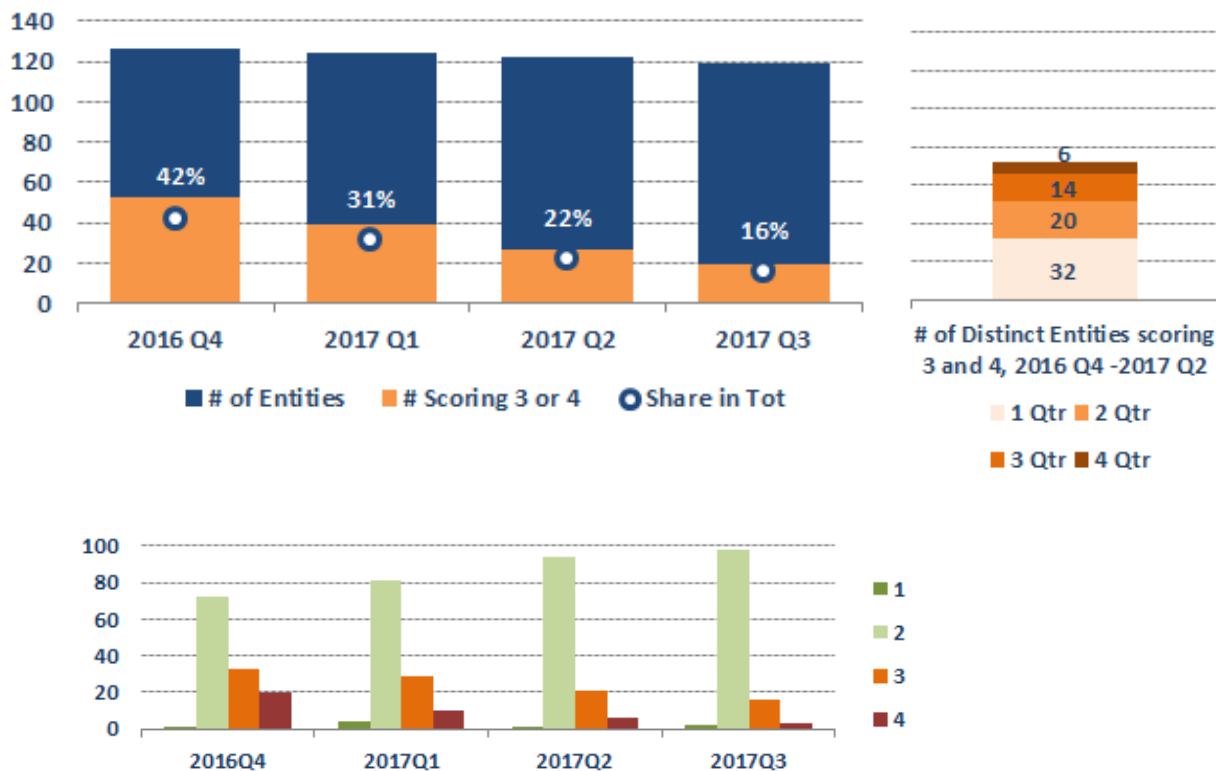
[Example bank]	SSM average
X	2.5

BCBS 239 Internal Audit Findings

- Large macroscopic gaps in size and in numbers
- Several weaknesses in the data compilation processes
- IT systems do not support reconciliation of key data independently of other reports
- No full automation of data compilation process
- Implementation of address of the process and maturity of the system
- Limited data flow capabilities on regional level

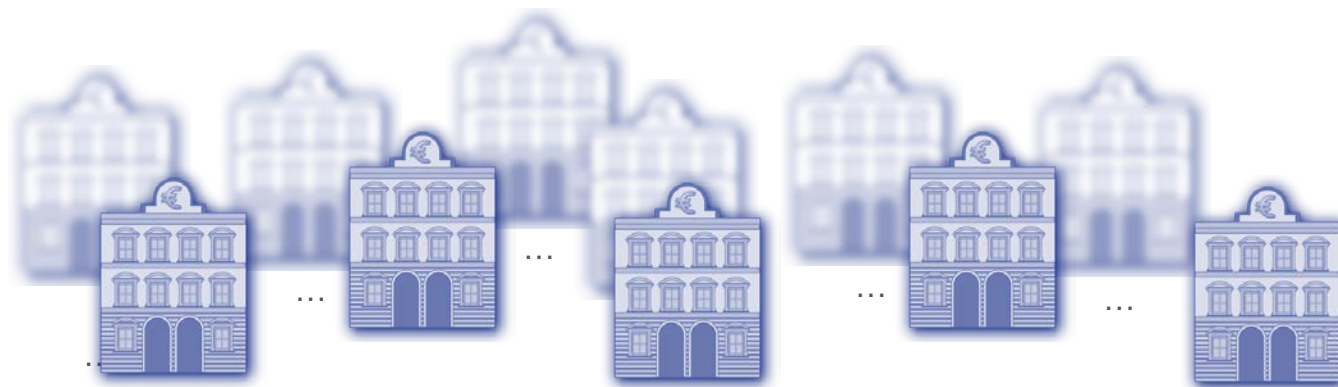
¹ Quality of data (data completeness) reflects aspects such as detectability, completeness and accuracy. JST 2016 Item 1 (point 1). 4 (data concerns).

Overall numbers



- Number of entities under direct supervision change
- Decreasing number of entities scoring 3 or 4 – absolute and relative
- 20 entities seems to have recurrent problems
- Distribution is highly concentrated on 2

Data quality of supervisory reporting: Banking Statistics



The state of play for ITS data quality is shared at aggregated level with the industry in a quarterly basis via the publication of Banking Statistics

Data from **banks** and **banking groups** directly supervised by the ECB.

... is combined

... and split again by banks' classifications.



Aggregated data for the SSM 



- breakdown by country 
- breakdown by income source 
- breakdown by location of assets 
- breakdown by size 
- breakdown by risk 

Improved feedback to banks on data quality issues – individual feedback to banks

4 steps escalation procedure:

- In case of data quality issues, banks will first be approached informally via NCAs to provide or resubmit data (Step 1).
 - In case the issues remain, the bank will receive letters from the ECB to raise and remind of the data quality issues.
 - *Step 2: Letter signed by ECB manager
 - *Step 3: Letter signed by ECB manager (higher hierarchy)
 - In case the issues still remain, ECB seek to apply enforcements measures or sanction proceedings (Step 4)
 - When a bank receives a letter the, Data Quality Dashboard per institution will be attached (including rating).
- **SREP rating:** Several initiatives on data quality – like the BCBS 239 Thematic Review – are used in the SREP Element 2 Internal Governance assessment.

What about the future?

- Increase in : *data-driven modelling techniques and granular data (volume, formats) within banking sector.*
- **Machine Learning at supervisory side (specially from an off-site perspective):**
 1. *Creation of Validation alerts (hard, soft) for main supervisory data points → but, it is limited as ITS scope is aggregated data.*
 2. *Clustering for plausibility checks (geographical, business model) → specially using the several geographical /portfolio breakdowns to differentiate group of supervised entities.*
 3. *May be useful in the detection of outliers → but, nature of supervisory data is still volatile, even at aggregated level.*
 4. *XBRL is a tool for business reporting → second step in the implementation of checks derived from machine learning techniques.*

Thank you!