



EUROPEAN CENTRAL BANK

BANKING SUPERVISION

# The Data Quality Indicator for individual banks: a tool for supervision

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**1** Purpose

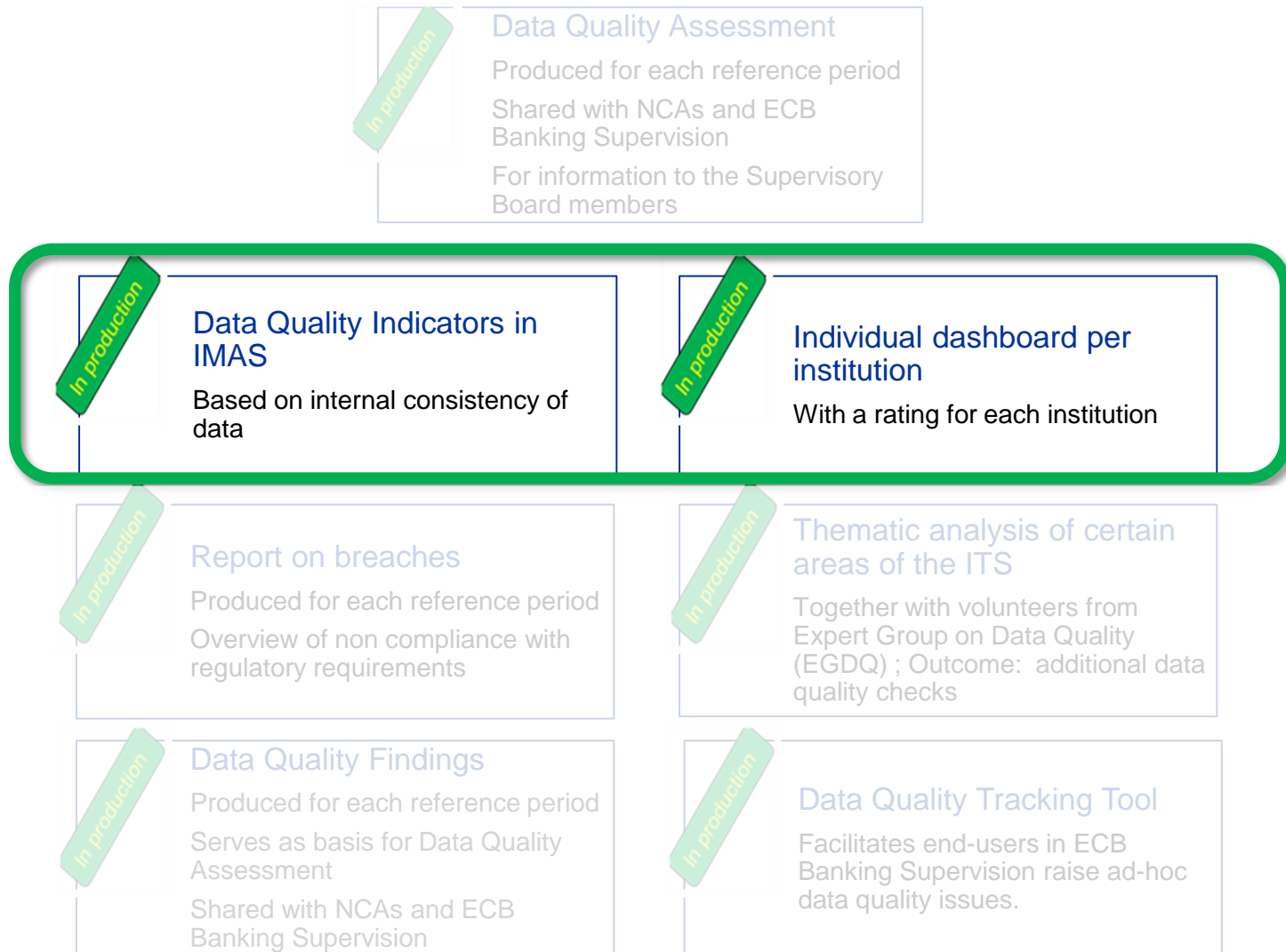
**2** Data Quality Indicators and Dashboard

**3** Results

**4** Examples

**5** Next steps

# Purpose (1)



## Why the Data Quality Indicators (DQI)?

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



IMAS Screenshots

A screenshot of the IMAS Risk Assessment Indicators interface. It features a 'Display Key Risk Indicators' button on the left, with an arrow pointing to a table of indicators. The table is titled 'Risk Assessment Indicators' and shows data 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

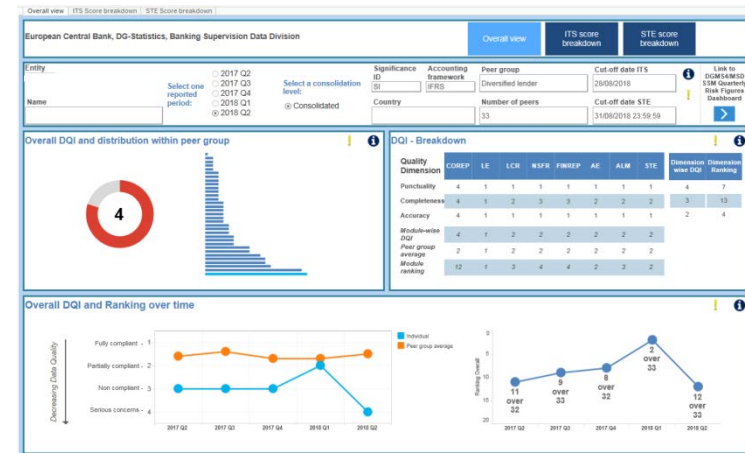
- ✓ SREP horizontal analyses.
- ✓ Facilitate supervisory dialogue with the supervised entity.

Two screenshots from the SREP system. The top one is titled '4.3.2 SREP 2017 - Element 2 - IG&RM - Data quality' and shows a summary of data quality issues with a pie chart and a table of findings. The bottom one is titled '2.5.1 Example of Zoom: Risk and data infrastructure' and shows a detailed view of 'Risk Infrastructure, Data and Reporting' with a table of findings and a summary of strengths and weaknesses.

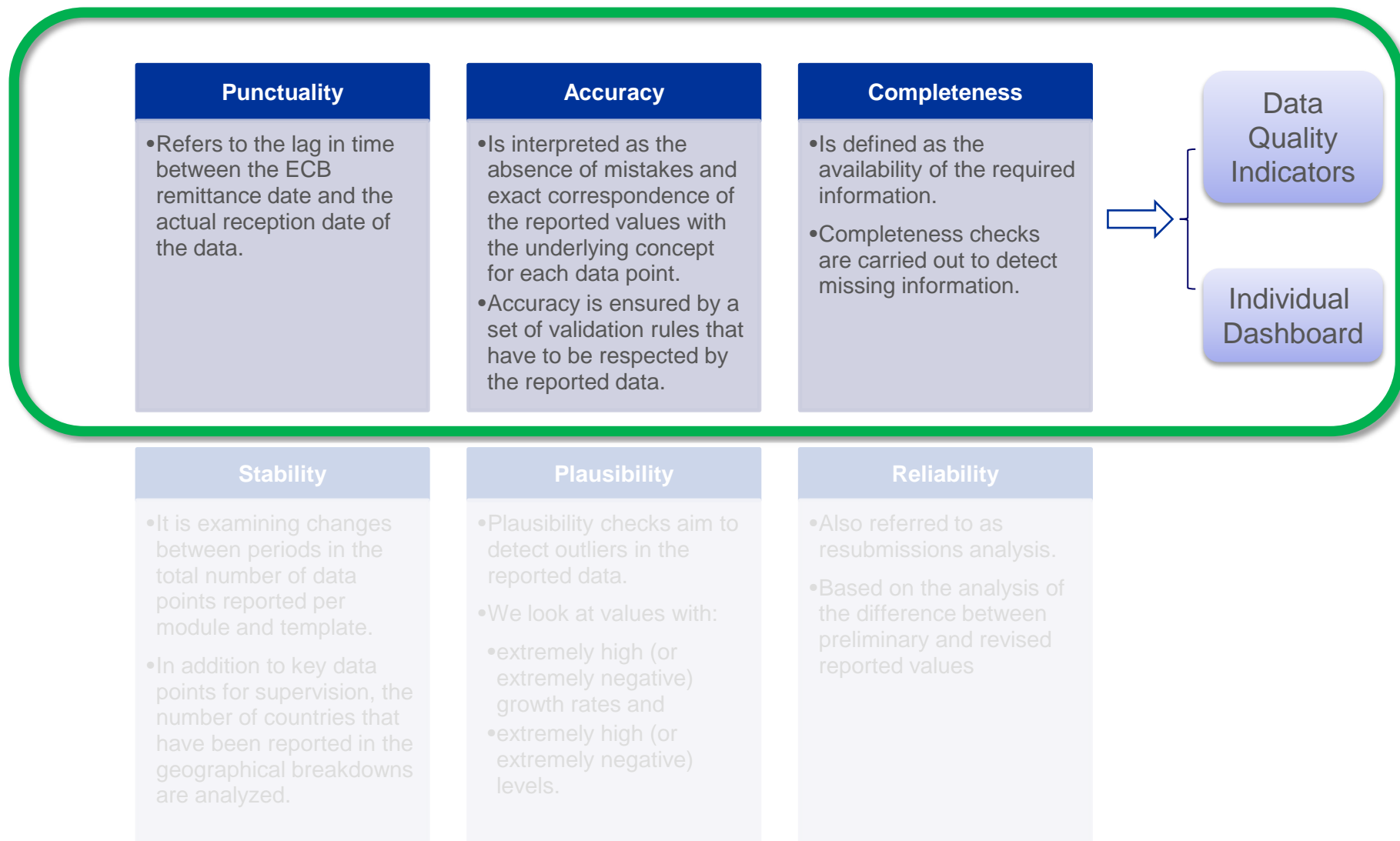
## Why the Individual Dashboard?

- ✓ Allow JSTs to have all key data quality figures available at a glance, with the possibility to drill down.

- ✓ As a tool for communication: to help JSTs set the framework for the dialogue with the supervised entity.



# Back to the data quality assessment...



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## Data Quality Dimensions and Metrics

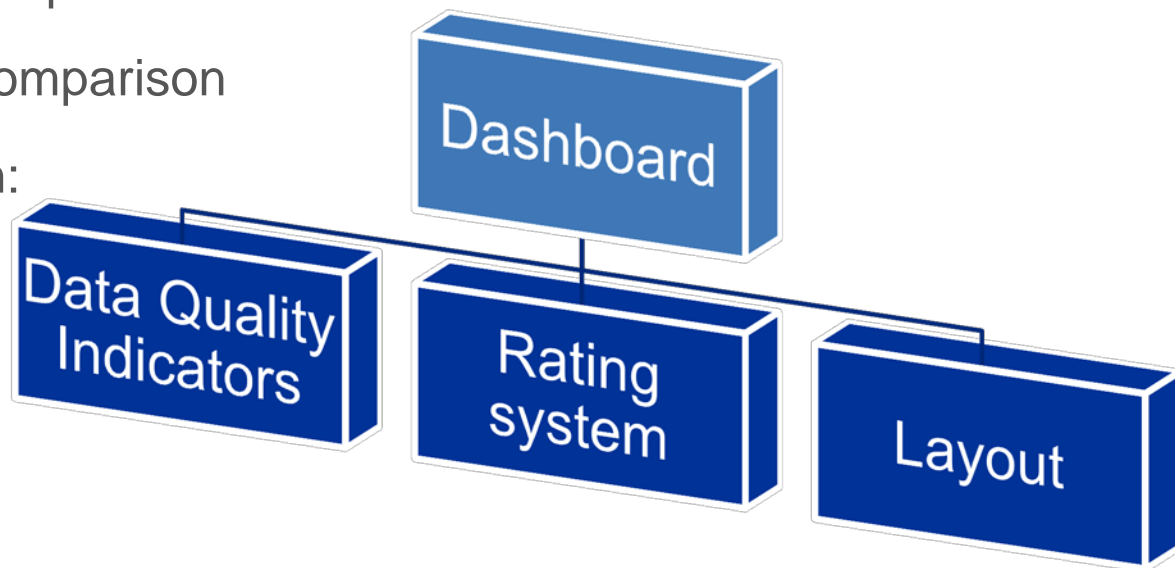
The metrics underlying the overall DQI indicators are grouped under three dimensions.

- **Punctuality**
  - Missing Module → 1<sup>st</sup> check point
  - Delay with errors
  - Delay fully valid
- **Completeness**
  - Missing templates
  - Missing data points
- **Accuracy**
  - Validation rules failing (ITS and STE)
  - Blocking ITS validation rules failing
  - Data points failing
  - RAS impact



### Data Quality Individual Dashboard

- A 3 page document summarising the most important indicators in terms of data quality; assessing and rating data quality performance
- Focus on significant institutions
- Analysis per entity and per reference period
- Historical performance viewpoint
- Individual & Peer group comparison
- Data Quality Indicators on:
  - Punctuality
  - Completeness
  - Accuracy
- SREP-like rating system



## DQI: Messages

Rating	Short description	Business interpretation
1	Compliant	<ul style="list-style-type: none"><li>• Current data quality is compliant with the reporting framework</li></ul>
2	Partially compliant	<ul style="list-style-type: none"><li>• Current data quality is partially compliant with the reporting framework</li><li>• Quality issues need to be addressed</li></ul>
3	Non compliant	<ul style="list-style-type: none"><li>• Current data quality is non-compliant with the reporting framework</li><li>• Serious quality issues need to be addressed</li></ul>
4	Serious concerns	<ul style="list-style-type: none"><li>• Current data quality is non-compliant with the reporting framework raising serious concerns</li><li>• Serious quality issues need to be addressed as soon as possible</li></ul>

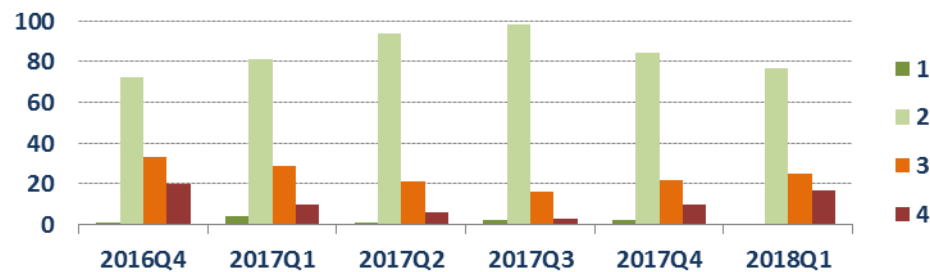
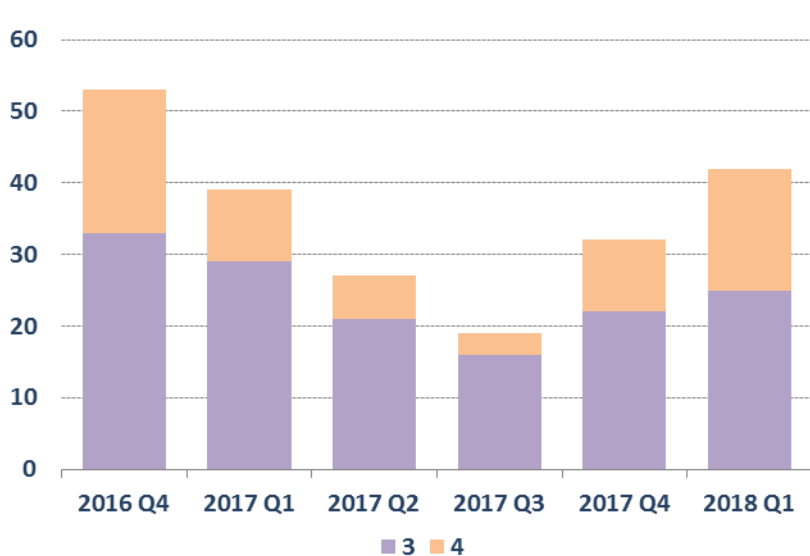
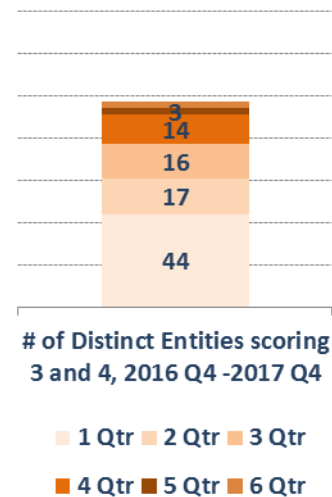
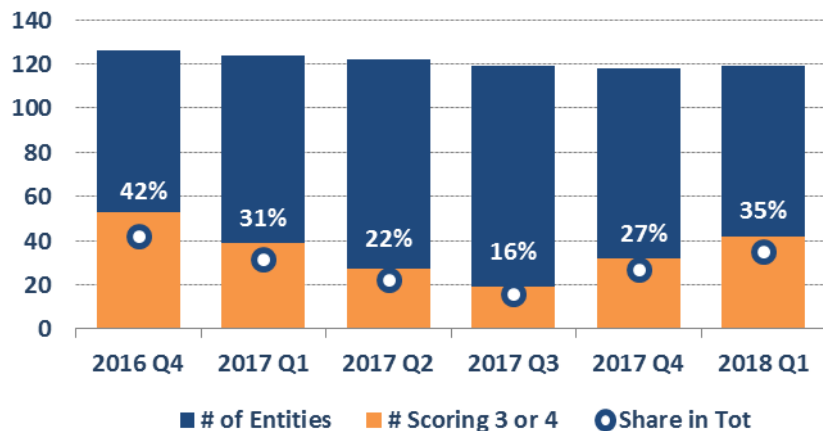
### To Remember

- Each quarter, a **snapshot of the data is taken** at a pre-determined cut-off date, which is equal to the **ECB remittance date + 1 day**.
- The DQIs are calculated on the basis of objective metrics.
- Regarding the number of missing data points (completeness dimension), there is a certain list of data points which is expected to be reported by all entities.
- The DQIs are a synthetic indicators build following one approach to convey a message on the reporting compliance and Data Quality of the different supervised entities.

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- 3 Results**
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## Results



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# Examples

Overall view
ITS Score breakdown
STE Score breakdown

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

Overall view
ITS score breakdown
STE score breakdown

Entity

Name

Select one reported period:

2017 Q2  
 2017 Q3  
 2017 Q4  
 2018 Q1  
 2018 Q2

Select a consolidation level:

Consolidated

Significance ID

Accounting framework

Peer group

Country

Number of peers

Cut-off date ITS

Cut-off date STE

Link to DGMS4/MSD SSM Quarterly Risk Figures Dashboard

[>](#)

### Overall DQI and distribution within peer group

### DQI - Breakdown

Quality Dimension	COREP	LE	LCR	NSFR	FINREP	AE	ALM	STE	Dimension wise DQI	Dimension Ranking
Punctuality	4	1	1	1	1	1	1	1	4	7
Completeness	4	1	2	3	3	2	2	2	3	13
Accuracy	4	1	1	1	1	1	1	1	2	4
Module-wise DQI	4	1	2	2	2	2	2	2		
Peer group average	2	1	2	2	2	2	2	2		
Module ranking	12	1	3	4	4	2	3	2		

### Overall DQI and Ranking over time

Decreasing Data Quality

Legend: Individual (blue), Peer group average (orange)

Ranking Overall

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

Overall view

**ITS score  
breakdown**

STE score  
breakdown



Entity:

Name:

Select one reported period:   
 2017 Q2   
 2017 Q3   
 2017 Q4   
 2018 Q1   
 2018 Q2

Select a consolidation level:   
 Consolidated

Significance ID:

Accounting framework:

Peer group:

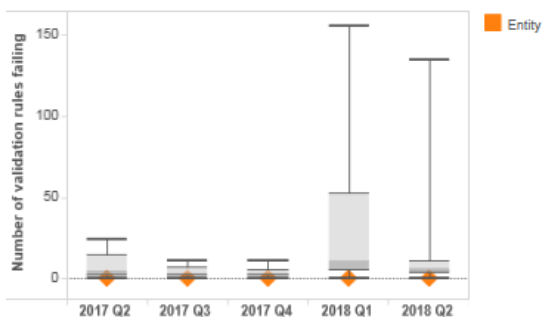
Cut-off date ITS:

Country:

Number of peers:

Cut-off date STE:

## Accuracy over time



## Accuracy

	COREP	LE	LCR	NSFR	FINREP	AE	ALM
Validation rules failing	0	0	0	0	0	0	0
peer-group average	7.7	0.0	0.0	0.0	5.0	0.3	0.1
of which: blocking	0	0	0	0	0	0	0
peer-group average	1.2	0.0	0.0	0.0	1.0	0.0	0.0
Data points failing	0	0	0	0	0	0	0
peer-group average	197.2	0.0	0.0	0.0	63.7	1.5	0.6
Ras impact				0	0	0	
peer-group average	3.5			0.0	0.3	0.1	



## Punctuality

	COREP	LE	LCR	NSFR	FINREP	AE	ALM
Delay With Errors (days)	1	0	0	0	0	0	0
peer-group average	0.1	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	0.7	0.0	0.0	0.0	0.3	0.1	2.0
Rejections		0	1	0	0	0	0
Accepted Submissions		1	1	1	1	1	2



## Completeness

	COREP	LE	LCR	NSFR	FINREP	AE	ALM
Missing templates	19	0	0	0	1	0	0
peer-group average	1.0	0.0	0.0	0.0	0.8	0.0	0.0
Missing Data Points	26	0	1	4	3	1	1
peer-group average	1.4	0.0	1.3	1.5	2.5	1.3	1.3
Missing data points involved in RAS	10	0	0	0	0	0	0





Overall view | ITS Score breakdown | **STE Score breakdown**

Overall view
ITS score breakdown
STE score breakdown

4

**Entity**

Name

Select one reported period:

2017 Q2  
 2017 Q3  
 2017 Q4  
 2018 Q1  
 2018 Q2

Select a consolidation level:

Consolidated

Significance ID

SI

Accounting framework

IFRS

Peer group

Diversified lender

Cut-off date ITS

28/08/2018

Country

Number of peers

33

Cut-off date STE

31/08/2018 23:59:59

### Accuracy over time

Number of validation rules failing

Entity

### Accuracy

	Concentration	Credit	IRRBB	Liquidity	Market
Validation rules failing	0	0	0	0	0
Data points failing	0	0	0	0	0
RAS impact	0	0	0	0	0

### Punctuality

Days of delay for STE modules

0

### Completeness

	Concentration	Credit	IRRBB	Liquidity	Market
Number of missing data points	0	0	0	0	2
Missing template	No	No	No	No	No

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### Directions for future developments

- Assess compliance at the **regulatory remittance date** (instead of the ECB remittance date).
- Include in the assessment **all “hard” rules**, not only the automatic (XBRL-based) EBA validation rules:
  - Include non-XBRL validation rules.
  - Include published rules developed by the ECB in cooperation with the NCAs.
- Continue to **refine the methodology** on the basis of gathered experience and supervisory demands.
  - Consider the resubmission analysis.

Thank you for your attention