EBA – Public hearing
Supervisory handbook on the validation of IRB rating systems

04 October 2022

Introduction

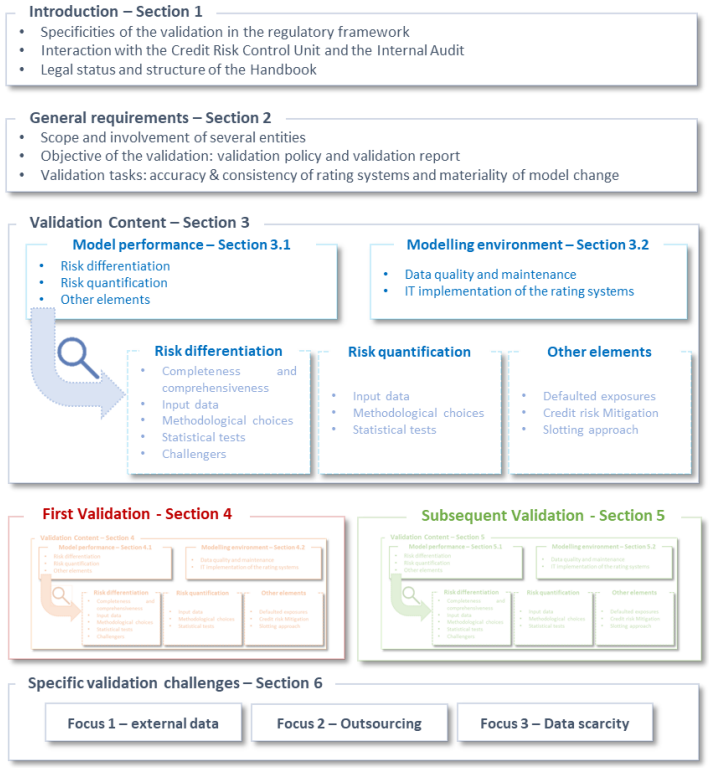
Background:

- Part of the "supervisory handbook" - Article 8(1)(aa) of the EBA Regulation
- No major additional requirement, leverage on the *IRB repair program** → **7 CONTEXT BOXES**
- Comments to CP to be sent by **28 October 2022**. General feedback + answer to **6 questions** welcomed

Structure of the handbook:

- **Section 1:** Introduction - specificities of the IRB validation
- **Section 2:** General requirements
- **Section 3:** Elements on which to get an opinion on:
  - **Model performance**: follows CRR structure (risk differentiation and risk quantification) & additional aspects (defaulted exposures, CRM, slotting approach)
  - **Modelling environment**: data quality & IT implementation
- **Sections 4 and 5:** specifies section 3, depending on the position in the model lifecycle (first or subsequent validation)
- **Section 6:** focus on 3 situations with validation challenges (external data, outsourcing and the data scarcity)

Q1

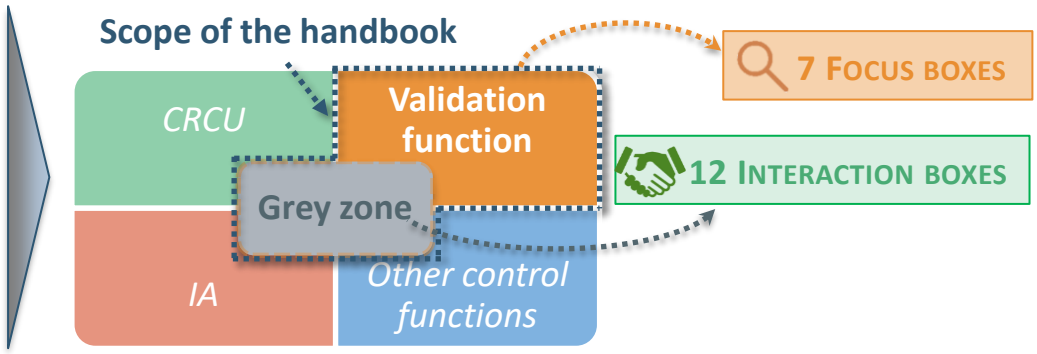


** CDR on assessment methodology, CDR and GL on DoD, GL on PD and LGD estimation, CDR on slotting approach, CDR and GL on DT, GL on CRM*

Section 1 - Specificities of the IRB validation

IRB validation's specificities:

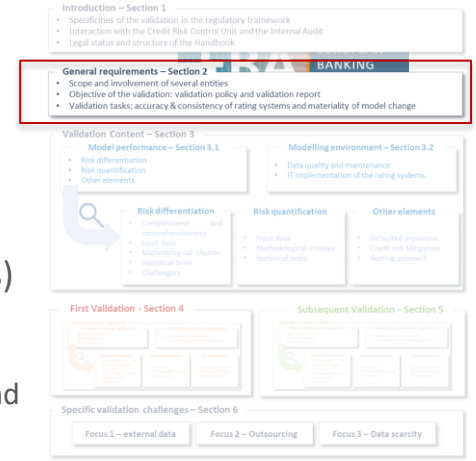
- Conducted independently to challenge the rating system: **2nd layer of defence**
  - Some tasks similar to 'model validation' performed by Credit Risk Control Unit (CRCU)
  - Some tasks can performed by Internal Audit (IA)
- Outcomes communicated to management body and senior management



Legal format and scope:

- **Legal format** - part of the "supervisory handbook" - Article 8(1)(aa) of the EBA Regulation:
  - No *'comply or explain'* mechanism
  - Departure can be justified on the needs of judgment-led supervision
- **Conversion Factors** left out (not part of IRB repair program), but most expectations on validation are applicable
- **Equity exposures** left out given the phasing out in Basel III

Section 2 - General requirements



Section 2.1 - Scope of the IRB validation:

- Any entity with IRB approval (i.e. consolidated, sub-consolidated or individual levels)
  - Validation function retains **responsibility** for all validation tasks and objectives
  - But **proportionality** of validation function's resources and framework to the complexity and materiality of the rating system
- Several validation functions can be involved
  - Outsourcing: **operational** tasks can be performed by a third party (*see focus 2*)
  - Within groups: coordination on the evaluation of the scope of any identified deficiency

Q2

Section 2.2 - Validation policy & validation report:

- **Validation policy** describes how to come up with an opinion on a rating system:
  - Description of the data collection process, list of tasks & analyses and methodology to reach a conclusion
  - Possible interaction(s) with CRCU
- **Validation report** describes the opinion of the validation function on the rating system
  - List of tests performed and outcomes of the analyses
  - Comparison with other years

Section 2.3 - Validation tasks:

- Performance assessment via 2 types of analyses
  - Review and challenge **modelling choices** (CRCU work and documentation)
  - Perform **empirical analysis** (challengers)
- Validation tasks expected to be 'consistent'
  - But can be targeted for specific cases (e.g. *see focus 3*)
- Assessment of the materiality of model changes
  - Linked with the assessment of process-related aspects of material model changes by IA (*Context Box 3*)

Section 3 – Model performance

Use of regulatory definitions for IRB metrics

Q3

- Risk differentiation and risk quantification assessed via **IRB metrics** (definition of default, economic loss, default & loss rates) as defined in the *IRB repair program*.

Section mainly based on the structure of the CRR:

Section 3.1 – risk differentiation

Consistency and comprehensiveness of the rating assignment		1. Documentation for consistency 2. Comprehensiveness and conservatism for non-standard ratings	
Accuracy of the rating assignment		**Discriminatory power**	**Homogeneity & Heterogeneity**
	Input data	1. Data quality 2. Completeness of the RDS 3. Data preparation *(including estimations)* 4. Representativeness	
	Methodological choices	1. Risk drivers 2. Functional forms and human judgment 3. Definition of grades or pools	
	Statistical tests	1. Scope and level of application 2. Various economic conditions	
	Challengers	1. Impact of overrides 2. Number of overrides 3. Stability of the ratings 4. Monotonicity of the DR 5. External data sources 6. Concentration in rating grades	

Key discussion on OOT/OOS validation

Section 3.2 – risk quantification

Input data	1. Data quality 2. Completeness of the RDS 3. Data preparation (review of the exclusions and realised LGD floored at 0%) 4. Representativeness (challenge adjustments)			
Methodological choices	**PD**	**LGD**	**Conservatism**	**Downturn (DT)**
	1. General calibration methodology 2. Average DR *(Overlapping windows)* 3. LRA *(including for LGD treatment of Incomplete work-out)* 4. Calibration segment and type 5. Appropriate adjustments		1. In CRR 2. Quantification for each MoC category 3. Aggregation of MoC categories	1. Economic DT 2. LGD DT
Statistical tests	1. Compare DR with PD and similar analysis for LGD and CF – 185(b) CRR 2. Other quantitative validation tools (best estimates) – 185(c) CRR 3. External data sources			

Q4

Section 3.3 – other elements

Defaulted exposures	1. RDS: reference dates, realised LGDs and data requirements 2. ELBE: MoC, economic conditions and SCRA 3. LGD in default: relation with LGD non defaulted and ELBE	
CRM	1. RDS: source and allocation of cash flows, recoveries from collateral 2. Level of validation 3. Meaningful recognition (no double counting)	
	FCP	**UFCP**
	1. On-balance sheet netting and master netting agreement 2. Adverse dependency	1. Choice of the approach 2. Recognition of multiple CRM
	Use of multiple CRM	
Slotting approach	1. Assessment of the assignment process 2. Assessment of the input data 3. Assessment of the modelling choices 4. Quantitative and challenger analyses	

Q5

With clarifications on three specific elements:

- All the expectations of Section 3.1 & Section 3.2 generally applies…
- … with however **some adjustments** or additional checks necessary.

Section 3 – Modelling environment

Background:

- IRB validation beyond performance assessment: covers also modelling environment
- However, assessment may be performed in cooperation with other function(s)

Section 3.1 - Data quality and maintenance:

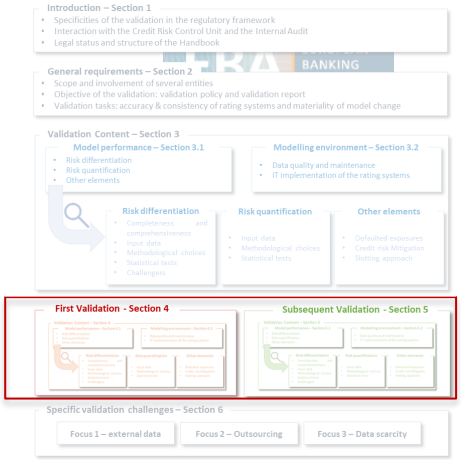
- Leverage of the *"data quality framework"* dimensions*
- Several layers of defence interconnected:
  - **Dedicated data quality function**: second line of defence
  - **CRCU**: for parameters' estimation (adjustment and MoC)
  - **Validation function**: check both validation & CRCU data
  - **IA**: third line of defence

- Tasks of the validation function :
  - Access to data quality management report
  - Independent access to all relevant IRB data (hence assessment of the IT documentation)

Section 3.2 - IT implementation:

- IA can review the correct implementation of the model and calculation of own fund requirements.
- Validation function's tasks:
  - Review the documentation (IT specifications)
  - Review the User Acceptance Tests

Section 4 and 5 – First and subsequent validation



Scope of the sections:

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- **First validation**: Changed aspects of changed rating systems (+ new rating systems)
- **Subsequent validation**: unchanged rating systems + unchanged aspects

➔ Difference in terms of background, focus and interaction with CRCU

***NB**: 'full' review of estimates:*

- *Less frequent (e.g. every 3 years), similar to first validation*
- *Review the alternative modelling possibilities from CRCU + use challenger models*

Section 4 - First validation:

***Background** – key step (e.g. before CA approval) but*

- ✗ *No previous assessment*
- ✗ *Limited new data available since model development*

Key discussion on OOT/OOS validation

➔ **Focus**: Modelling and calibration choices

➔ **Interaction with CRCU**: expected to complement analysis with additional tests, using new data available as much as possible

Section 5 - Subsequent validation:

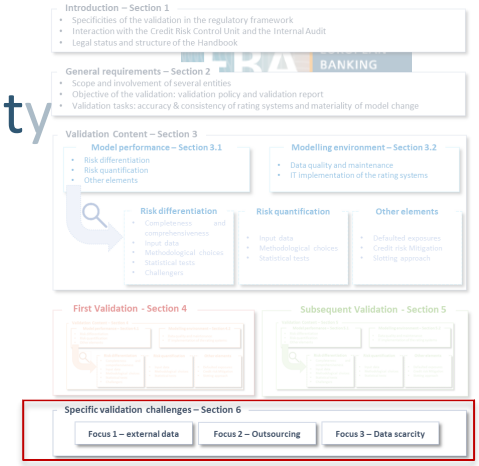
***Background** – 'regular' (yearly) review of estimates:*

- ✓ *Can leverage on previous assessment*
- ✓ *New data available*

➔ **Focus**: Empirical assessment with new data available

➔ **Interaction with CRCU**: More flexibility possible for some analyses (representativeness, risk differentiation's empirical assessments for non-material rating-systems)

Section 6 – External data, Outsourcing, Data scarcity



Section 6.1 - External data (including data pooling):

- Section covers a wide range of situations (ECAI mapping, pool data, other data)
- **5 principles** to cover specific additional risk – derived from CRR requirements:

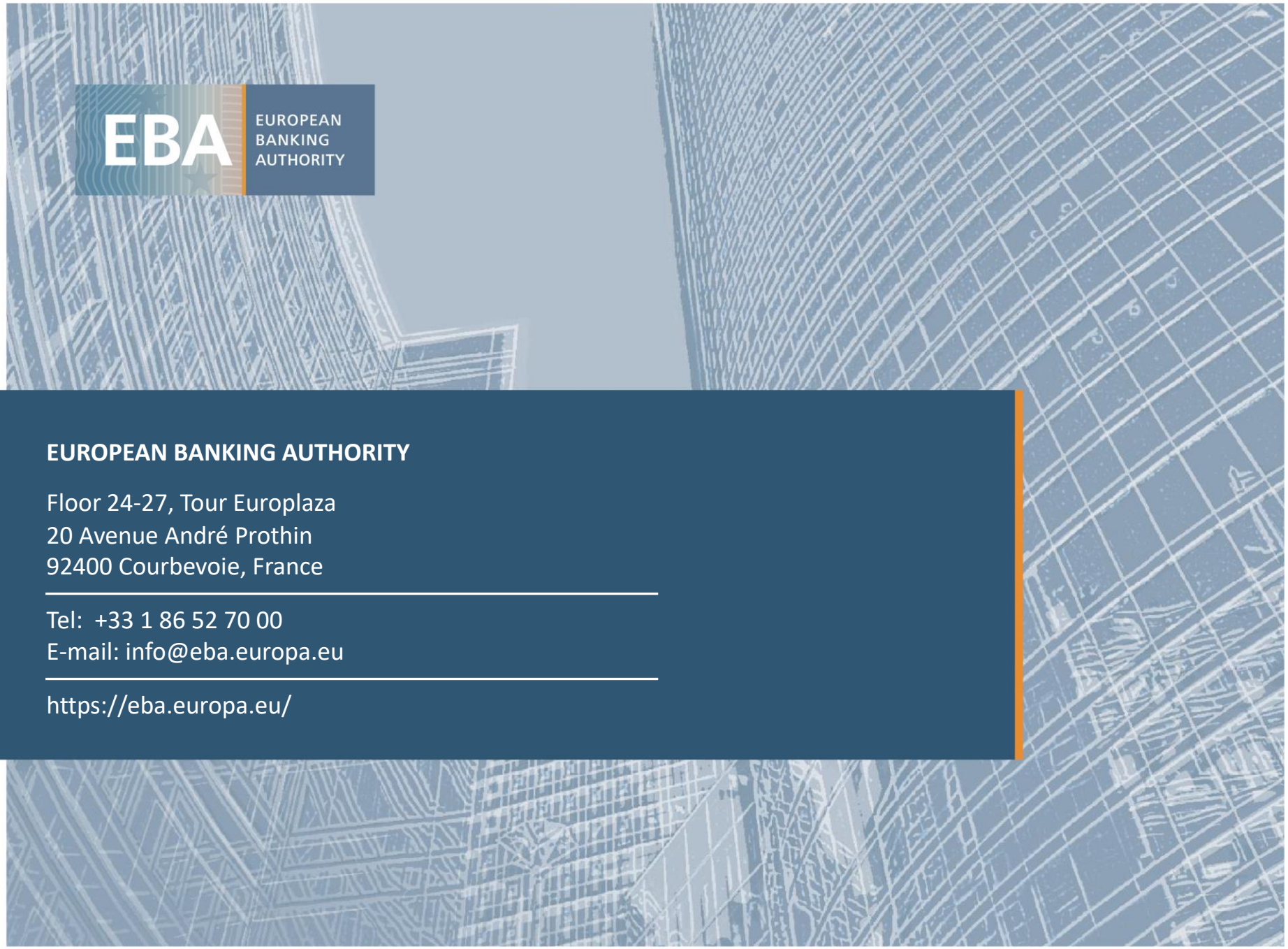
1. Key assessment = **representativeness** *(MoC & use of data)*
2. Validation function has **access to data**, at least indirectly
3. Assessment of bias due to **duplication of obligors**
4. Assessment of the performance first on **internal data**
5. Assessment of **data quality** framework of the provider

Section 6.2 - Outsourcing:

- Leverage on the *guidelines on Outsourcing:*
  - Key requirement: only possible to outsource **operational tasks** to retain independence of the validation function
  - Other requirements: transparency, access & inspection, quality standards, business continuity
  - Further clarified for **intragroup outsourcing**
- **Outsourcing policy**: adjust the validation function's resources to the nature of outsourcing provider

Section - 6.3 Data scarcity:

- *Limited regulatory sources*
- Adaptation of the validation policy
  - Define **specific metrics and tolerances**
  - Need for complementary (qualitative) analyses
- Specific assessment of the risk differentiation
  - Analysis of risk drivers for observed default and losses
  - Adequacy of the **number of rating grades**
- Examples of alternative validation approaches



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