FINANCIAL INFORMATION BASED ON MICRODATA: BANCO DE ESPAÑA CENTRAL CREDIT REGISTER EXPERIENCE

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OUTLINE

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SOME BACKGROUND

- **Banco de España Regulation on the Central Credit Register (Circular 1/2013) on the collection of granular data on loans granted by credit institutions**

    - The result of a process of internal reflection aimed at improving the quality reported to the CCR triggered by the profound financial crisis

- **Main reasons behind the launching of this project:**

    - To widen the role of credit registers in the lending market beyond the traditional supervision of credit institutions

    - To strengthen its use for the proper conduct of macroprudential supervision, to preserve the stability of the financial system

    - To overcome the lack of sufficiently disaggregated information

- **The 2017 modification of the CCR Spanish Regulation:**

    - To adapt the reporting framework for the collection of granular data based on harmonized ECB statistical reporting requirements

FROM AGGREGATED DATA TO GRANULAR DATA (1): MAIN FEATURES

		CCR 1995	CCR 2013[1]
Number of features (attributes)	**Borrowers**	18	29
	Instruments	5	235
Level of granularity		Aggregated data	Instrument by instrument
Reporting threshold	**Residents**	≥ a 6.000 €	0 €, with some exception
	Non-residents	≥a 300.000 €	
Transaction traceability		✘	✔
Type of borrowers		Borrowers (legal and natural persons)	Borrowers (legal and natural persons) and other counterparties*
Exemptions for Reporting specific transactions		1. Some types of accounts : current accounts, mutual accounts, reciprocal accounts. 2. Non compulsory for public debt issued by Central Government	No exemptions

(1) All the details of the new reporting scheme can be found in **last year presentation** by **Lola Cano:** *"Recent developments of the Central de Información de Riesgos and its uses"*

FROM AGGREGATED DATA TO GRANULAR DATA (2): INCREASE IN QUALITATIVE DETAILS

- Richness of **instrument attributes**. Some examples:
  - 47 values for 'Type of product' attribute (CCR-95: 15 values)
    - Loans: 30 values (financial credit – 23, trade receivables - 7)
    - Other instruments: 17 values
  - 45 values for 'Purpose of the loan' attribute (not reported in CCR-95)
    - loans to households 13, loans to other sectors 32
- Richness of **data on amounts collected**
  - 24 attributes on amounts for all types of products. ['Principal. Not past-due', 'Principal. Arrears', 'Interest and fees', 'Late-payment interest', 'Claimable expenses', . . .]
  - And 7 additional amounts for loans. ['Past-due principal collected in cash', 'Early redemption', 'Forgiveness or extinguishment of claim', . . .]
- **Traceability of instruments**. Linkages for instruments resulting from:
  - instrument transferences
  - restructured, refinanced, renegotiated, subrogated and separated instruments
  - credit institution mergers

  ✓ **Quick response to future user requirements**
  ✓ **Reducing future reporting burden**

FROM AGGREGATED DATA TO GRANULAR DATA (3): INITIAL IMPACT IN SOME VARIABLES

	CIR 1995	CIR 2013	
	March-2016	**March-2016**	December-2016
Borrowers	15.288.206	20.499.014	20.856.591
Resident	15.259.410	20.282.757	20.636.562
Non resident	28.796	216.257	220.029
Number of exposures (CIR 1995) / instruments (CIR 2013)	26.518.210	39.693.649	42.265.206
Total exposure (eur 10^9)	2.951	3.645	3.802

➢ **Initial implications:**

➢ Differences in the reporting volume under both schemes: Increasing number of borrowers and of the total exposure (due to the withdrawal of the threshold and of the exemptions)

➢ Break in time series, deeper at highest level of disaggregation

➢ Need to be cautious in the interpretability of data

SPANISH CCR MAIN FIGURES

Credit institutions and specialised lending institutions. Loans granted.

- **Debtors (thousands)**

	Total	Resident					Non-resident
		Total	Financial institutions	General government	Non financial corporations	Households and NPISH	
2017-Dec	19.380,4	19.037,3	4,9	6,5	1.011,6	18.014,2	343,2
2018-Dec	19.764,5	19.504,8	5,4	8,0	1.030,3	18.461,1	259,7

- **Outstanding amounts at end of period (€ billions, 10^9)**

	Total	Resident					Non-resident
		Total	Financial institutions	General government	Non financial corporations	Households and NPISH	
2017-Dec	2.099,8	1.845,4	338,5	266,3	535,6	705,0	254,4
2018-Dec	2.052,6	1.784,1	318,4	253,7	510,4	701,6	268,4

BANCO DE ESPAÑA'S EXPERIENCE WITH GRANULAR DATA MANAGEMENT (1)

A big challenge both for Banco de España and for the reporting agents:

➢ **Issues related with information systems**

- Big technical challenges: Size of the databases, need to widen storage and processing capacity, etc

- Increased number of data involved in the exchange of information with the RAs:

  - *bigger reception files*

  - *huge increase in the number of data corrections*

  - *Increasing amount of Data Quality feedback (hundred of thousands of instruments; hundred of thousands of validations results)*

- Need to decide the model of transition: maintaining two reporting systems or switching once for all to the new one

- Need to decide to substitute or adapt the already existing IT systems

  → *All in all: big transformation in the processes of transmission and processing credit risk data*

BANCO DE ESPAÑA'S EXPERIENCE WITH GRANULAR DATA MANAGEMENT (2)

➢ **Issues related with the reporting agents**

- Multiple areas involved in the granular reporting: attributes for same instrument are kept in different areas (accounting department vs risk department, for example)

- Difficulties in obtaining new attributes for already existing instruments (accounting information: performing status, probability of default) or for previous borrowers (enterprise size; number of employees)

- Univocal identification of the borrower could also be a difficult problem to be sorted out under certain conditions, as the implementation of AnaCredit has shown

- Risk of overburden/duplication of reporting requirements: granular vs aggregated reporting could fall under the responsibility of different areas

- Essential to share understanding on the definitions

- Need to set a logical model of all the data attributes and metrics suitable for all the regulatory requests

→ *Need to reorganize the Reporting Agents internal databases for an integrated financial reporting.*

# BANCO DE ESPAÑA'S EXPERIENCE WITH GRANULAR DATA MANAGEMENT (3)

➢ **Issues related to data quality management**

- Moving to granular data generally involves an increase in the level of details requested. Each attribute within each operation needs to be coherent

- Data quality controls are very different in the granular reporting:

  - *requires the continuous involvement of analysts (the analitycal system plays a very important role) (see diagram);*

  - *the involvement of power users at initial stages of implementation*

  - *and the implication of the reporting agents*

- New Data Quality approaches:

  - *Summary indicators; Reconciliation of granular data with aggregated data*

  - *Need to define a certain accuracy threshold*

  → *To get a reasonable level of data quality takes time*

BANCO DE ESPAÑA'S EXPERIENCE WITH GRANULAR DATA MANAGEMENT (4)
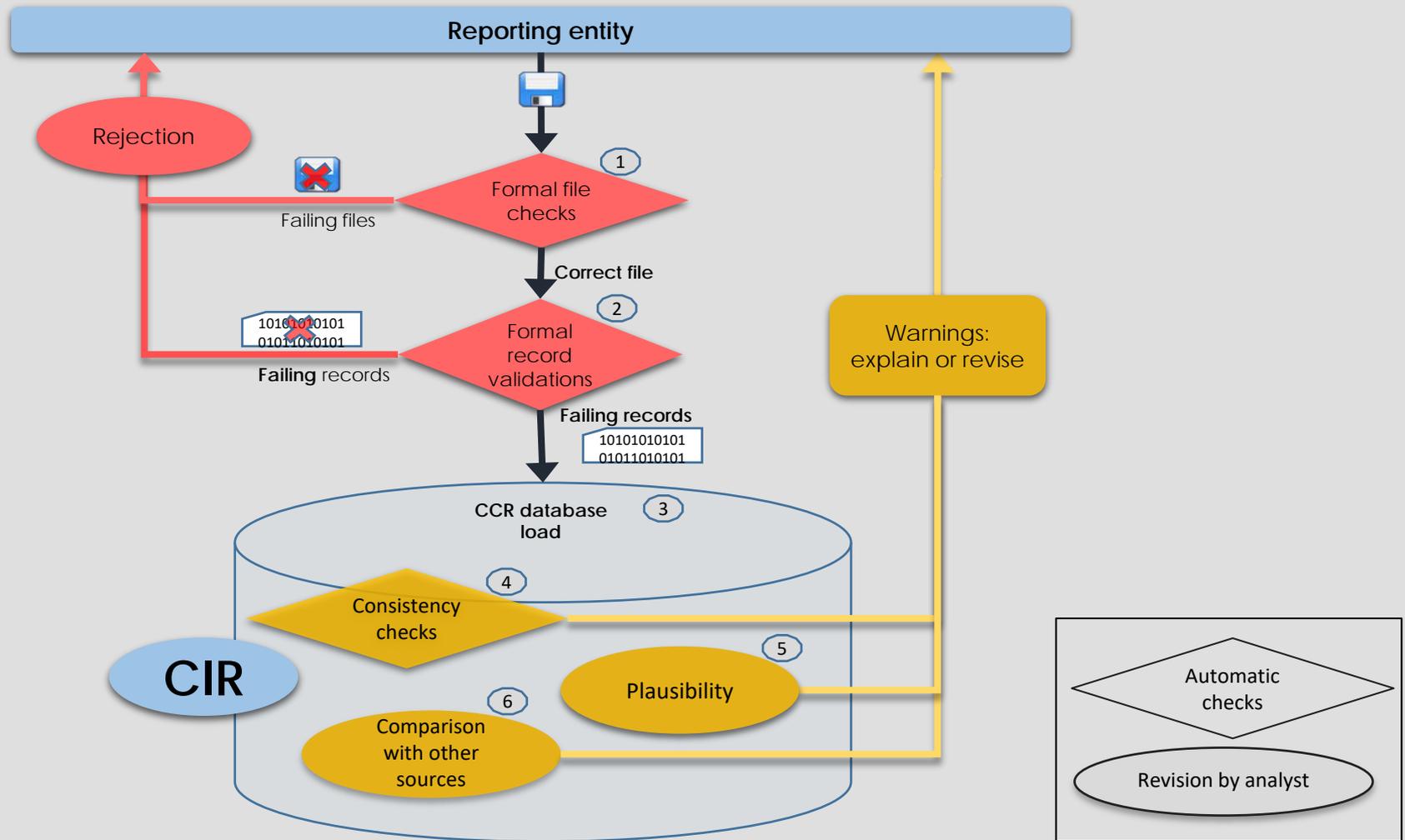
Source : 2018 CCR Annual report

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CONCLUDING REMARKS (1)

- Change to granular information data basis is very costly both for NCBs and for the reporting agents

- Complex technical issues emerge

- Need to enhance governance issues

- Processing such a huge amount of information requires high investment in IT infrastructure that should be accompanied by investment in human capital:

    - *Training is essential: both for the production team and the final users*

- Ensuring quality of information in the initial stages of implementation should be the main target

    - *Need to manage user expectations*

- Essential to share understanding on the definitions

    - *Need to set a logical model of all the data attributes and metrics suitable for all the regulatory requests*

CONCLUDING REMARKS (2)

- Time for the change is needed

    - *Coordinated and reasonable planning is of the essence*

    - *A collaborative approach among NCBs, reporting agents and users should be followed*

- Granular data, in comparison to the traditional aggregate statistics, cause new challenges about confidentiality

Having a complete database is not enough. To fulfil the purposes of the wide range of users of CCR data, it is essential to ensure the veracity and accuracy of the information

THANKS FOR YOUR ATTENTION

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