
IFC Satellite Seminar on “Granular data: new horizons and challenges for central banks”

The Eurosystem’s granular data on securities, loans and entities –
How we use such information today and what we may develop differently next time¹

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EUROPEAN CENTRAL BANK

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The Eurosystem's granular data on securities, loans and entities -

how we use such data today and what we may develop differently next time

Bank of Canada – IFC Satellite seminar on 'granular data: new horizons and challenges for central banks'



15 July 2023

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Overview

- 1 Background and dimensions
- 2 Need for an integrated multi-purpose product
- 3 Challenges and solutions
- 4 Predefined statistical product
- 5 What we should address to do better next time
- 6 The Integrated Reporting Framework (IReF)

1. Background and dimensions

WHY



- (also) financial crisis 2009 triggered **new policy questions**
 - Information available inadequate: **aggregates were not enough**
- Decision to “**move beyond the aggregates**” with credit data and securities data

WHAT did we do?



- **Securities issues** data ‘Centralised Securities Database’ (*CSDB*), since 2009; covering monthly and daily ca. 8 million active securities worldwide with 70+ attributes;
- **Securities holdings** data, ‘Securities Holdings Statistics Database’ (*SHSDB*), by sector (SHSS) and banking group (SHSG), since 2013
- Data on **banks’ loans to legal entities** (‘all except private households’), (*AnaCredit*), since 2018, reported by all 20 euro area countries, € 25,000 threshold; 70 attributes, covering monthly and quarterly ca. 30 million active instruments and about 5 million counterparties (mainly corporates)
- **Entity master data** ‘register of Institutions and Affiliates’ (*RIAD*), about 80 attributes and about 13 million records (this covers issuers, holders, creditors, debtors, etc.)

2. Need for an integrated multi-purpose product

Multi-purpose usage:

- Developing new/enhanced statistics (e.g. ad-hoc aggregates, climate)
- Monetary policy (e.g. SME access to finance)
- Research (e.g. effectiveness of monetary policy transmission)
- Financial stability (e.g. sectoral risk exposure, interconnectedness)
- Banking Supervision (e.g. credit exposures, borrower concentration)

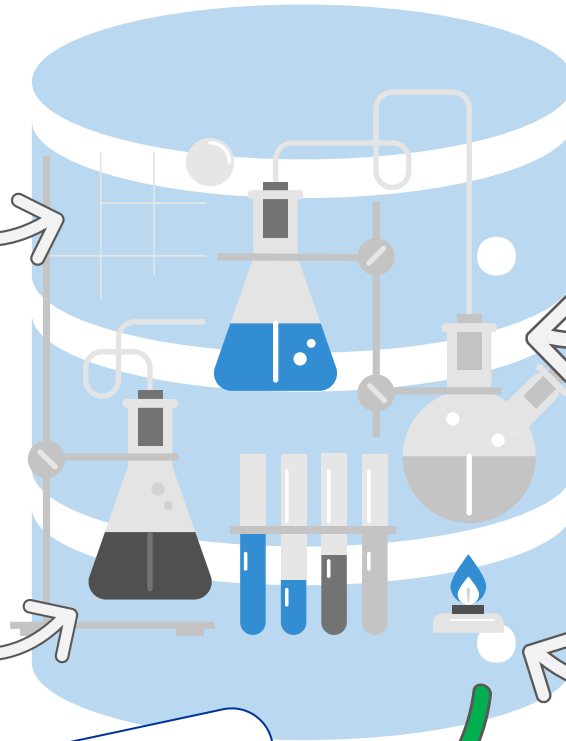
CSDB: What are the total issuances of this entity?

SHSG: Which securities do supervised banks hold?

RIAD: Who is this entity and in which group does it belong to?

AnaCredit: Who received loans from this bank?

Integrated: e.g. 'who provides funding via loans or securities to a certain entity or group?'



3. Challenges and solutions

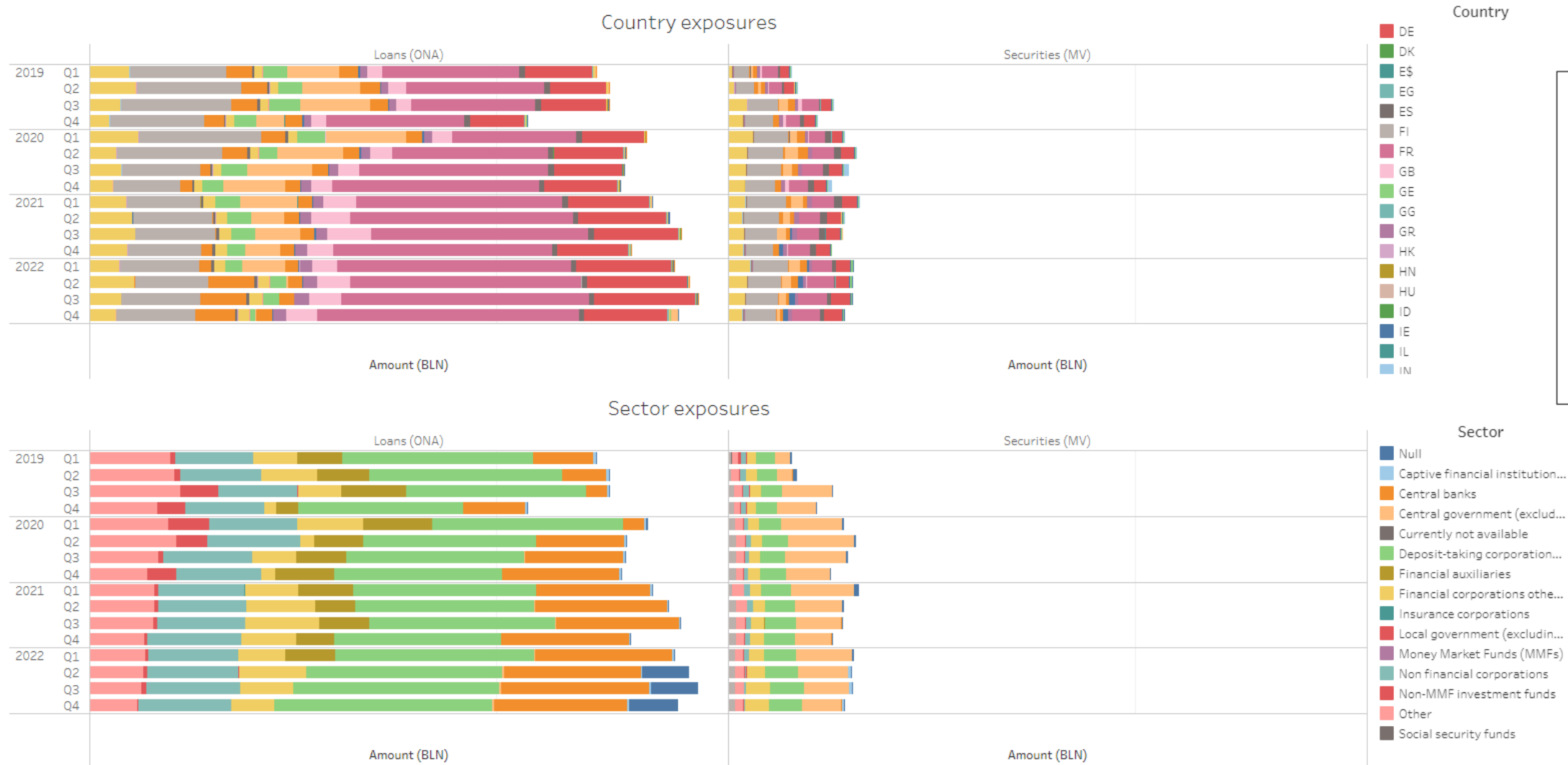
Challenges

- **Unique identification** of entities across different statistical systems
- **Reconciliation** of differences in reporting population/coverage and level of granularity
- Differences in **frequencies, timeliness** and processing of **revisions**
- Calculations are **computationally heavy** and need to be refreshed frequently
- We need a **single core product**, reliable, replicable, which could be used as a basis for all users, also to connect other, potentially still less developed and standardised data → e.g. to develop climate related indicators

Solutions (see also annex)

- Technical approach via **2 big tables** covering entity reference data and amounts data (by entity), quarterly since 2019
 - ✓ Unique identification of **entities** across time and statistical systems
 - ✓ Establish **group structures** to build on
 - ✓ Establish **amount tables** by nominal value and market value/carrying amount
- Developing an **interface for non-technical users** and **database access for power users**
- Develop **predefined statistical products**, also at aggregated level
- **Collaborate** well across statistical domains!

4. Predefined statistical product



Note:

The charts refer to an aggregate of more than 10 banks to keep confidentiality protected.

Technically the data can be extracted for individual banks or banking groups. It is also possible to explore respective exposures versus individual counterparties or industries.

5. What we should address to do better next time

- **Data quality management:** Process requires high level of collaboration and coordination as it is not integrated; so far the underlying statistical regulations are output harmonised and primary reporting may differ among National Central Banks; production processes are not necessarily fully aligned
- **Access monitoring** is so far split and the access to the integrated dataset requires several separate permissions.
- **Gaps or overlaps of requirements which follow slightly different definitions** across different sets of statistics which can hamper integration
- **Increasing reporting burden** with each new requirement for reporting banks and National Central Banks compiling the data

6. The Integrated Reporting Framework (IReF)? [1/3]

NCBs defined reporting requirements

Reporting overlaps existed

... One regulation
... Redundancy-free

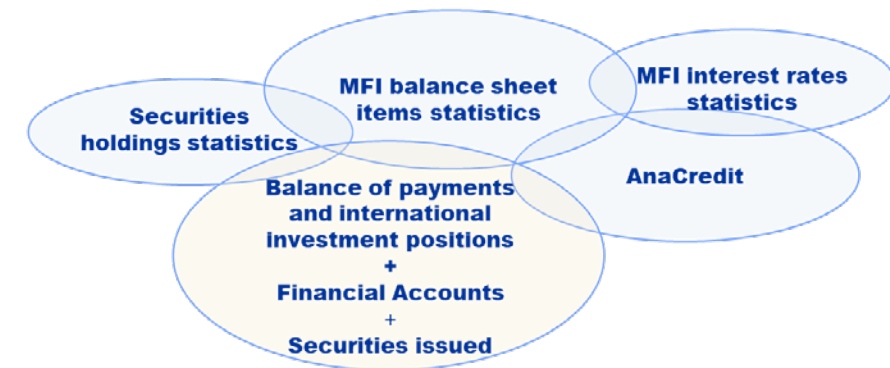
Standardisation via the IReF

IReF
collection
layer



ONE euro area
↓
ONE directly applicable regulation
↓
ONE largely standardised implementation

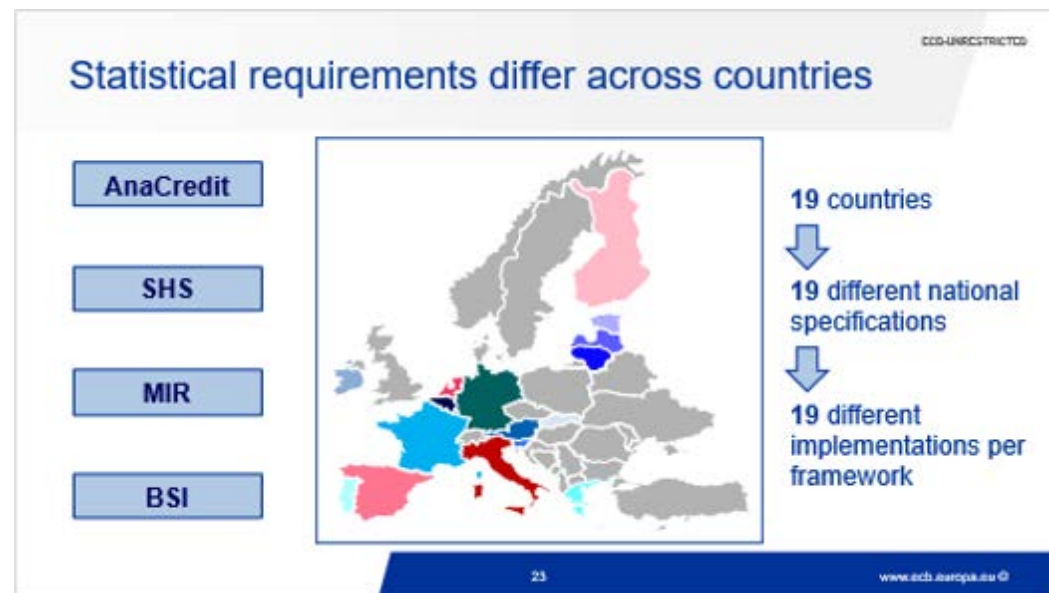
Datasets currently in scope of the IReF



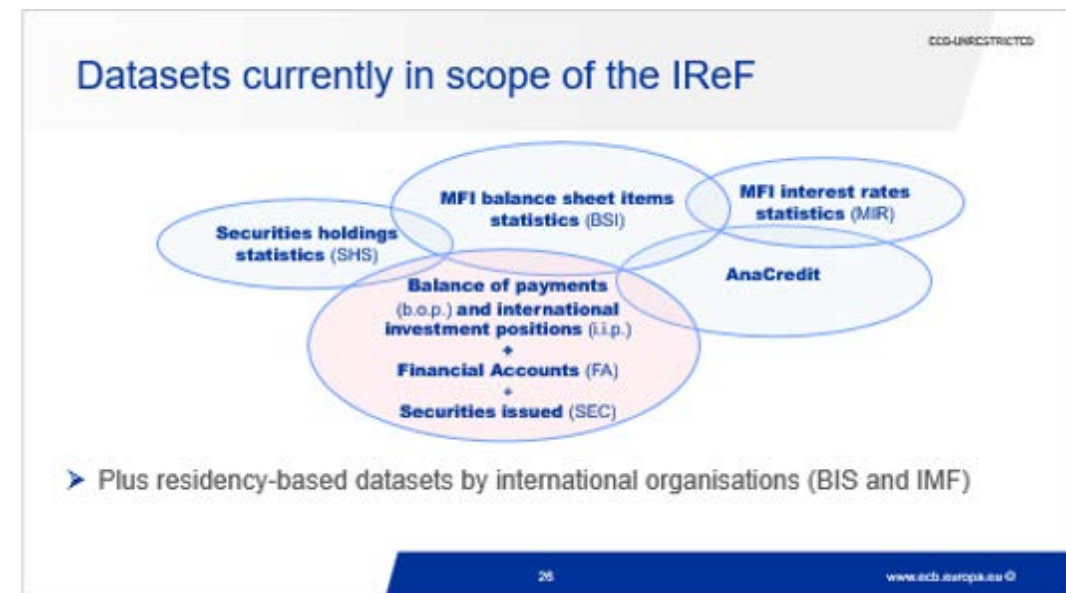
➤ *Plus supranational regulatory contents*

6. What is the IReF trying to achieve?

Cross country standardisation



Redundancy-free reporting



6. What is the IReF trying to achieve?

Cross country standardisation

Standardisation via the IReF



Redundancy-free reporting

Integration is the solution



Annex

Disclaimer: in the interest of available presentation time some of the issues in this presentation needed to be simplified. In case of further questions, please do not hesitate to contact me.

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Granular product – integration backbone

Full granularity data consisting of two tables



Entity reference table

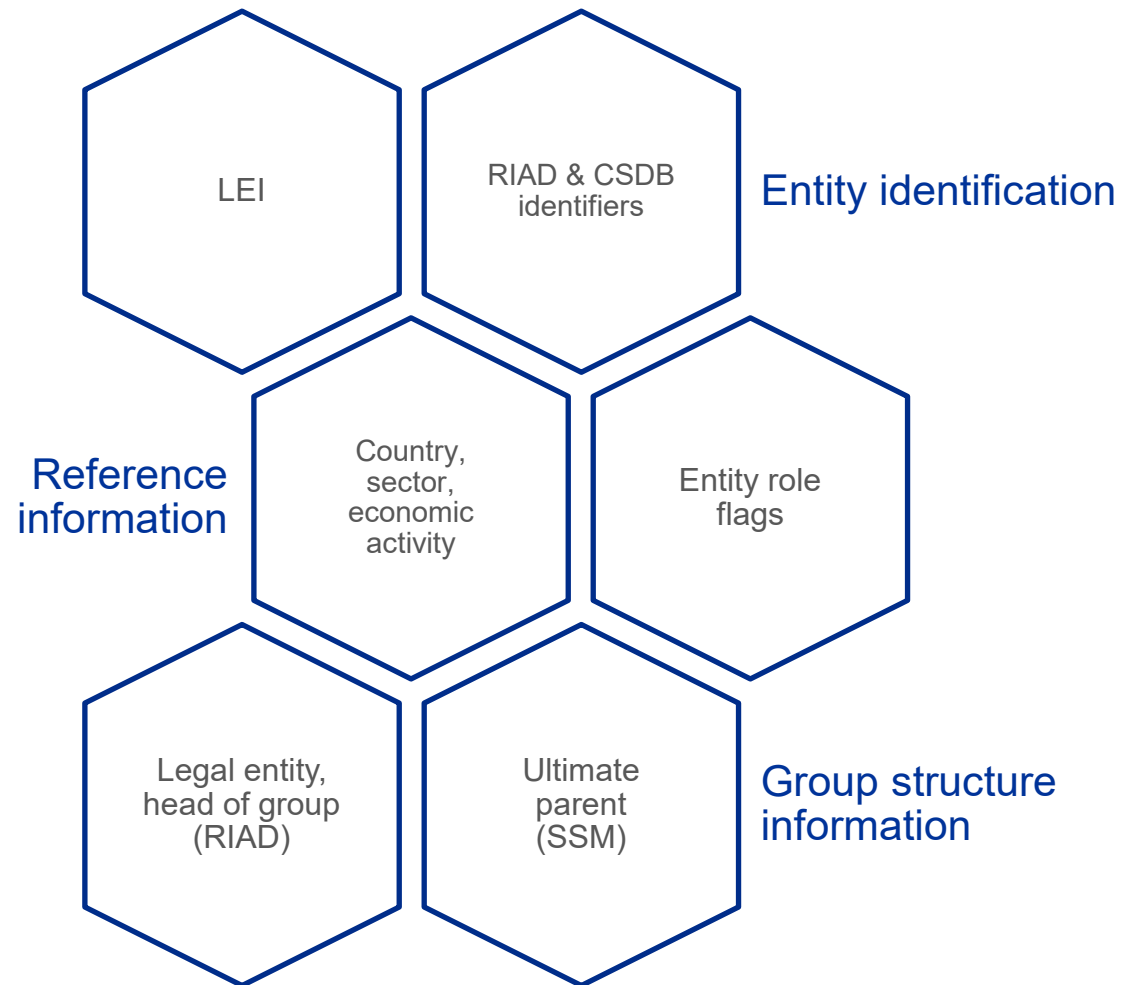


Amount table (by entity)

Providing the ability to:

- uniquely identify entities across time and systems
- quantify the amount of securities/loans between entities
- establish a group structure to build upon

Entity reference table



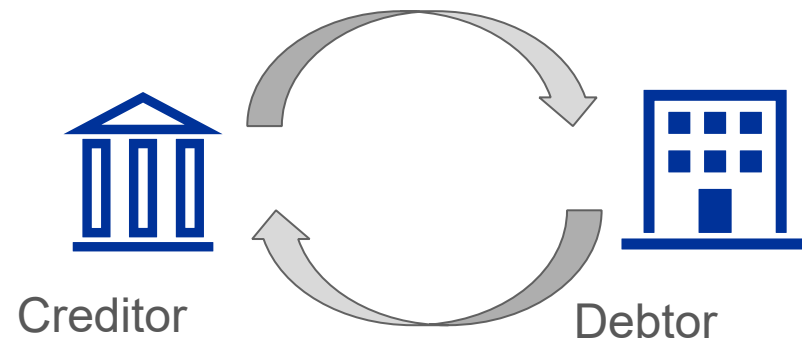
All reference periods as of September 2018

AnaCredit, CSDB, RIAD, SHSG, SSM information

Group structure based on SSM and RIAD

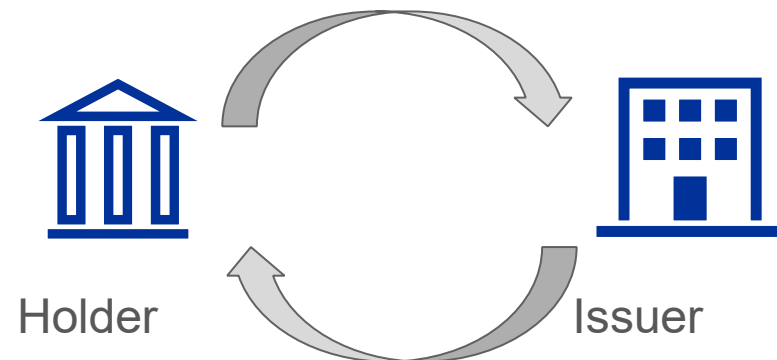
Amount table

Amount figures for the following 4 types of entity relationships:



measured by

Carrying amount
Outstanding nominal amount



measured by

Holding amount (market)
Holding amount (nominal)
Amount outstanding
Market capitalisation