

# Economic and Finance statistics



## Block 4: Micro data for Statistics

Part 3 – AnaCredit - Loan-by-loan data on credit and credit risk

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# Outline

Part 1: Introduction to financial micro statistics - Benefits, challenges and key aspects of financial micro data

Part 2: Security-by-Security databases

Part 3: Loan-by-loan data on credit and credit risk

1 Background

2 AnaCredit and its goal

3 What does AnaCredit collect?

4 How does AnaCredit collect it?

5 Useful references

Part 4: MMSR, €STR and Yield curve

# Background

## *The rise of micro data for statistics*

More granular data collections have become increasingly relevant for the production of statistics

Aggregate data is high-level data which is **acquired by combining individual-level data**

### Surveys

- *limited coverage, low comparability*
- often run ad hoc to address urgent needs, *no/limited time series*
- expensive, for both reporting agents and central banks

### Aggregated data

- individual institutions combine their positions and transactions into a *limited set of statistics/indicators*
- *predefined (fixed)* breakdowns
- well established, *broad coverage*, relatively *limited costs* of reporting
- *long lead time (years)* to address *ever changing policy needs*

### Granular data

- Individual-level data
- *more informative*: enables sophisticated and more accurate analysis, address heterogeneity
- *flexible*: meet ever-changing user needs in a timely manner,
- Used to *derive aggregates* (regular & on-demand), allowing *drill-down* of aggregates
- *cost-effective*: high set-up costs offset by running savings, also for banks!



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Nowadays technology makes the *collection, storage and processing of high volumes* of individual-level data *possible*

# Moving beyond the aggregates

*Targeting a holistic approach to data reporting*

## Integration

managing areas of statistical and supervision reporting as parts of a single system



## Harmonisation

of practices, methodologies and processes followed for data production  
= *longer-term objective*

- **Goal:** *extract the most out of existing data* (high value for analysis) and *minimise reporting burden*

# AnaCredit

## *In a nutshell*

### WHY



- Financial crisis triggered new policy questions
- Information currently available inadequate:  
*need to zoom in* beneath aggregates, need for *harmonised definitions*
- Decision to “*move beyond the aggregates*” (also) with credit data

### WHAT



- AnaCredit = Analytical Credit Datasets
- Granular information on loans by **euro area banks** *70 attributes*
- Identity of **creditor** (banks) & **debtor** (mainly corp.) *20 attributes*

### WHEN



- **First reporting** *in Nov. 2018* with reference date *end-Sep. 2018*
- On a monthly basis, quarterly in some cases
- To date, 32 reference dates have been reported

# Purpose of AnaCredit

*Credit and credit risk data are key for the tasks of the ESCB*



AnaCredit will support several key functions of the **ESCB**  
→ multi-purpose dataset for many potential uses

## **Monetary policy**

Demand & supply in credit markets and access to finance of SMEs

## **Monetary policy implementation**

Collateral and leverage of financial intermediaries

## **Risk management**

Sectoral risk analysis/monitoring for macro stress testing

## **Financial stability / Macro-prudential policies**

Risk exposures, interconnectedness and potential contagion

## **Developing new / enhanced statistics**

Micro-macro data comparison, derivation of aggregates



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# Process leading to the definition of AnaCredit

## *Addressing the heterogeneity in the availability of credit data*

**Work by the ECB and the national central banks of the ESCB aimed at providing detailed and timely credit data to allow for efficient use to support the tasks of the ESCB**

- Providing an analytical view of euro area' credit risk regardless of the financial instrument or accounting classification
  - The merits and costs procedure showed user needs for a comprehensive set of attributes and measures that characterise credit
- Developing a long-term framework for the collection of granular data, in line with the ECB's strategy for statistics
  - Based on harmonised statistical reporting requirements and targeting a holistic approach to data reporting, ensuring interoperability with other statistical frameworks collecting granular information
- Fostering harmonisation and increased comparability of the data across institutions and countries
  - Thus ensuring a higher data quality for analysis
- Minimise the reporting burden, also by increasing the stability of the reporting requirements over time
  - Thanks to greater detail, the need for any additional requests addressed to reporting agents is reduced. Incorporating changes into data collection and processing systems of reporting agents can be very costly

# Regulation, Guideline and Manual

## *Legally binding requirements and the reporting instructions*

- **AnaCredit Regulation** ([Regulation \(EU\) 2016/867 on the collection of granular credit and credit risk data](#))
  - Sets out the reporting requirements and defines the reporting population
  - Legal basis for the AnaCredit implementation
- **AnaCredit Guideline** ([Guideline ECB/2017/38 on the procedures for the collection of AnaCredit data from NCBs](#))
  - Legally binding for euro area NCBs: allocating NCBs' responsibilities for the reporting
  - Procedures for reporting credit and counterparty reference data to the ECB
- **AnaCredit Manual** ([AnaCredit reporting manual](#)) to support reporting agents in the reporting
  - Detailed documentation, with concrete examples, clarifying the AnaCredit requirements
  - Further **assistance via Q&A**, addressing reporting issues raised by banks on an ongoing basis



# Definition of AnaCredit reporting population

## *Who has to report?*

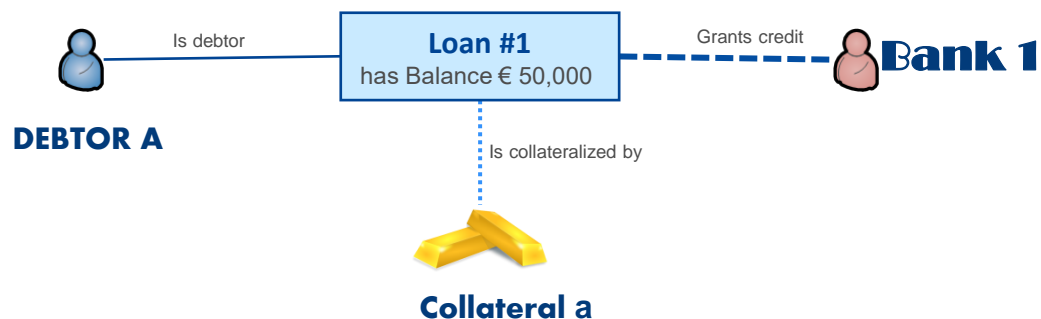
- **Reporting population** – *euro-area resident credit institutions* and *resident foreign branches* of credit institutions
- **Reporting agent** - a legal entity or a foreign branch that is resident in a reporting Member State and that is subject to the ECB's reporting requirements pursuant to this Regulation (Art. 1(8))
- **Observed agent** - an *institutional unit* whose activity as creditor or servicer is reported by the reporting agent
  - *Banks* broken down to *Head office* (representing the reporting bank) and *Foreign branch(es)*
- Reporting agents *report credit data of their* observed agents
  - *Instruments* subject to AnaCredit reporting (Art. 4 and 5)
  - Only credits extended to legal entities fall under the scope
- Reporting agents report to the **relevant NCB**

Instruments					
✓	Reverse repo	✓	Credit card debt	✓	Trade receivables
✓	Deposits	✓	Revolving credit	✓	Financial leases
✓	Overdraft	✓	Credit lines	✓	Other loans

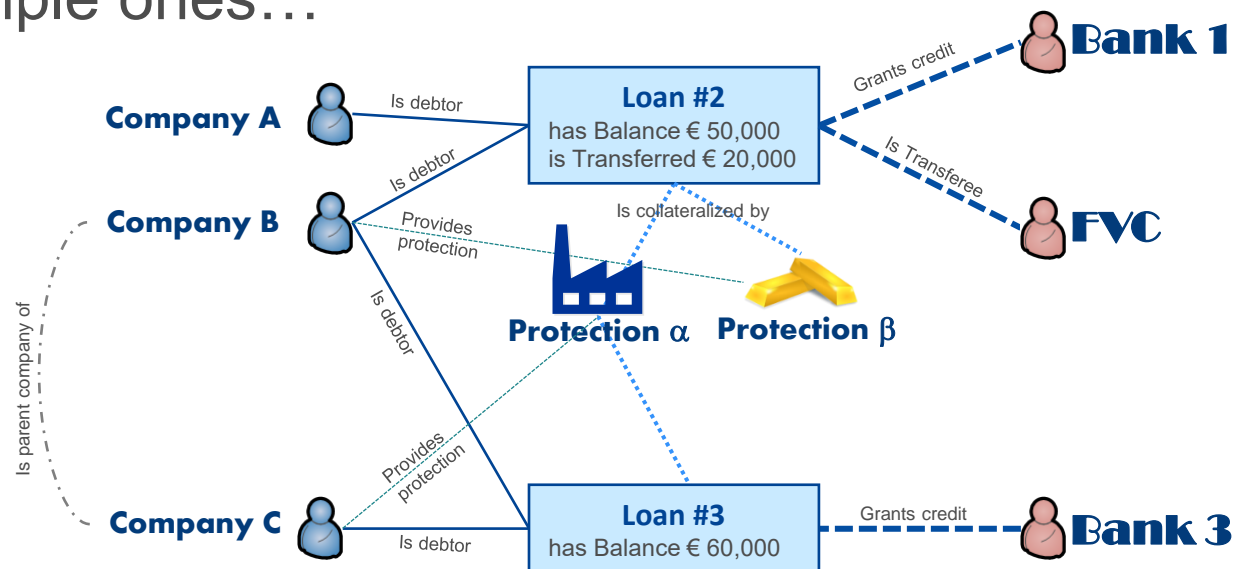
# Data model

*A way to represent reality*

- Simple cases...



- And not that simple ones...



# Conceptual data model of AnaCredit

## *Three interconnected parts of a credit*

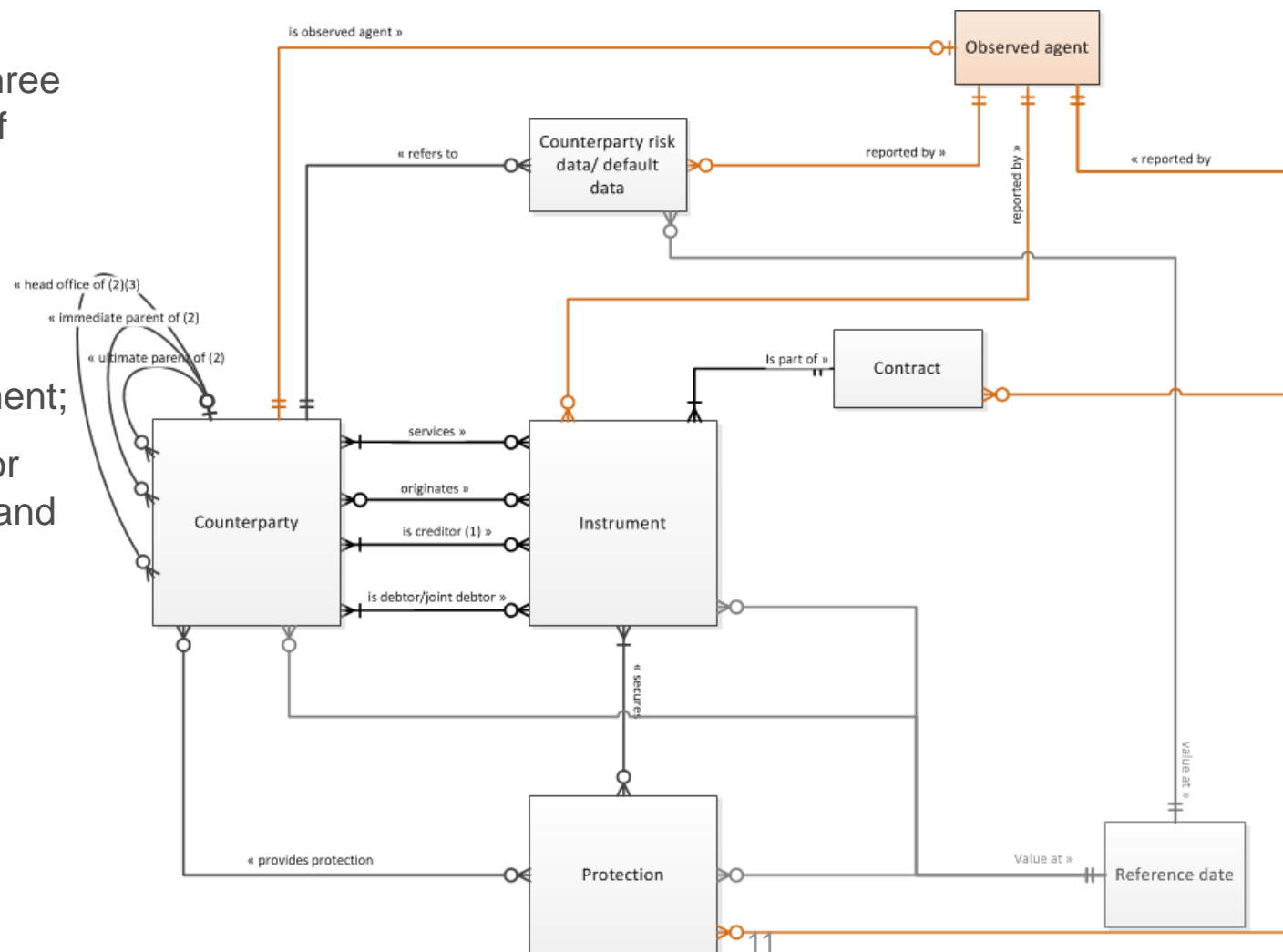
The AnaCredit reporting requirements involve three parts which are deemed to be the main pillars of any credit granted under a contract.

These parts are:

- the **instrument** that represents the individual credit;
- the **protection** that secures the instrument;
- the **counterparties** that are related to or otherwise affiliated with the instrument and the protection

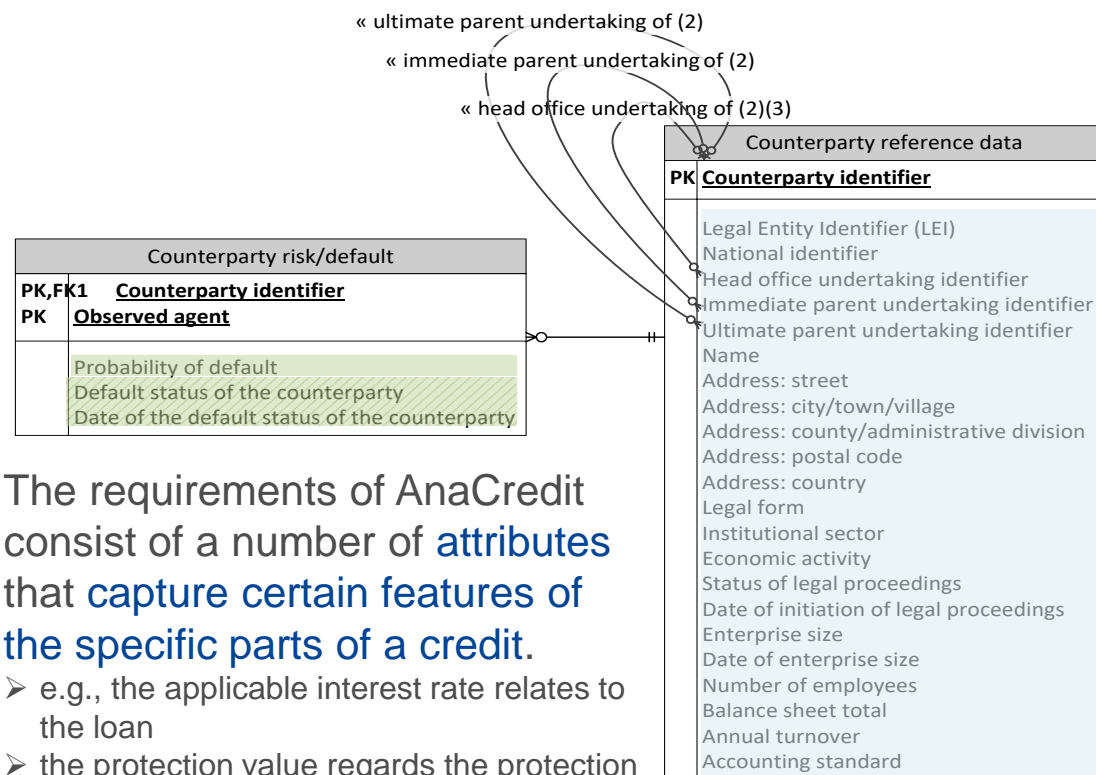
### n:m relationships

- a debtor may have several loans
- a loan may have multiple debtors



# Data attributes and datasets

## Ten interrelated reporting datasets



Reporting context
Reference date

Counterparty-instrument	
PK,FK2	<u>Observed agent</u>
PK,FK2	<u>Contract identifier</u>
PK,FK2	<u>Instrument identifier</u>
PK,FK1	<u>Counterparty identifier</u>
PK	<u>Counterparty role</u>
	Joint liability (1)

Protection	
PK	<u>Observed agent</u>
PK	<u>Protection identifier</u>
FK1	Protection provider identifier (4)
	Type of protection
	Protection value
	Type of protection value
	Protection valuation approach
	Real estate collateral location
	Date of protection value
	Maturity date of the protection
	Original protection value
	Date of original protection value

Instrument-protection received	
PK,FK1,FK2	<u>Observed agent</u>
PK,FK1	<u>Contract identifier</u>
PK,FK1	<u>Instrument identifier</u>
PK,FK2	<u>Protection identifier</u>
	Protection allocated value
	Third party priority claims against the protection

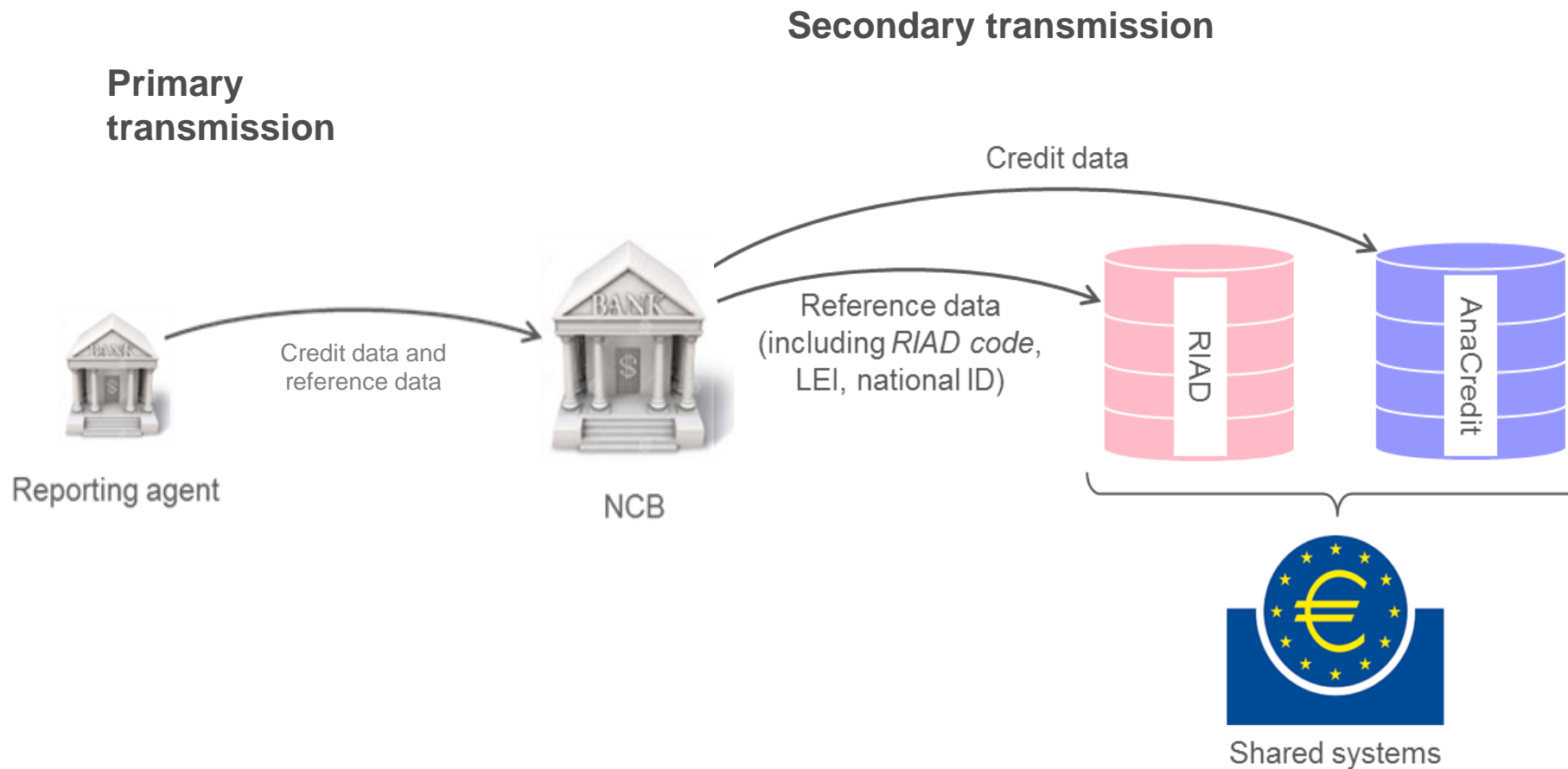
Instrument	
PK	<u>Observed agent</u>
PK	<u>Contract identifier</u>
PK	<u>Instrument identifier</u>
	Type of instrument
	Amortisation type
	Currency
	Fiduciary instrument
	Inception date
	End date of interest-only period
	Interest rate cap
	Interest rate floor
	Interest rate reset frequency
	Interest rate spread/margin
	Interest rate type
	Legal final maturity date
	Commitment amount at inception
	Payment frequency
	Project finance loan
	Purpose
	Recourse
	Reference rate
	Settlement date
	Subordinated debt
	Syndicated contract identifier
	Repayment rights
	Fair value changes due to changes in credit risk before purchase
	Interest rate
	Next interest rate reset date
	Default status of the instrument
	Date of the default status of the instrument
	Transferred amount
	Arrears for the instrument
	Date of past due for the instrument
	Type of securitisation
	Outstanding nominal amount
	Accrued interest
	Off-balance sheet amount
	Accounting classification of instruments
	Balance sheet recognition
	Accumulated write-offs
	Accumulated impairment amount
	Type of impairment
	Impairment assessment method
	Sources of encumbrance
	Accumulated changes in fair value due to credit risk
	Performing status of the instrument
	Date of the performing status of the instrument
	Provisions associated with off-balance sheet exposures
	Status of forbearance and renegotiation
	Date of the forbearance and renegotiation status
	Cumulative recoveries since default
	Prudential portfolio
	Carrying amount

The requirements of AnaCredit consist of a number of **attributes** that **capture certain features of the specific parts of a credit**.

- e.g., the applicable interest rate relates to the loan
- the protection value regards the protection securing the loan

# AnaCredit data flows

*From reporting agents to the ECB, via national central banks (NCBs)*



# RIAD - Information on counterparties

*Reference data for statistical and other business purposes*

## Register of Institutions and Affiliates Data

- Shares data provided to the ESCB, SSM and other users
- Stores reference data on financial institutions and non-financial counterparties and their relationships
  - E.g. name, address, sector of economic activity (NACE),
  - Allows all counterparties to be uniquely identified via a unique identifier (LEI/national ID)
- Information on relationships and group structures based on:
  - ownership / control (o/c) (or other) relationships
- Allows linking different data from different sources

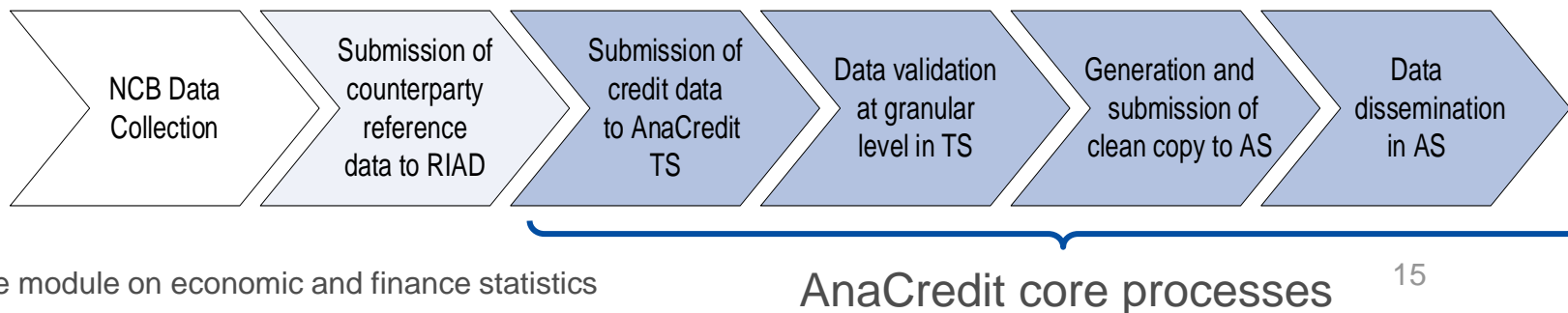


# IT in the support of the business process

## *State-of-the-art IT infrastructure*

**With the amount of data and the wide spectrum of users, a new IT infrastructure had to be developed to ensure**

- smooth exchange of information with NCBs on 3,000 banks and 25 million loans every month
- access by users at different levels of granularity & with different BI tools
- system's reliability and adequate performance: servicing hundreds of users who expect short querying times
- an adequate protection of confidentiality: only authorised users can access confidential information
- interoperability with other data systems



# Useful references

- **AnaCredit Regulation** ([Regulation \(EU\) 2016/867 of the ECB on the collection of granular credit and credit risk data](#))
- **AnaCredit Guideline** ([Guideline ECB/2017/38 on the procedures for the collection of AnaCredit data from NCBs](#))
- **AnaCredit in plain terms:**
  - [Explanatory note on the ECB Regulation](#)
  - [Feedback statement - Responses to the observations on the draft AnaCredit Regulation, May 2016](#)
  - [Integrating microdata for policy needs](#)
  - [The Analytical Credit Dataset - A magnifying glass for analysing credit in the euro area](#)
- **AnaCredit Manual:**
  - [AnaCredit reporting manual Part I – General Methodology, second edition](#)
  - [AnaCredit reporting manual Part II – Datasets and data attributes, second edition](#)
  - [AnaCredit reporting manual Part III – Case studies, second edition](#)
- [AnaCredit reporting manual – questions & answers](#)



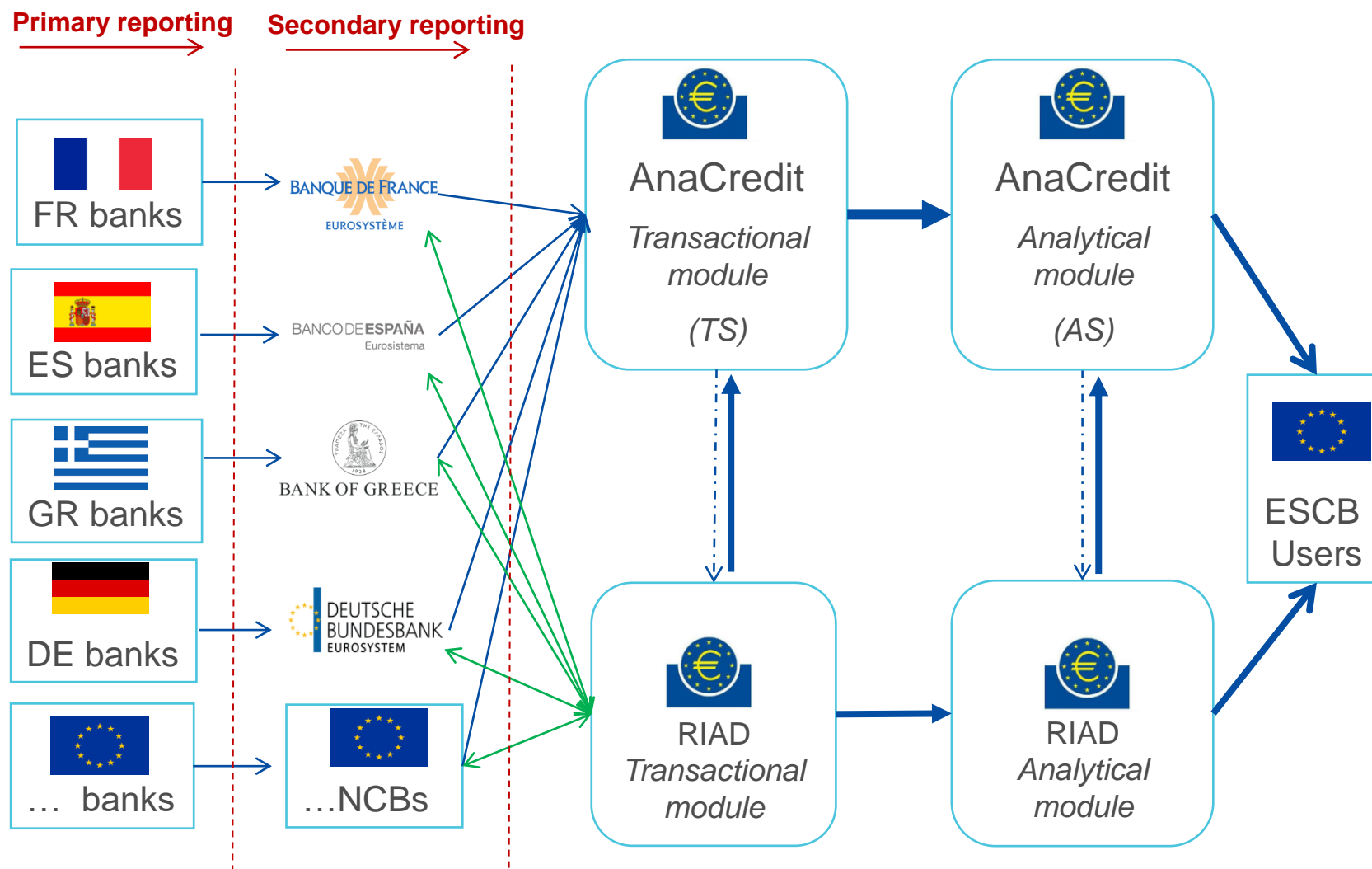
# Thank you

Happy to receive any question or comments at the Q&A session on 13 July, 14 c.t.



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# From banks through NCBs to the ECB



# Overview of the reporting population

*Number of banks and branches belonging to the reporting population*

