



EUROPEAN CENTRAL BANK

EUROSYSTEM

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# **BIRD methodology – Historization, versioning**

### Why do we need historization / versioning?

- Knowledge of the **exact definition** of a **cube** at **any point in time**
  - Implying the **knowledge of the core objects** that are used by a cube in any point in time
- The need to be able to generate consistent time series, taking into account changes in the underlying cube(s)
  - Satisfied if the codes of the core objects are static (i.e. do not change)
  - Relevance of a cube as a container for combinations (i.e. data points)
- The need to be able to follow the evolution of reporting frameworks

## Scope of historization / versioning

### ➤ **Keeping track of**

- **Precise definition of cubes at any point in time**
- **Composition of objects at any point in time** (e.g. hierarchies)
- **Application of objects** (e.g. transformations, validations)

### ➤ **What historization / versioning is not**

- A log
- Dealing with changes to correct errors
- Keeping track of attributes of elements (e.g. official name of a Burma was changed into Myanmar)
- Keeping track of the existence of objects (e.g. until when was the Spanish peseta existing?)

## Historization & versioning in the dictionary

### ➤ Historization

- Established via **validity interval** (i.e. **valid from** & **valid to**)
- Used to control the composition of an object's elements (e.g. composition of a **subdomain** or **member hierarchy**)

Valid from	Valid to	Member
01/01/2017	31/12/9999	Austria (AT)
01/01/2017	31/12/9999	Belgium (BE)
01/01/2017	31/12/9999	Bulgaria (BG)
01/01/2017	31/12/9999	Cyprus (CY)
01/01/2017	31/12/9999	Czechia (CZ)
01/01/2017	31/12/9999	Germany (DE)
01/01/2017	31/12/9999	Denmark (DK)
01/01/2017	31/12/9999	Estonia (EE)
01/01/2017	31/12/9999	Spain (ES)
01/01/2017	31/12/9999	Finland (FI)
01/01/2017	31/12/9999	France (FR)
01/01/2017	29/03/2019	United Kingdom of Great Britain and Northern Ireland (GB)
01/01/2017	31/12/9999	Greece (GR)
...	...	...

Historization of the subdomain *Country codes for EU countries (EU)*

## Historization & versioning in the dictionary

### ➤ Versioning

- Established via the field **version**
- Used to indicate **structural changes**, e.g. for cubes, cube structures, combinations, transformation schemes
- **Code is static**, the **identifier of the object** takes into account the **version** (field)
- **Includes historization** (i.e. **validity interval**)

CUBE_ID	CODE	NAME	VALID_FROM	VALID_TO	VERSION
BIRD_IL_RVRS_RPRCHS_LNS_1	RVRS_RPRCHS_LNS	Reverse repurchase loans	04/01/2017	31/05/2018	1
BIRD_RVRS_RPRCHS_LNS_2	RVRS_RPRCHS_LNS	Reverse repurchase loans	01/06/2018	31/12/9999	2

Versioning applied to the cube *Reverse repurchase loans (RVRS\_RPRCHS\_LNS)*