

XBRL Taxonomy Development at DNB

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Insights into DNB's approach to taxonomy development, validation rules, releasing reporting frameworks, and evolving XBRL standards

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1. Scope

[De Nederlandsche Bank](#) (DNB) collects data from financial institutions using XBRL (eXtensible Business Reporting Language). XBRL is a freely available and global framework for exchanging business information. XBRL allows the expression of semantic meaning commonly required in business reporting. [Source: [Extensible Business Reporting Language \(XBRL\) 2.1](#)]

DNB receives a large amount of data, over 90 million datapoints every quarter. Using XBRL allows for accurate and efficient data collection. It is defined in a taxonomy which datapoints need to be reported. An XBRL taxonomy is a technical specification of a reporting instruction. It contains all definitions, reporting structures, and validation rules for the data to be included in the report, and it means the report is software readable. This ensures consistently uniform interpretation of the data. DNB has created 21 taxonomies (as of 2025) for many different purposes. Additionally, DNB collects data for EBA, EIOPA, and SRB using their taxonomies.

This document is addressed to financial entities and DNB internal stakeholders. It describes how DNB develops and implements DNB taxonomies and external taxonomies, how and when updates are communicated to reporters, in which format data should be submitted, how metadata is defined in the DNB Data Dictionary, and how validation rules are created, corrected and deactivated. Its purpose is to inform the general public who may use it to develop their own approaches towards reporting data to DNB. Please note that DNB strives to follow the approaches described here, but may deviate from them if required. Please also note that this document may be updated in the future.

1.1 Versioning and Document Updates

This document is maintained by DNB and will be updated periodically. Each version will be published with:

- Version number
- Publication date
- Summary of changes since the previous version

Where the document refers to the “current” taxonomy architecture, process, or reporting practice, this should be read as current at the time of publication.

Future updates will incorporate additional topics, such as table-constraint-based validation and new developments in XBRL or DPM.

2. DNB taxonomies

2.1 Data Point Model

DNB creates XBRL taxonomies using Data Point Modelling (DPM). DPM is a methodology which intends to create a bridge between the functional design of a reporting framework – “the reporting templates” – and the technical design of an XBRL taxonomy. This method is also employed in the current taxonomies from EBA, SRB, and EIOPA. The essence of this methodology consists of building a dimensional data model which is the foundation to the schemas and relationships in the Taxonomy. [Source: [Data Point Model – Eurofiling](#)]

2.2 Data dictionary

The concepts in DNB taxonomies are defined in a [Data Dictionary](#). The DNB DPM Dictionary (formerly the DNB Data Dictionary) is developed and maintained using the same underlying methodology that European authorities apply when constructing their supervisory taxonomies. It is based on the Data Point Model (DPM), a common conceptual framework used by institutions such as the EBA, EIOPA, and the ECB to structure reporting requirements consistently across the European regulatory landscape.

Where possible, DNB aligns its dictionary with the conceptual structures, domains, and definitions used by these European authorities. At the same time, the DNB DPM Dictionary contains additions that DNB deems necessary for reporting.

DNB has over twenty taxonomies for statistical, supervision and resolution purposes, all using a single shared data dictionary. Using a single dictionary has several advantages.

- **Single source of truth:** information for all data can be found in one location.
- **Ease of use:** for reporting institutions that report on several taxonomies, it is easier to have a single source of concepts. This makes it clear what data they are expected to submit.
- **Data quality:** to ensure a high quality of data, it is important that all concepts defining the data are clearly described and easy to find.

- **Analysis:** using a data dictionary ensures highly structured data. This allows for complex analyses of the dataset.
- **Reusability and comparability:** having a shared data dictionary allows for the reuse of concepts across taxonomies. This ensures that the meaning, relevance, and quality of concepts are the same for all taxonomies. Consequently, this leads to comparability of the data.

The DNB DPM Data Dictionary is updated every time we publish a new (version of a) taxonomy. The updated dictionary is posted on the DNB website, alongside a changelog stating the updates. The latest version of the dictionary is backwards compatible with all previous versions of any DNB taxonomy. [Source: [Information and documentation | De Nederlandsche Bank](#)]

2.3 Taxonomy development process and lead time

Developing DNB taxonomies is a collaborative process between XBRL specialists and domain specialists. The duration of this process varies per taxonomy and depends on several factors, such as the number of datapoints, the level of detail the business requires from reporting institutions, and the volume and complexity of the data quality and consistency checks to be incorporated. Smaller or less complex taxonomies typically take around 2–3 months to develop, whereas more extensive taxonomies with a high degree of detail and a significant number of validation rules may require 6–9 months.

The process generally begins with the domain specialists defining the content and structure of the reporting requirement. The XBRL specialists then translate this into an XBRL taxonomy. In some cases, this step is followed by a public consultation. Once the taxonomy content has been finalised, the domain specialists determine the required data quality checks, which the XBRL specialists convert into XBRL Formula linkbases.

The resulting taxonomy and associated validation rules undergo multiple rounds of technical testing and user acceptance testing to ensure correctness, usability, and alignment with the reporting framework before publication.

DNB applies multiple XBRL specifications when developing taxonomies, including XBRL Dimensions, XBRL Formula, and the Open Information Model (OIM), in addition to the base XBRL 2.1 Specification. The DPM methodology

provides the structural foundation, and these additional specifications ensure full technical consistency and validation capability. Hence, reporters can prepare and validate their own reports using any XBRL certified software.

2.3a Publication of a taxonomy

DNB aims to publish new taxonomies well in advance to allow reporting institutions and software vendors sufficient time to prepare their systems. In general, DNB strives to communicate a new taxonomy at least six months before the first reporting reference date. This sixmonth period is considered good practice and enables institutions to plan, implement and test the required changes in their reporting software.

However, the exact preparation time may vary depending on the nature and urgency of the reporting requirement. In some cases, external regulatory timelines, policy priorities or unforeseen developments may result in shorter or longer lead times. Where deviations from the sixmonth target occur, DNB will communicate this as early and clearly as possible.

2.3b Publication of Updates and Hotfixes

After publication, DNB may release updates or hotfixes to a taxonomy if errors or omissions are identified. These may include updates to validation rules, technical corrections, or changes required to ensure alignment with DPM DNB dictionary or external reporting frameworks.

DNB will publish any such updates or hotfixes on the DNB website as soon as reasonably possible and will clearly identify the scope and impact of the change. Updates or hotfixes do not alter the original reporting reference date unless explicitly communicated.

2.3c Taxonomy Maintenance and Update Drivers

DNB maintains over twenty taxonomies covering statistical, supervisory and resolution reporting purposes. Not every taxonomy is updated every year. The business or domain experts determine whether an update is necessary based on several factors, including changes in European regulations, new data needs for statistical, supervisory or resolution purposes, or emerging policy requirements.

When changes are needed in data quality checks without any modification to the structure of the taxonomy itself, DNB creates an external formula linkbase. These external formula validations are applied alongside the taxonomy. With the next taxonomy update, the checks from the external formula linkbase are incorporated into the taxonomy, ensuring that validation rules and taxonomy content remain aligned over time.

2.4 Defining, correcting, and deactivating validation rules

DNB develops and publishes a set of validation rules with each of the taxonomies. These validation rules are specified using a human readable format. The following elements are used to build the validations:

- **ID:** A Unique identifying code for each validation rule in a taxonomy
- **FormulaExpression:** The expression that is evaluated for this validation rule. If the evaluation of the expression is true, the validation rule is satisfied.
- **Precondition:** The possible filing indicators required for the validation to be evaluated. If these filing indicators are not set to “true” in the report, the validation rule is not evaluated.
- **FallbackValue:** This attribute determines how a missing value is handled. If “true” is selected, the default fallback value is used for a missing value in the expression.
- **Severity:** This determines if a report is rejected when the expression does not evaluate to “satisfied”. If this is set to warning, the report is not rejected but marked as breaking some validation rules. If this is set to “error”, the report is rejected.
- **Label:** This label is displayed as an explanation when the validation rule is not satisfied.

These validation rules are then converted to the XBRL Formula rules following these specifications: [Formula 1.0](#). These XBRL formula rules validations are then separated into the sets based on which tables the validations use. These sets are linked to the entrypoints on which the rules are applicable.

If it is determined that a taxonomy contains an incorrect validation rule, the rule can be deactivated. A deactivation is identified through a combination of a validation rule id and an entrypoint, or part of an entrypoint. This allows DNB to deactivate a rule across multiple entrypoints.

As described in section 2.3b, DNB may add validation rules outside the taxonomy itself when additional checks are needed for the validation of a report. These externally applied rules can supplement existing validations or replace them where necessary. The identifiers of such validation rules always include “_ext_” to indicate that they originate from an external formula linkbase rather than from the taxonomy.

2.5 Validation process

XBRL reports received by DNB will be tested using several types of validation. The results of these validations will determine whether the report is accepted or rejected. In the case of a rejection, the reason for rejection will be provided. The types of validations¹ are:

- **Imperative validation:** These validations check the basic characteristics of the report, such as the reporting period and the identifier of the reporter.
- **XBRL 2.1 validation:** These validations check if the report follows the XBRL 2.1 specifications. [Extensible Business Reporting Language \(XBRL\) 2.1](#)
- **Dimension validation:** These validations check if the report uses the correct dimensions and domain members. It checks based on the XBRL Dimensions 1.0 specifications. [XBRL Dimensions 1.0](#)
- **Open Information Model:** These validations are applied to xBRL-CSV reports to check their format. The report is verified based on the Open Information Model 1.0: [Open Information Model 1.0](#)
- **Filing rules:** These validations are a broad set of checks that apply to all reports for a specific taxonomy author. The DNB filing rules can be found under [Information and documentation | De Nederlandse Bank](#)
- **Formula rules:** These validation rules are specific to the report. They are published in the XBRL formula language, and as such can be validated by any XBRL compliant software. A version of these rules is provided in the annotated templates published with the taxonomy. These are the rules described in section 2.4.

The results of these validations are provided through files available to the reporter when validation has finished. The results of the imperative validation will be displayed through a log file. The results of the five other validations will be displayed in an excel report.

¹ New validation types may be added in the future.

After these XBRL validations, more checks could apply, depending on the nature of the report. These checks are outside the scope of this document and are usually communicated with reporting requirements.

2.6 Report formats

Reporting institutions can submit their reports in XBRL or in Excel using a dedicated template, where permitted. DNB defines the allowed formats for each reporting obligation (xBRL-XML, xBRL-CSV, and/or Excel). Reporting institutions may choose from the formats offered for their specific reporting requirement.

DNB converts Excel submissions to XBRL before processing them. Typically, institutions may only opt to submit DNB reports in Excel rather than XBRL. Reports for other supervisory authorities, e.g. the EBA, must be submitted in XBRL in most cases.

Excel templates are published on the DNB website alongside the taxonomy and other documentation. Additionally, if Excel submission is allowed for a reporting obligation, the template will be available for downloading in the reporting portal.

It is important to note that Excel reports are converted to XBRL via software. Therefore, it is very important that reporters only enter their data but do not edit the template itself in any way (e.g. moving sheets around). If the template is edited, the software may not be able to properly convert it, or part of the data won't be processed correctly.

Please note that the Excel conversion is intended for small reports and DNB may require submission in XBRL if the amount of data is deemed too large.

3. Implementation of external taxonomies

3.1 Taxonomies published by other parties

As a national competent authority, DNB receives reports for the European Banking Authority (EBA), European Insurance and Occupational Pensions Authority (EIOPA), and the Single Resolution Board (SRB). These parties publish taxonomies for their respective reports. DNB uses these taxonomies and the filing rules of the respective authorities to validate the received reports. If a report is validated and accepted, it will be forwarded to the respective authority.

To enable the validation of the reports, DNB implements the taxonomies published by these external parties. DNB aims to implement these taxonomies as is, to reduce mismatch in the validation processes.

4. Current state and evolutions on DPM and XBRL

4.1 Evolution of Reporting formats

The field of XBRL is continuously evolving, and DNB aims to align its reporting formats with the standards used by EBA, EIOPA and SRB.

Historically, all XBRL reports submitted to DNB were based on the xBRL-XML syntax. While widely adopted, this format results in relatively large files due to redundant structural information.

To address this, the XBRL community developed [xBRL-CSV](#), a more compact and efficient format built on the Open Information Model 1.0 (OIM). xBRL-CSV reduces file sizes significantly and simplifies processing for both reporters and supervisors.

Starting in 2026, DNB will publish its own taxonomies in a way that supports both xBRL-XML and xBRL-CSV. This ensures interoperability with European reporting frameworks and provides flexibility for software vendors and reporting institutions.

For reports submitted in Excel, the impact of this transition is minimal. Excel reports continue to be converted internally by DNB's processing engine, and the Excel templates remain unchanged with respect to the introduction of

xBRL-CSV, as no structural modifications are needed to support this format shift.

4.2 Taxonomy Architecture Developments

As XBRL standards evolve, so does the modelling methodology underpinning DNB taxonomies. DPM itself is continuously being enhanced, and EBA has introduced the [DPM 2.0 project](#) project to modernise the way taxonomies are structured and versioned. One of the key changes is the adoption of version-based URI, replacing the previous combination of normative code and publication date.

These changes are documented in the joint [taxonomy architecture v2.0.pdf](#), guidance published by EBA and EIOPA. From 2026 onwards, DNB will adopt this architecture for all newly developed taxonomies. This ensures greater consistency, modularity and alignment with European supervisory authorities.

4.3 Roadmap for XBRL and Taxonomy Development

DNB aims to further develop its taxonomy landscape and reporting framework in line with European standards and technological advancements. The roadmap below outlines the key areas of focus for the coming years.

4.3.a Transition to xBRLCSV

DNB will continue to expand the adoption of xBRLCSV across its own taxonomies. This transition reduces file sizes, improves processing efficiency, and aligns DNB with the reporting formats used by EBA and EIOPA. While the underlying processing format evolves, this transition does not require changes to the Excel templates used by reporting institutions.

4.3.b Alignment with the DPMbased Taxonomy Architecture

DNB will adopt the taxonomy architecture developed by EBA and EIOPA, ensuring consistency in structure, modularity and versioning conventions across supervisory authorities. New DNB taxonomies published from 2026 onwards will follow this architecture.

The transition to this architecture will occur in parallel with the adoption of xBRLCSV for DNB taxonomies beginning 2026. Together, these developments create a more streamlined, scalable and futureproof taxonomy landscape.

4.3.c Enhancement of Validation Capabilities

DNB intends to extend its suite of validation capabilities, including the introduction of tableconstraintbased validation and improvements to data quality and consistency checks. Enhancements may be introduced initially through external formula linkbases and incorporated into the taxonomy upon its next update.