EIOPA Solvency II DPM Documentation

The document contains non-binding information, and is subject to substantial further changes

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Contents

I   Abstract

This document described the Data Point Model [DPM] defined by EIOPA to support reporting of Solvency II data. It introduces the DPM terminology, presents the resulting artefacts (DPM Dictionary and Annotated Templates) and explains in details the approach applied for data modelling.

II Introduction

One of the aims of EIOPA is to improve harmonisation and support coherent application of rules applied for financial institutions and markets across the European Union. In order to achieve this goal a set of common legal acts has been published: the Framework Directive, the Implementing Technical Standards and the Public Guidelines. These acts define among others a set of data to be reported by the undertakings (in particular in the Reporting Templates and supporting Business Logs).

In order to facilitate the data exchange process, EIOPA decided to use an XBRL standard as a mean for technical definition of information requirements (in form of XBRL taxonomies) and as a technical data submission format (XBRL instance documents).

The Data Point Modelling methodology has emerged in the evolution process of application of the XBRL standard for financial and prudential reporting[1]. In the beginning and for the first few years XBRL taxonomies have been developed by the IT experts who basically translated the tabular representation of information requirements to the technical format. At some point though the maintenance and updates started to require increasing business input and the business domain experts had been more and more involved in the process. This caused the need for definition of a formal model for description of requested data which could be provided by the data users and translated to technical format by the IT without any loss of information or space for interpretation. The resulting methodology has been called the Data Point Modelling to emphasise the shift in the approach from the form centric representation of information requirements (based on tabular views) to the data centric definitions (detailing properties of each exchanged piece of information).

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[1] http://eurofiling.info/portal/data-point-model/

Currently DPM methodology is considered as an intermediary layer between the information requirements definition in legal acts and its technical representation. Following other European supervisors (such as EBA) and some National Competent Authorities (NCAs) EIOPA decided to use this methodology to properly reflect in XBRL all relevant properties of the exchanged data.

The result of the DPM modelling process is a structured description of the model in form of a dictionary (listing and naming all breakdowns and their components identified in the process of analysing the legal acts) and a set of annotated templates (tabular views of requested data with description from the dictionary). These two documents are subsequently used as the inputs for XBRL taxonomy generation process.

The result of application of the DPM methodology shall support fulfilment of the following of requirements:

– remove redundancy of metadata definitions (no duplicated data points),
– increase consistency of metadata definitions (clarity and explicitness of definitions),
– increase efficiency of data tagging and mapping (accuracy of assigning tags to data points for generation to/from existing systems),
– advance metadata maintenance procedures (change management and communication),
– facilitate non-IT technical experts' involvement (data modelling is performed by the business users),
– support data mapping procedures (manual and automatic).

III General building blocks and terminology of DPM methodology

An important impact on the organization of the DPM has the process of its definition. The starting point is a set of legal acts composed of the text of regulations, guidelines, international standards and the tabular representation of the information requirements. These input materials are analysed in order to define consistent classifications (breakdowns with enumerated properties) used to categorise the content

of the tables[2]. The main division of in the DPM is therefore a clear separation of a **dictionary** (definition of breakdowns in general) and the tabular representation of current information requirements gathered in **frameworks** (which in case of the EIOPA DPM takes form of the Annotated Templates). This is particularly important from the standpoint of maintenance. While dictionary is expected to steadily grow it time and assure backward compatibility (i.e. to support all previous versions), frameworks can change more drastically and dynamically depending on actual information requirements.

III.1   DPM dictionary

Dictionary defines the classifications used in data description. It does it by identifying elements: metrics (that may be arranged in relationship sets), domains and their value constraints or members (plus relationships between them) and dimension as presented on Figure 1 and explained in the next paragraphs.
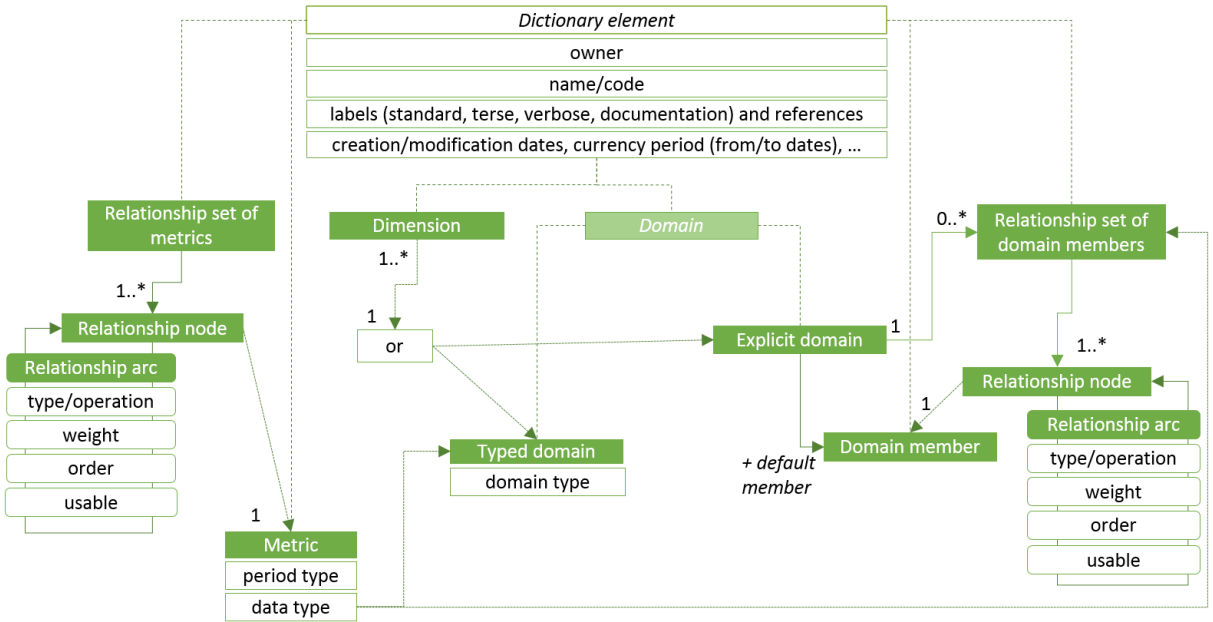

Figure 1. DPM dictionary

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[2] Ideally though, the process should be reversed, i.e. start with the definition of breakdowns that would subsequently be applied in description of information requirements presented in the tabular format.

Each dictionary element must have a unique (in scope of its definition[3]) <u>name/code</u> and identify an <u>owner</u> (authority who defined it/is responsible for its maintenance). Additionally it should have a human readable <u>label</u> (in one – usually English – or more languages and optionally serving different roles/purposes) and may contain other documentary properties (e.g. references to underlying legislation or guidelines, more verbose explanations, etc.). For maintenance purposes declaration of each element must contain a creation date, may include a date of last modification as well as a currency period (from and to dates) when the element is considered to be in application.

A **metric** is the minimum description of each data point (each data point in the model must include in its definition one, and only one, metric). It carries the information on the expected value (data type) and the time context (period type)[4]. It may include other semantics (business properties) depending on the approach taken by the author of the model.

Other classifications are represented by domains. A **domain** is a set of elements/values sharing a specified semantic nature. Domain can be of one of two kinds: explicit and typed. An **explicit domain** has its elements enumerated in the model while a **typed domain** values are assigned in the reports based on a specified format (data type).

Elements of an explicit domain are called domain members. A **domain member** (or simply a member) is enumerated element of an explicit domain. All members from a domain share a certain common nature defined subjectively but applied consistently by the model's author. A typical example of a domain is "Geographical areas". Members of this domain could be different areas of the Earth, classified according to the physical geography ("Europe", "Pacific Ocean", "Himalayas", …) and/or human geography ("France", "EU", "G-20 major economies", …). Combining physical and human geography into one domain is already the author's subjective view of the classification. The number of members in explicit domains varies from two (e.g. "Yes" and "No") to hundreds (in case of countries or currencies).

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[3] In general name/code must be unique for a given owner for metrics, domains and dimensions. Relationship set and members' names/codes must be unique for an owner and a domain that they belong to.

[4] Time context could be also carried by dimensional attributes.

An example of a typed domain could be the ISIN identifier (used to identify uniquely financial instruments) which is restricted to a certain number of digits.

In order to document the relations between domain members or between metrics, they can be gathered in **relationship sets** (sometimes called subdomains or hierarchies). A **relationship** is constructed from nodes and arcs. A **node** refers to a metric (in relationship sets for metrics) or to a domain member (in relationship set of domain members). Nodes are arranged as directed graphs. An **arc** (edge) identifies the source node, the target node and the order of the relation in a relationship set. It may also identify a node as used for organizational purposes only (with usable property). Arcs may also document the basic arithmetic relations by identifying the type of operation ("≥", "≤" or "=") and weight by which the target node contributes to the value of a source node (in applications of the DPM so far constrained mainly to identification of a sign, i.e. "+1" and "-1"). In general all members of explicit domains should participate in hierarchical relationships and whenever possible, these relationships shall reflect arithmetical dependencies as presented in Table 1.

Table 1. Example of arithmetical dependencies between domain members expressed in the DPM as a hierarchy (subdomain)

Member	Comparison operator	Sign and weight
Calculated as a sum of best estimate and risk margin	=	
Best estimate	=	+1
Best estimate [before adjustment for expected losses due to counterparty default]		+1
Adjustment for expected losses due to counterparty default		-1
Risk margin		+1

In some cases a hierarchy (subdomain) is defined as a flat list of members to be used in a certain scenario (e.g. applied to a particular dimension, driven by information requirements of a template or set of members referenced by an enumerated metric.

Usually hierarchies include only some members of a domain, especially when there could be alternative classifications, e.g. "Poland"/"Other than Poland" and "EU"/"Other than EU" would never form a single hierarchy as "EU" includes "Poland" plus some other countries while "Other than EU" includes "Other than Poland" minus some countries.

Hierarchies are an important part of the model as they help to maintain coherence within a domain.

In order to be used in description of information requirements a domain member or a typed domain value requires a **dimension** that provides a context of its application. In other words dimensions contextualise domain members when applied to a data point i.e. they contribute to the semantics of a member which, without a dimension, may be insufficient to represent the full meaning of a property. For instance, in case of "Geographical areas" domain, "Spain" as a member could represent "Location of an issuer" of a financial instrument, "Location of a stock exchange" where this instrument is traded, "Location of a broker" who participated as a middleman in the transaction or finally "Location of a buyer" who purchased this instrument. The same domain member "Spain" was contextualised in this example by four different dimensions. A similar situation may appear in case of a typed domain whose restriction could be different based on the dimension contextualising its value, e.g. code = 123-345-567-890 could be the "Identification number for tax purposes" or "Company registration number", where the kind/type of the number is given by the dimension.

Each dimension must be associated with a domain and may contextualize any member or value of this domain. A domain may have associated more than one dimension, in such a case a member of a domain can be contextualized with many dimension when representing a reportable piece of information.

Explicit domain should specify a **default member** that is assumed to be applied to all dimensions referring to this domain in case they are not explicitly used in description of the required data, i.e. these default members are implicitly applied to every data point that is not explicitly characterised by a particular dimension. For example, a dimension "Original currency" may be associated with a default member "All currencies". This means that when a data point does not explicitly mention the "Original currency" dimension, it is assumed that it takes the "All currencies" member for this dimension.

Default members are very useful when defining the model, as otherwise every data point would have to explicitly mention each dimension and the applicable member. With default members it is enough for a data point to name only the properties that are important to distinguish this data point from other data points. Although technically in XBRL the "default" is a property of a member with respect to a dimension, the DPM assumes that all dimensions referring to a certain domain would have the same default member. This means that only one member in a domain can be assigned as a default and shall apply to all dimensions referring to this domain.

There could be dimensions in the model that do not apply to some data points. For example, a data point representing "Equity instruments" is unlikely to be linked to the

"Original maturity" dimension (shares and other ownership rights usually do not have maturity). Therefore, the default member is usually named "Total/Not-applicable".

Data types of metrics and typed domains are in particular: monetary, decimal, percentage, integer, boolean, date and URI but can be further extended (by defining new data types or restricting existing data types) if needed. A metric may also be restricted to a specific type of a typed domain or to an enumerated list of members. In the latter case it refers to a relationship set of members, identifies a starting member and whether it is included in the set of allowed values. In specific cases it may also inform how many generations (children, grandchildren, …) of members form the list of allowed values and take into account also the usable property (that may characterise the use of a member in a hierarchy merely for grouping purposes).

III.2 DPM framework

Framework represents information requirements for a specified scope. Frameworks components and relations between them are presented schematically on Figure 2.

Figure 2. DPM framework

A **taxonomy** is a version of a framework, identified by a reference to the underlying legal acts (name and version of information requirements) plus a date stamp (taxonomy publication date). A taxonomy consists of one or more tables that are usually gathered in table groups and further referenced from modules. It is possible that a taxonomy refers to and reuses tables from previous versions of a framework.

A **module** represents a set of information requirements that are supposed to be submitted in a single report. Typical factors taken into account when defining the scope of a module include:
- data nature homogeneity,
- frequency of reporting (i.e. scope of data transmitted on monthly, quarterly, yearly basis),
- subject scope (e.g. solo and consolidated data),
- accounting or other regulations impacting definitions of data.

Reporting entity classifies a report for submission according to one of modules predefined in the taxonomy.

A **table group** typically gather tables in so called reporting units as defined in the underlying legal acts. Table groups can be nested in case another thematic classification may be applied.

A **table** is a graphical representation of information requirements and a format for data presentation.

An **axis** is a basic component of a table representing columns, rows, or sheets (i.e. multiplication of a table based on a property specified on this axis). Axis disposition/orientation is defined as in the Cartesian coordinates system where "x" axis defines columns, "y" axis - rows and "z" axis - sheets. Every table must have at least one axis for columns and one for rows but may also include more than one axis of certain kind (e.g. two or more axis representing rows). Axis can be fixed or open.

A **fixed axis** consist of nodes. Nodes can be concrete or referencing.

A **concrete node** is each header of a fixed axis. Nodes can be arranged in nested structures. In such a case relationships between nodes identify ordering and the manner of presentation of child nodes before or after (for rows) or to the left or right (for columns) in relation to the parent node. Moreover a concrete node can be classified as abstract if it is included in the table merely for the purpose of organization of headers rather than a resulting in a line containing data.

A **referencing node** points to a relationship set (of metrics or domain members) in a dictionary, specifies the starting node and informs if it included in the set of selected values. The resulting visualisation converts the hierarchy nodes into concrete nodes of an axis. Referencing node is basically an alternative to explicit enumeration of concrete nodes with the benefit of reusing already defined breakdowns and also several constraints (e.g. limited customization of header titles/labels, lack of possibility of inclusion of other codes or marking of unreportable cells and unambiguous treatment of unreported data).

An **open axis** refers to a dimension (usually typed) or other aspects of facts, in particular the temporal reference, entity or unit specific information (for more details see then next section in this document). Nodes (headers) are therefore dynamically constructed based on values contained in a report. In case when a table contains more than one axis of certain kind, the resulting visualisation is a Cartesian product of nodes or values of each axis. This is typically done in so called open tables (i.e. tables with

undefined number of rows, when one or more columns are row keys provided in a report) or when there are several axes multiplying the table in sheets.

A concrete node may refer to a metric, dimension member pairs or specific typed dimension values and other aspects of a fact. This reference is inherited from parent nodes to child nodes unless prohibited or overridden by a different metric or member for a given dimension.

Content of a table is additionally defined by hypercubes. A **hypercube** links metrics to dimension member pairs or typed dimensions (and their specific values if applicable). They are constructed as defined in the XBRL Dimensions specification and are technical artefacts. In DPM model reflection of a framework, such as the Annotate Templates it is enough to reflect reportable and prohibited (non-reportable) cells.

Cells in tables appear on and are described by properties (including inheritance) from intersection of row and column headers and information form the sheet (i.e. particular multiplication of a table). Non-reportable cells (usually marked graphically as criss-crossed or grey shaded and excluded from reporting as illogical or simply unrequested) are a result superposition of the hypercubes (that define only allowed combinations) on the table visualization (based on axes and their content).

Similarly to dictionary elements, framework elements such as frameworks itself, taxonomy, module, table group, table, axis and node are identified by a code/name, human readable label and owner. Axis nodes usually contain also a code (called "rc-code") that facilitates addressing of cells in a table.

III.3   Data point and fact

Relation between a data point and fact is schematically presented on Figure 3.
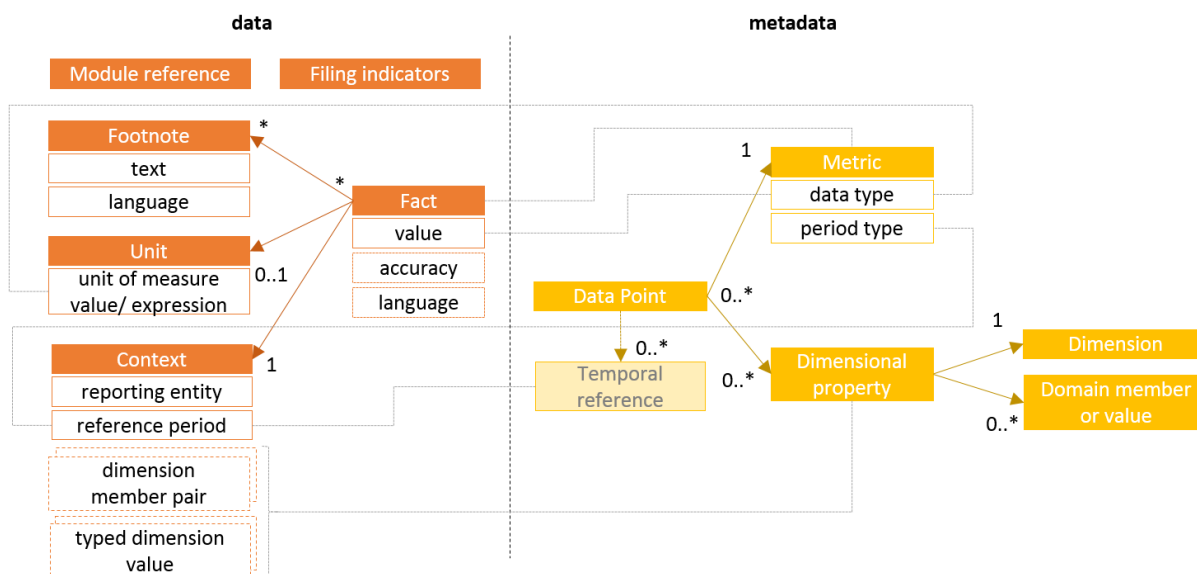
Figure 3. Data point and fact

A **data point** is characterised by a metric and may be further described by dimensional properties. It may also be provided a temporal reference i.e. identification of a period that is different to the default reference period of a report.

A **fact** refers to a data point by applying a metric as defined by a data point and linking to a context that contains dimensional properties corresponding to those defined by a data point.

A **context** apart from dimensional properties contains also identification of a reporting entity (using an identifier value according to the provided scheme) and a reference period that in general informs about the moment or time interval for measurement/expression of a fact value.

Non-numeric facts may contain an attribute informing about the language for its textual value.

Numeric facts contain an attribute expressing data accuracy and refer to declaration of a **unit** of measure.

Footnotes can be provide additional textual explanation on facts.

As explained in the previous sections, a report must also identify a module based on which it was created and contain a list of filing indicators referring to reported units (table groups or tables) that are further used as preconditions for evaluations of validation rules.

IV Data Point Model for Solvency II

Solvency II Data Point Model follows the organization as presented in the previous section. However it has also many unique features that differentiate it from other existing DPMs (such as the EBA model used in banking supervision). These are in particular:

– two layers approach (MD and HD),

– significant portion of complex open tables (with unknown and potentially large number of rows) which requires simplification of their modelling in order to allow usability,

– high number of entry points (modules) reflecting various reporting scenarios,

– Excel format for definition of the model in form of the DPM Dictionary and Annotated Templates (aiming to resemble the Business Templates from the Solvency II legal acts),

– technical constructs applied in these Excel files in order to extract all DPM metadata in an automated manner to a structured format of a DPM database and subsequently to XBRL taxonomy syntax.

The chapter describes in details the approach applied in the DPM modelling of Solvency II information requirements.

IV.1 Input materials: Reporting Templates and Business Logs

The Solvency II information requirements are primarily defined in:

- the Draft ITS on Regular Supervisory Reporting (Draft ITS),

- the ITS on Special Purpose Vehicles (ITS),

- the Guidelines on Financial Stability Reporting (Final Report),

- the Guidelines on Third Country Branches (Final Report).

The main inputs for definition of the Solvency II DPM model are the Reporting Templates and the Business Logs supporting the above legal acts.

Reporting Templates reflect Solvency II information requirements arranged in the form of tabular views while the Business Logs specify in more detail manner the requested content by giving the meaning of information described by particular rows and columns of each template.

From the data modelling perspective, they provided all necessary information for identification of the general breakdowns describing the requested data (defined in the DPM Dictionary), current reporting requirements (in the form of sets of data points represented by the DPM Annotated Templates) as well as the checks and constraints on values to be reported.

IV.2 MD and HD versions of the DPM

The main purpose of the DPM methodology is to identify each reportable piece of information (a data point) in a precise and unambiguous manner. As a result the DPM defines usually high number of dimensions. This situation has a number of advantages:

- the model is data centric and independent from the particular views of data (templates),
- each data point is classified in detailed according to all applicable characteristics that are defined separately,
- dependencies between concepts are explicit and clearly identifiable,
- supports change management (based on defining specific differences),
- applied breakdowns can be used for various purposes including data querying for analysis,
- a bridge with other reporting frameworks can be established using specific properties on each data point,
- data model is less subjective and has fewer space for arbitrary modelling decisions (e.g. if a certain property shall be included in the semantics of a metrics or represented by a dimensional property).

Detailed definition of each property comes however at cost of readability of a model. It also impacts the technical representation of the model in the XBRL format: instance documents are larger in terms of size and code which hinders performance of their parsing and validation. Additionally the XBRL Formula assertions require to use a high number of dimensions in order to properly filter the facts for evaluation of variables in the context of a report.

To overcome the drawbacks while maintaining of all benefits the Solvency II DPM applies two layers for data modelling and representation:

- a Highly Dimensional (HD) approach and

- a Moderately Dimensional (MD) approach.

In HD approach the model is defined according the DPM methodology where metrics resemble the very basic properties of a data point that typically determine only its data type. In MD approach the semantics of each metric is extended by inclusion in its definition a number of dimensional properties that in the HD approach are represented by separate and independent dimension-member pairs. Decision on which properties are included in the MD metric is closely aligned with the template view of the required data set (as described in the next paragraphs of this chapter). Other dimensional properties are shared between the two approaches and applied to data points in both versions. This means that MD and HD versions resemble the same model, but MD includes some of the business properties in the definition of a metric while the HD approach keeps all business semantics as dimension-member pairs.

The relation between MD and HD data points is schematically presented in Figure 4.
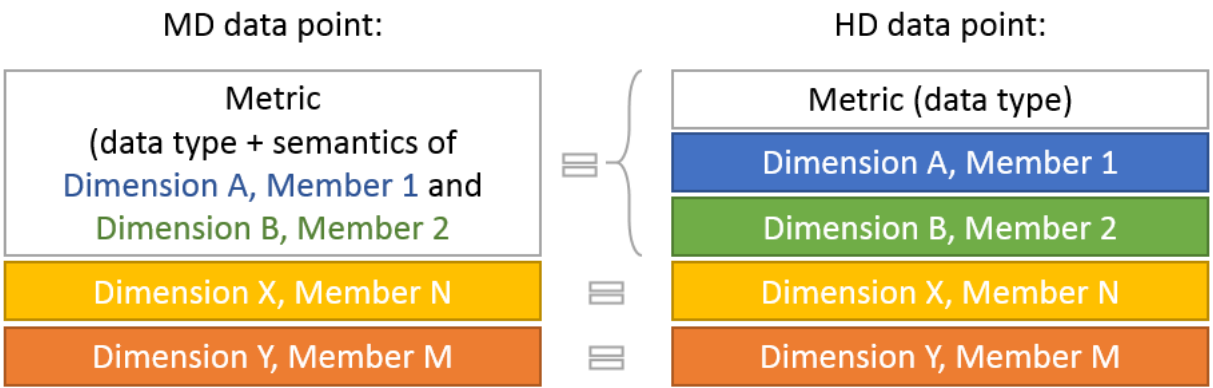

Figure 4. Schematic relation between MD and HD data points

The DPM dictionary contains definitions of properties for both HD and MD approach. The Annotated Templates contain references to the HD components with additional information (based on the applied font colouring convention) to allow the equivalent MD references to be derived.

The process of deriving the MD model from HD is different for closed and open templates.

For closed tables (i.e. tables with all rows and columns identified and named), the derivation process is determined by the placement of the HD metric either on rows, columns or as the table multiplication (z-axis) property. MD metrics are derived by combination of the HD metric and some of the dimensional annotations. The decision on which annotations are combined is determined by their application in all closed tables of the model. By design it is not possible to include in a metric definition an annotation that is reflected in different sections (i.e. either rows, columns or table multiplication z-axis properties) of a table (in other words, all properties of a metric must be always defined in

a single section of a table). All dimensions that must not be included in the definition of MD metrics in closed tables are marked in the DPM Dictionary as "Dimension in MD closed"[5].

Open tables (i.e. tables with unknown number of rows) include three types of columns:

a) columns which are a part of a key for unique identification of each row (and are therefore modelled as typed or explicit dimensions)[6],

b) columns which are not part of a key and are modelled as dimensions,

c) columns that resemble data points to be reported for each row (annotation of these columns include identification of metrics).

Columns which can be part of the key (a) or are not part of a key but are modelled as dimensions (b) are resembled in the same way in the MD version as they are in the HD version. Columns that resemble data points (c) are in MD version described as a single metric that combines information from the HD metric and all HD dimensional properties. Note that in this case the "Dimension in MD closed" property is not applicable for exclusion of certain dimensions from being included in the MD metric definition as it is very important for the XBRL file size and processing performance that all facts in a row have the same dimensional description (identified by the dimensions which are part of a key).

As a result the same data point appearing in an open and closed table of the model may be theoretically defined in a different manner in the MD approach (using a different

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[5] Dimensions are marked as "Dimension in MD closed" when such dimension is used on a different section (row/columns/table multiplication) than a metric in at least one of the closed table of the model. In such case the dimension cannot be merged in the MD metric definition. This helps to avoid situations of the same data point being defined differently in the MD model (i.e. using two different MD metrics).

[6] In some cases, particularly when multiple columns contribute to a key (resulting in a so-called composite natural key), the DPM may include an additional property that should serve solely as a unique key (also known as an artificial key). This property is represented by a typed dimension, whose domain is a set of identifiers for rows defined by each filer in the submitted report.

metric that in case of open table includes some dimensional annotation in its definition while in a close table this annotation is defined separately to the metric).

In general annotations which identify a default member for a dimension should not be present in the Annotate Templates. If such case occurs that annotation would never be included in the MD metric definition.

MD metric labels are derived from the HD model by concatenating the HD metric label and those HD dimension-member pairs that are included in MD metric definition (as explained in derivation process above). These dimension-member pairs are ordered according to an algorithm (sorted alphabetically by domain code, dimension code and member label) to ensure consistency, and are separated by pipe characters ("|"). As a result, labels of MD metrics follow the general pattern:

Metric: {label of HD metric}|{dimension code}/{label of domain member}|{dimension code}/{label of domain member}|…

For example:

Metric: Monetary|TA/Maximum value|VG/Solvency II|BC/Loss|CC/Facultative

Please note that technical XBRL representation of the Solvency II framework components and reporting in XBRL format is made only in the MD version of the model; the HD version is defined for reference purposes only

IV.3 Structure of the Solvency II DPM

There is no single predefined format for representation of the DPM. The ones commonly used is an Excel workbook (in this format the DPM is usually created and edited)[7], a database (used for maintenance and quality/consistency checks) and an XBRL taxonomy (applied for reporting in XBRL). EIOPA applies all these three formats. The latter two are IT artefacts explained in separate documentations. This document focuses on description of an Excel format where the business users define the DPM.

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[7] Excel format is commonly known to the business experts developing the model and open source or inexpensive commercial tools allow editing and reviewing of its content.

As described in the section III of this document, a DPM consists of Dictionary and Framework. The latter can be organized for instance in a form of an Analysis Matrix, as in case of the EBA, or as Annotated Templates in case of EIOPA. Annotated Templates have several advantages over the Analysis Matrix:

– they are close to the Business Templates,

– each table is modelled at once (not by row/columns/table multiplication approach),

– it is possible to identify crossed-out cells in a single view.

The original disadvantage of the Annotated Templates was high flexibility of its structure which made it complex to develop an automated process of XBRL taxonomy development. This obstacle has been overcome in the current Solvency II DPM Annotated Templates by applying named ranges and cell styles.

IV.3.1 Solvency II DPM Dictionary

Solvency II DPM Dictionary is defined in the form of an MS Excel workbook. It consists of numerous worksheets as described below and presented on screenshot on Figure 5:

– worksheet listing all owners together with their codes[8],

– worksheet listing all domains together with their codes and types (explicit/typed),

– worksheet listing all dimensions together with their codes and reference to domains,

– two worksheets listing metrics, one for HD and one for MD version of the model; declaration of a metric includes identification of the constraint towards the reportable values to a specified type (e.g. monetary, string, etc.) or enumeration (by identification of the hierarchy and optionally also the starting member whose descendants – taking into account the usable property – form the list of allowed values to be reported),

– one worksheet for each explicit domain defining (among others):

  o unstructured list of all domain members (of which at least one is marked as a default member),

  o relationships between domain members (arithmetical if possible).

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[8] As explained in section III.1 of this document Owner is an authority who defines the concepts in the dictionary and is responsible for their maintenance.

Figure 5. Structure of Solvency II DPM Dictionary

Label	Name	Default	Owner	Creation date	Validity date	Last modified date	Count	Comment	Hierarchy	Name	Hierarchy	Sign	Weight	Owner	Usable	Applicable	Applicable	Creation date	Validity date
Total/NA	x0	yes	s2c	2014-07-07			12		1: Solvency II own funds eligibility					s2c		BE		2014-07-07	
Tier 1 – restricted	x1		s2c	2014-07-07		2015-07-31	2		Total/NA	x0	=							2014-07-07	
Ancillary own funds	x2		s2c	2014-07-07			2		Basic or ancillary own funds	x6	=	+						2014-07-07	
Attributable to shareholders	x3		s2c	2014-07-07			1		Basic own funds	x7		+						2014-07-07	
Available to meet MCR criteria	x4		s2c	2014-07-07			1		Ancillary own funds	x2		+						2014-07-07	
Available to meet SCR criteria	x5		s2c	2014-07-07			1		Items for which an amount was approved	x16								2014-07-07	
Basic or ancillary own funds	x6		s2c	2014-07-07			1		Items for which a method was approved	x15								2014-07-07	
Basic own funds	x7		s2c	2014-07-07			2		Not basic nor ancillary own funds	x19		+						2014-07-07	
Tier 1 – unrestricted	x8		s2c	2014-07-07		2015-07-31	2		2: Tiers					s2c		TX		2014-07-07	
Counted under transitionals	x9		s2c	2014-07-07			1		Total/NA	x0	=							2014-07-07	
Eligible for undertaking	x10		s2c	2014-07-07			1		Tier 1 and Tier 2	x27	=	+						2014-07-07	
Eligible to meet MCR criteria	x11		s2c	2014-07-07			1		Tier 1	x26	=	+						2014-07-07	
Eligible to meet minimum SCR criteria	x12		s2c	2014-07-07			1		Tier 1 – unrestricted	x8		+						2014-07-07	
Eligible to meet SCR [other than minimum	x13		s2c	2014-07-07	2015-07-31		1		Tier 1 – restricted	x1		+						2014-07-07	
Eligible to meet SCR criteria	x14		s2c	2014-07-07			1		Tier 2	x28		+						2014-07-07	
Items for which a method was approved	x15		s2c	2014-07-07			1		Tier 3	x30		+						2014-07-07	
Items for which an amount was approved	x16		s2c	2014-07-07			1		3: Tiers					s2c		TX		2014-07-07	
Not available to meet MCR criteria	x17		s2c	2014-07-07		2015-07-31	1		Total/NA	x0	=							2014-07-07	
Not available to meet SCR criteria	x18		s2c	2014-07-07			1		Tier 1	x26		+						2014-07-07	
Not basic nor ancillary own funds	x19		s2c	2014-07-07			1		Tier 2 and Tier 3	x29	=	+						2014-07-07	2015-07-31
Not eligible to meet MCR criteria	x20		s2c	2014-07-07	2015-07-31		1		Tier 2	x28		+						2014-07-07	
Not restricted	x21		s2c	2014-07-07	2016-06-30		1		Tier 3	x30		+						2014-07-07	
Other than ancillary own funds	x22		s2c	2014-07-07			1		4: Types of equity					s2c		OE		2014-07-07	
Other than counted under transitionals	x23		s2c	2014-07-07			1		Total/NA	x0	=							2014-07-07	
Restricted	x24		s2c	2014-07-07	2016-06-30		1		Type 1 Equity	x31		+						2014-07-07	
Subordinated liabilities	x25		s2c	2014-07-07			1		Type 2 Equity	x32		+						2014-07-07	
Tier 1	x26		s2c	2014-07-07			1		Subordinated liabilities	x25		+						2014-07-07	
Tier 1 and Tier 2	x27		s2c	2014-07-07			1		5: Treatment in relation to ring fencing					s2c		EI		2014-07-07	
Tier 2	x28		s2c	2014-07-07			4		Total/NA	x0	=							2014-07-07	
Tier 2 and Tier 3	x29		s2c	2014-07-07	2015-07-31		1		Restricted	x24		+						2014-07-07	2016-06-30
Tier 3	x30		s2c	2014-07-07			4		Not restricted	x21		+						2014-07-07	2016-06-30
Type 1 Equity	x31		s2c	2014-07-07			1		6: Tiers					s2c		TX		2014-07-07	
Type 2 Equity	x32		s2c	2014-07-07			1		Total/NA	x0	=							2014-07-07	

Dimensions in the DPM are used not only to reflect typical breakdowns (i.e. "Currencies", "Lines of business") but certain notion of data points (e.g. "Consolidation scope") or expression of temporal characteristics ("Instant or duration").

All concepts in dictionary are described with information helpful for maintenance and versioning:

– creation date,

– validity date,

– last modified date.

IV.3.1.1 Domains worksheet

Domains worksheet (Figure 6) contains among others information about domains code/name, label (in English), domain type (primary, explicit or typed) and owner. Primary domain type is used for metrics. Data type is identified for typed domains.

#	Domain code/name	Domain label	Domain type	Owner	Prefix	Namespace	Location	Datatype	Creation date	Validity date	Last mo	Comment
24	NT	Types of number	explicit	s2c					2014-07-07			
25	BR	Brackets	explicit	s2c					2014-07-07			
26	PP	Types of percentage	explicit	s2c					2014-07-07			
27	DC	Types of decimal	explicit	s2c					2014-07-07			
28	CE	Types of income statement concepts	explicit	s2c					2014-07-07			
29	TI	Time intervals	explicit	s2c					2014-07-07			
30	RT	Risk types	explicit	s2c					2014-07-07			
31	SC	Status of claim	explicit	s2c					2014-07-07			
32	PC	Product characteristics	explicit	s2c					2014-07-07			
33	EX	Exposure types	explicit	s2c					2014-07-07			
34	AP	Approaches used	explicit	s2c					2014-07-07			
35	ID	Codes	typed	s2c				string	2014-07-07			
36	NA	Names	typed	s2c				string	2014-07-07			
37	NB	Integer numbers	typed	s2c				integer	2014-07-07			2015-07-31
38	ER	Ratings	typed	s2c				string	2014-07-07			
39	RA	Agencies	typed	s2c				string	2014-07-07			
40	TY	Types	typed	s2c				string	2014-07-07			

Figure 6. Structure of domains worksheet in Solvency II DPM Dictionary

IV.3.1.2 Dimensions worksheet

Dimensions worksheet (Figure 7) contains among others information about its code/name, label (in English), applicable domain code, owner, dimension in MD closed information.

Applicable domain code identifies the domain that each dimension relates to. There must be one and only one applicable domain identified for each dimension but in the same time more than one dimension can be applicable for a single domain.

"Yes" in "dimension in MD Closed" column identifies those dimensions that can't be included into MD metrics applicable in closed tables (see: IV.2).

#	Dime	Dimension label	Applicable domain code	Owne	Dimension in MD Closed	Restriction on co	Prefi	Namespace	Creation da	Validity date	Last modifi	Comments
1	BC	Basic concepts	BC	s2c					2014-07-07			
2	AL	Type of assets and/or liabilities	MC	s2c					2014-07-07			
3	TT	Type of transaction	MC	s2c					2014-07-07			
4	GR	Types of guarantees received [on- and off- balance]	MC	s2c					2014-07-07			
5	AS	Type of assets	MC	s2c					2014-07-07			
6	LB	Type of liabilities	MC	s2c					2014-07-07			
7	OB	Type of off balance sheets concepts	MC	s2c					2014-07-07			
8	LS	Long or short positions	MC	s2c					2014-07-07	2015-07-31		
9	OS	Types of sum insured	MC	s2c					2014-07-07			
10	OZ	Sum insured by the reporting entity including technical provisions [c	MC	s2c					2014-07-07	2015-07-31		
11	OF	Own funds	MC	s2c					2014-07-07			
12	PF	Types of performance	MC	s2c					2014-07-07			
13	VG	Valuation general	AM	s2c	yes				2014-07-07			
14	TA	Types of amount	AM	s2c	yes				2014-07-07			
15	DD	Discounted or undiscounted	AM	s2c					2014-07-07			
16	VP	Valuation of provisions	AM	s2c					2014-07-07			
17	AD	Prospective or retrospective	AM	s2c	yes				2014-07-07			
18	TQ	Type of capital requirement	AM	s2c					2014-07-07	2015-07-31		
19	VM	Valuation method	VM	s2c					2014-07-07	2015-07-31		

Figure 7. Structure of dimensions worksheet in Solvency II DPM Dictionary

IV.3.1.3 Metrics worksheet

There are two worksheets dedicated to metrics: met HD and met MD (Figure 8). The structure of those worksheets is the same. Both contain among others information about labels (in English), names, owners, data types, domains, hierarchies and period types[9]. MD metrics labels are derived from HD components according to procedure described in section IV.2.

Domain information is applicable only to enum:enumerationItemType metrics. Two additional columns are referenced in those cases:

- Hierarchy – identifying the a relationship set of domain members that are potential value of a metric. The set can be of nested structure,

- Member (optional) - it identifies in case of nested relationship sets starting nodes that are excluded from the set of selected values (i.e. if it is

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[9] All Solvency II metrics are of instant period type. DI domain is used to specify period type attribute.

"Total/NA" then it means that children of "Total/NA" are available values but "Total/NA" is not)(see section **Error! Reference source not found.**).

Figure 8. Structure of metrics worksheet in Solvency II DPM Dictionary

IV.3.1.4 Domain worksheet

Domain worksheets (Figure 9) contain two sections of information:

- unstructured list of elements, including its label (in English), name and owner. This section is also used to identify a default member ("Yes" in "Default" column) and to count, how many times each domain member is being referenced from relationship sets section ("Count" column),

- information describing the relationship sets that are defined between domain members[10].

Each relationship set is described by its number and label (i.e. "2: Tiers"). Domain members used in those relationship sets are organized in hierarchical structures (represented in column "Hierarchy"). There can be arithmetical relationship between domain members in a hierarchy described using "Sign" and "Weight" columns. If a hierarchy is referenced by a metric then usable attribute (in "Usable" column) can be used to identify those domain members that can't be chosen as potential value of this particular metric[11].

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[10] This section is reflected also for metrics but in fact is not used there at the moment.

[11] This mechanism is used for example for NACE codes when it was beneficial to reflect entire structure of those codes including those, that can't be reported according to Solvency II rules. Those cases are identified with „no" in „Usable" column.

For each relationship set an owner is identified, as well as applicable dimension code. If a relationship set is referenced exclusively by a metric (not dimension) then N/A is specified (for technical reasons).

Label	Name	Default	Owner	Creation dat	Validity date	Last modified	Count	Comment	Hierarchy	Name	Hierarchy	Sign	Weight	Owner	Usable	Applicable	Applicable
Total/NA	x0	yes	s2c	2014-07-07			12		1: Solvency II own funds eligibility					s2c		BE	
Tier 1 – restricted	x1		s2c	2014-07-07	2015-07-31		2		Total/NA	x0	Total/NA	=					
Ancillary own funds	x2		s2c	2014-07-07			2		Basic or ancillary own funds	x6	Basic or a	=	+				
Attributable to shareholders	x3		s2c	2014-07-07			1		Basic own funds	x7	Basic own funds		+				
Available to meet MCR criteria	x4		s2c	2014-07-07			1		Ancillary own funds	x2	Ancillary own funds		+				
Available to meet SCR criteria	x5		s2c	2014-07-07			1		Items for which an amount was approved	x16	Items for which an amount was approved						
Basic or ancillary own funds	x6		s2c	2014-07-07			1		Items for which a method was approved	x15	Items for which a method was approved						
Basic own funds	x7		s2c	2014-07-07			2		Not basic nor ancillary own funds	x19	Not basic nor ancilla		+				
Tier 1 – unrestricted	x8		s2c	2014-07-07	2015-07-31		2		2: Tiers					s2c		TX	
Counted under transitionals	x9		s2c	2014-07-07			2		Total/NA	x0	Total/NA	=					
Eligible for undertaking	x10		s2c	2014-07-07			1		Tier 1 and Tier 2	x27	Tier 1 and	=	+				
Eligible to meet MCR criteria	x11		s2c	2014-07-07			1		Tier 1	x26	Tier 1	=	+				
Eligible to meet minimum SCR criteria	x12		s2c	2014-07-07			1		Tier 1 – unrestricted	x8	Tier 1 – unrestricted		+				
Eligible to meet SCR [other than minimum]	x13		s2c	2014-07-07	2015-07-31		1		Tier 1 – restricted	x1	Tier 1 – restricted		+				
Eligible to meet SCR criteria	x14		s2c	2014-07-07			1		Tier 2	x28	Tier 2		+				
Items for which a method was approved	x15		s2c	2014-07-07			1		Tier 3	x30	Tier 3		+				
Items for which an amount was approved	x16		s2c	2014-07-07			1		3: Tiers					s2c		TX	
Not available to meet SCR criteria	x17		s2c	2014-07-07	2015-07-31		1		Total/NA	x0	Total/NA	=					
Not available to meet MCR criteria	x18		s2c	2014-07-07			1		Tier 1	x26	Tier 1		+				
Not basic nor ancillary own funds	x19		s2c	2014-07-07			1		Tier 2 and Tier 3	x29	Tier 2 and	=	+				
Not eligible to meet MCR criteria	x20		s2c	2014-07-07	2015-07-31		1		Tier 2	x28	Tier 2		+				
Not restricted	x21		s2c	2014-07-07	2016-06-30		1		Tier 3	x30	Tier 3		+				
Other than ancillary own funds	x22		s2c	2014-07-07			1		4: Types of equity					s2c		OE	
Other than counted under transitionals	x23		s2c	2014-07-07			2		Total/NA	x0	Total/NA	=					
Restricted	x24		s2c	2014-07-07	2016-06-30		1		Type 1 Equity	x31	Type 1 Equity		+				
Subordinated liabilities	x25		s2c	2014-07-07			1		Type 2 Equity	x32	Type 2 Equity		+				
Tier 1	x26		s2c	2014-07-07			4		Subordinated liabilities	x25	Subordinated liabiliti		+				
Tier 1 and Tier 2	x27		s2c	2014-07-07			1		5: Treatment in relation to ring fencing					s2c		N/A	
Tier 2	x28		s2c	2014-07-07			4		Total/NA	x0	Total/NA	=					
Tier 2 and Tier 3	x29		s2c	2014-07-07	2015-07-31		1		Restricted	x24	Restricted		+				
Tier 3	x30		s2c	2014-07-07			4		Not restricted	x21	Not restricted		+				

Figure 9. Structure of domain worksheet in Solvency II DPM Dictionary

IV.3.2 Solvency II Annotated Templates

Solvency II Annotated Templates reflect DPM framework (see section III.2). They provide a mapping between the Reporting Templates and DPM dictionary.

The Annotated Templates contain the HD model only and enough information to derive the MD from it (see section IV.2). This means that the Annotated Templates do not have to duplicate information (which must be kept in sync between the two models) causing a maintenance burden and a risk of errors.

Annotated Templates are defined in the form of an Excel workbook containing a number of worksheets. In general one worksheet describes one Business Template (however more than one graphical table may be annotated in one worksheet).

DPM qualifiers used in annotation represent the codes or labels of concepts defined in the dictionary. They may be associated with each row, column and entire table (if applicable). Details explaining the DPM qualifiers are described in the next sections of this chapter.

IV.3.2.1 Organization of Annotated Templates

Organization of Annotated Templates follows the Technical Standard (ITS). The general assumption is to assign the same template code when a template is used, without any changes, across different variants and entry points (modules). For example,

S.02.02 is the same for solo and group variants, therefore in the Annotate Templates codification there is one template S.02.02.01 used in two entry points (01 and 04).

Table codes in Annotated Templates use the predefined structure *{(S|SR).XX.YY.ZZ.WW}* comprising the following elements:

- *S|SR*[12]: an alphanumeric code for the global reporting package. For Solvency II reporting it is either regular *S* (for regular Solvency II) or *SR* (for ring-fenced funds). Other frameworks like the Solvency II ECB add-ons or Special Purpose Vehicles (SPVs) have different prefixes.
- *XX*: a numeric code for the templates group, for example 01 (for Basic Information), 02 (for Balance Sheet), etc.,
- *YY*: a numeric code for the specific template (sequential code kept stable over time),
- *ZZ*: two digits assigned to an entry point (reporting obligation) which can be reused by other entry points (with a higher number) if the template is the same[13] as presented on Figure 10.
  - o the annual individual templates are considered the "default" one (as it is the largest package) and has code "01";
  - o for other entry points it is assessed if the template with code "01" can be reused; if not, the template is assigned a sequential code: "02"; subsequent entry points may reuse template "01" or "02" if they are identical; if not the template is assigned another sequential code "03" and so on (see example for S.01.03 in Figure 10),
- *WW:* table number within an Annotated Templates; it is related to the XBRL taxonomy implementation; EIOPA has made a commitment to keep the code stable as long as there are no business changes to the particular table requirements (if there are modifications, a new table with a new code will be assigned and the previous table will become obsolete or will be replaced)[14].

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[12] Note that the code SR was not used in Public Consultation but is planned to be added for ring-fenced funds on the final package.

[13] A similar approach was used for this code in the IT implementation of the codification for the Solvency II Preparatory Phase.

[14] This helps, for example, during an IT mapping exercise to identify tables that need to be remapped because something has changed.

	Annual Solvency II reporting Solo	Quarterly Solvency II reporting Solo	Day 1 Solvency II reporting Solo	Annual Solvency II reporting Group	Quarterly Solvency II reporting Group	Day 1 Solvency II reporting Group	Annual Solvency II reporting Third country branches	Quarterly Solvency II reporting Third country branches	Day 1 Solvency II reporting Third country branches	Annual Financial Stability reporting Solo	Quarterly Financial Stability reporting Solo	Annual Financial Stability reporting Group	Quarterly Financial Stability reporting Group	Annual ECB reporting Solo	Quarterly ECB reporting Solo	Annual ECB reporting Third country branches	Quarterly ECB reporting Third country branches	Annual reporting Special Purpose Vehicles
	b+l	a	s	g+n	f	t	p+r	o	u	d	c	i	h	b+l (including ECB add-on)	a (including ECB add-on)	p+r (including ECB add-on)	o (including ECB add-on)	
S.01.01	S.01.01.01	S.01.01.02	S.01.01.03	S.01.01.04	S.01.01.05	S.01.01.06	S.01.01.07	S.01.01.08	S.01.01.09	S.01.01.10	S.01.01.11	S.01.01.12	S.01.01.13	X	X	X	X	X
S.01.02	S.01.02.01	S.01.02.01	S.01.02.01	S.01.02.04	S.01.02.04	X	S.01.02.07	S.01.02.07	S.01.02.10	S.01.02.10	S.01.02.10	S.01.02.12	S.01.02.12	S.01.02.01	S.01.02.01	S.01.02.07	S.01.02.07	X
S.01.03	S.01.03.01	X	S.01.03.01	S.01.03.04	X	X	S.01.03.01	X	S.01.03.01	X	X	X	X	S.01.03.01	X	S.01.03.01	X	X
S.02.01	S.02.01.01	S.02.01.02	S.02.01.01	S.02.01.01	S.02.01.02	S.02.01.03	S.02.01.07	S.02.01.08	S.02.01.09	X	X	S.02.01.13	X	X	X	X	X	X
S.02.02	S.02.02.01	X	S.02.02.01	S.02.02.01	X	X	S.02.02.01	X	X	X	X	X	X	S.02.02.01	X	S.02.02.01	X	X
S.02.03	X	X	X	X	X	X	S.02.03.07	X	X	X	X	X	X	S.02.03.07	X	S.02.03.07	X	X
S.03.01	S.03.01.01	X	S.03.01.04	S.03.01.04	X	X	S.03.01.01	X	X	X	X	X	X	S.03.01.01	X	S.03.01.01	X	X
S.03.02	S.03.02.01	X	S.03.02.04	S.03.02.04	X	X	S.03.02.01	X	X	X	X	X	X	S.03.02.01	X	S.03.02.01	X	X
S.03.03	S.03.03.01	X	S.03.03.04	S.03.03.04	X	X	S.03.03.01	X	X	X	X	X	X	S.03.03.01	X	S.03.03.01	X	X
S.04.01	S.04.01.01	X	S.04.01.04	X	X	X	S.04.01.01	X	X	X	X	X	X	S.04.01.01	X	S.04.01.01	X	X
S.04.02	S.04.02.01	X	S.04.02.01	X	X	X	S.04.02.01	X	X	X	X	X	X	S.04.02.01	X	X	X	X

Figure 10. Organisation of Annotated Templates

IV.3.2.2 Annotation process

The process of annotating templates aims to associate the Reporting Templates with comprehensive, precise and explicit descriptions of business characteristics relevant to all data cells.

The characteristics (breakdowns and their components) used to annotate the cells are documented in a comprehensive manner in the DPM Dictionary.

The annotation process consists of the following steps:

1. Business experts analyse a template row by row, column by column, including the header information (e.g. title of a template) and related documentation (in particular Business Logs).

2. In case of an open table (with unknown number of rows) the key columns are identified and annotated as typed or explicit dimensions. They serve as a key to each row. If among columns there is no candidate for the key or the number of potential keys is high a new columns serving as an artificial key is added to a table.

3. HD metric (primary characteristic) must be assigned to every data cell, either as a property of a table and hence applying to the entire content of a table (all cells in a table), or to all rows or columns,

4. Remaining applicable business properties (pairs of dimension-members) are assigned to data cells similarly as in case of metrics, as a table header or for one or more rows/columns,

5. Consistency of characteristics is verified and (optionally) DPM is updated for required but missing metrics or remaining business properties (dimensions, domains and members).

IV.3.2.3 Annotation convention

Annotation of Business Templates is conducted through assignment of metrics and other business properties (dimension-member pairs) to each identifiable data cell by their application to the entire table, its row or column (and hence to a data cell which is on the intersection). It is possible to apply multiple sets of characteristics to each data cell.

Characteristics applicable to data cells are arranged graphically in either subsequent vertical columns (below each column of an annotated template) or horizontal rows (on the right-hand side of each row of an annotated template). Characteristics applicable to the entire table are described in a separate location on the worksheet (as a "Z axis:" property usually above the table). In case of semi open tables (i.e. which rows or columns are multiplied by a specified explicit dimension members hierarchy) the expandable rows or columns are annotated as "X axis:" or "Y axis:".

Figure 11. Example of an Annotated Template

An example illustrating how annotations have been applied to the templates is presented on Figure 11. As described above, annotations have been applied to columns, rows or the whole tables ("Z axis:").

Annotations may refer to:

- metrics in which case the metric label is prefixed with "Metric:", i.e. "Metric:Monetary",
- dimension-member pairs for explicit dimensions according to the pattern {dimension code}/{label of domain member}, i.e. "II/Partial internal model",
- set of explicit dimension-member pairs following the pattern {dimension code}/"All members" with identification of a subdomain that defines applicable domain members,

- typed dimensions annotated as {dimension code}:{label of dimension}, i.e. "NF: Number of fund".

Note that when there are multiple variants of a template which differ only by the "Z axis:" property, they can be combined onto one sheet using multiple "Z axis:" sections.

For open tables, the columns which uniquely identify the row are annotated with identification of the type of key:
- *natural key* if a column is required to uniquely identify the row,
- *artificial key*, when a columns was introduced to replace/in addition to a number of *natural keys*,
- *foreign key* to identify the relation between tables that were normalized.

Blue font identifies the HD annotation that is replaced by the MD metric (for each row, column or table "Z axis:" property. Black font identifies dimensional annotation applicable to both MD and HD approaches.

IV.3.2.4 Named ranges and cell styles

To allow the automated process of parsing of the Annotated Templates to a structured format (database, XBRL, etc.), each template and table is described using MS Excel named ranges and (if applicable) cell styles. Examples and explanation of some named ranges in provided in Table 2.

Table 2. Examples of named ranges

Item	Explanation	Example
S.XX.YY.ZZ	The IT code given to the specific table.	S.01.02.01
S.XX.YY.ZZ.NN	The IT code given to the specific sub-table.	S.01.02.01.01
S.XX.YY.ZZ.NN.TD	Covers rectangular area enclosing the data cells.	S.01.02.01.01.TD
S.XX.YY.ZZ.NN.TL	Concerns the business labels, located on the far left side of a table.	S.01.02.01.01.TL
S.XX.YY.ZZ.NN.TLC	The business labels codes, located on the right side of the business labels .TL column.	S.01.02.01.01.TLC
S.XX.YY.ZZ.NN.TT	The business labels on the top of a table.	S.01.02.01.01.TT
S.XX.YY.ZZ.NN.TTC	The business labels codes, located below of the business labels .TT row.	S.01.02.01.01.TTC
S.XX.YY.ZZ.NN.TC	The caption of the table.	S.01.02.01.01.TC
S.XX.YY.ZZ.NN.TK	The line of identification labels for the table.	S.01.02.01.01.TK
S.XX.YY.ZZ.NN.TKC	Codes for the line of the identification labels.	S.01.02.01.01.TKC
S.XX.YY.ZZ.NN.X	X axis annotations produced by the DPM analysis. In case of open table	S.01.02.01.01.X
S.XX.YY.ZZ.NN.Y	Y axis annotations produced by the DPM analysis. In case of open table create a unique key of the row.	S.01.02.01.01.Y
S.XX.YY.ZZ.NN.Z	Z axis annotations produced by the DPM analysis.	S.01.02.01.01.Z
S.XX.YY.ZZ.NN.XAX	The second X axis	S.01.02.01.01.XAX
S.XX.YY.ZZ.NN.YAX	The second Y axis	S.01.02.01.01.YAX
S.XX.YY.ZZ.NN.ZHI	The second Z axis	S.01.02.01.01.ZHI
S.XX.YY.ZZ.NN.YHI	Part of the key in the open table, which used a dropdown list.	S.01.02.01.01.YHI

Location of named ranges for different use cases is presented in Figure 12.

S.12.03.01.04

Z axis:
RC/Other than reporting currency
EE/Other than home country
BL/Life and Health SLT
VG/Solvency II
VL/Best estimate

S.XX.YY.ZZ	.X	.XAX
S.XX.YY.ZZ.NN	.Y	.YAX
.TC	.TL	.YHI
.TD	.TLC	.Z
.TK	.TT	.ZHI
.TKC	.TTC	

X axis:

OC/All members	Other than reporting currency	R0010	CU_5

Y axis:

LG/All members	Other than home country	C0020	GA_18

By country (other than home country) and by currency (other than reporting currency)

	Part of the Best Estimate written in the currencies	
	C0050	
Total value of Best Estimate in countries other than home country	R0040	Metric: Monetary	BC/Liability	L6/Gross technical provisions [other than local GAAP specific]

S.16.01.01

F4

Information on annuities stemming from Non-Life Insurance obligations

S.16.01.01.01

Z Axis:
TB/Direct Business
BL/Annuities stemming from non-life insurance contracts
VG/Solvency II

RB/All members	The related non-life line of business	Z0010	LB_30
AX/All members	Accident year / Underwriting year	Z0020	AM_8
OC/All members	Currency	Z0040	CU_1

Information on year N:

	C0010			
The average technical rate	R0010	H1	TA/Average [weighted]	Metric: Pure	PP/Percent of technical rate
The average duration of the obligations	R0020	I1	TA/Average [weighted]	Metric: Decimal	DC/Residual modified duration of obligations
The weighted average age of the beneficiaries	R0030	J1	TA/Average [weighted]	Metric: Decimal	DC/Age of beneficiaries [years]
		RM/N		

S.36.01.01

IGT3

IGT - Internal Reinsurance

S.36.01.01.01

IGT - Internal Reinsurance

ID of intergroup transaction	Line of business	Identification code of cedent	Identification code of reinsurer	Name of cedent	Name of reinsurer	Validity period (start date)	Validity period (expiry date)	Currency of contract/treaty	Type of reinsurance contract/treaty	Maximum cover by reinsurer under contract/treaty
C0010	C0180	C0030	C0060	C0020	C0050	C0080	C0090	C0100	C0110	C0120
		C6	E6	B6	D6	F6	G6	H6	I6	J6
"natural key"	"natural key"			Metric: String	Metric: String	Metric: Date	Metric: Date	Metric: Placement currency/currency of contract	Metric: Type of reinsurance contract/treaty ITG [Full scope]	Metric: Monetary
GX: ID of intergroup transaction	BL/All members	IX: Identification code of investor/buyer/transferee/payer/reinsured/beneficiary	ZS: Identification code of issuer/seller/transferor /receiver/reinsurer/provider	TS/Name of investor/buyer/transferee/payer/reinsured/beneficiary	TS/Name of issuer/seller/transferor /receiver/reinsurer/provider	TD/Start date	TD/End data			TA/Maximum cover
	LB_36									BC/Reinsurance contract/treaty cover conditions

Figure 12. Location of named ranges for different use cases

IV.4 Differences between Reporting Templates and Annotated Templates

The Annotated Templates are intended to capture the business requirements in a format which is as close to the Reporting Templates as possible. Unfortunately, in order to be concise and unambiguous, some differences must be introduced.

The most important reasons for those differences are:

– Necessity to use "*artificial keys*" (see IV.3.2.1),

– Necessity to use URIs, being combination of "code" and "type of code" (see the "Filing rules" published by EIOPA),

Necessity to split templates if there was a modelling issue (i.e. separation of closed and open part of Business Template, see

S.04.02.01

Information on class 10 in Part A of Annex I of Solvency II Directive, excluding carrier's liability

S.04.02.01.01

Information on class 10 in Part A of Annex I of Solvency II Directive, excluding carrier's liability. Part 1

		Undertaking		
		FPS		
		C0010		
Frequency of claims for Motor Vehicle Liability (except carrier's liability)	R0020			Metric: Integer CB/Motor vehicle liat NT/Frequency of cl
Average cost of claims for Motor Vehicle Liability (except carrier's liability)	R0030		TA/Average	VG/Solver Metric: Moneta CB/Motor vehicle liat BC/Cost of claims

TZ/Freedom to provide services by undertaking
LA/EEA countries [other than home country]

S.04.02.01.02

X Axis:

LG/All members		EEA member	R0010	GA_13

Information on class 10 in Part A of Annex I of Solvency II Directive, excluding carrier's liability. Part 2

		By EEA Member		
		Branch	FPS	
		C0020	C0030	
Frequency of claims for Motor Vehicle Liability (except carrier's liability)	R0020		H2	Metric: Integer CB/Motor NT/Frequ
Average cost of claims for Motor Vehicle Liability (except carrier's liability)	R0030		H2A	TA/Averag VG/Solvency II Metric: Monetary CB/Motor BC/Cost

TZ/Typical branch activity   TZ/Freedom to provide services by the branch
LR/EEA   LR/EEA
LA/Local   LA/Not local [EEA]

– Figure 13).

Annex I						
S.04.02.01						
Information on class 10 in Part A of Annex I of Solvency II Directive, excluding carrier's liability						
		Undertaking	By EEA Member		...	
		FPS	Branch	FPS	Branch	FPS
		C0010	C0020	C0030	...	
Country	R0010	X	X	X	X	X
Frequency of claims for Motor Vehicle Liability (except carrier's	R0020					
Average cost of claims for Motor Vehicle Liability (except carrier's liability)	R0030					

S.04.02.01

Information on class 10 in Part A of Annex I of Solvency II Directive, excluding carrier's liability

S.04.02.01.01

Information on class 10 in Part A of Annex I of Solvency II Directive, excluding carrier's liability. Part 1

		Undertaking		
		FPS		
		C0010		
Frequency of claims for Motor Vehicle Liability (except carrier's liability)	R0020			Metric: Integer CB/Motor vehicle liat NT/Frequency of cl
Average cost of claims for Motor Vehicle Liability (except carrier's liability)	R0030		TA/Average VG/Solver	Metric: Moneta CB/Motor vehicle liat BC/Cost of claims

TZ/Freedom to provide services by undertaking
LA/EEA countries [other than home country]

S.04.02.01.02

X Axis:			
LG/All members	EEA member	R0010	GA_13

Information on class 10 in Part A of Annex I of Solvency II Directive, excluding carrier's liability. Part 2

		By EEA Member		
		Branch	**FPS**	
		C0020	**C0030**	
Frequency of claims for Motor Vehicle Liability (except carrier's liability)	R0020		H2	Metric: Integer CB/Motor NT/Frequ
Average cost of claims for Motor Vehicle Liability (except carrier's liability)	R0030		H2A	TA/Averag VG/Solvency II Metric: Monetary CB/Motor BC/Cost

TZ/Typical branch activity   TZ/Freedom to provide services by the branch

LR/EEA   LR/EEA
LA/Local   LA/Not local [EEA]

Figure 13. Example of Business Template that needs to be split in Annotated Templates for modelling reasons