

ExcelXbrlGen (EXGEN)  
Excel XBRL Taxonomy Generator  
Overview of features and interface

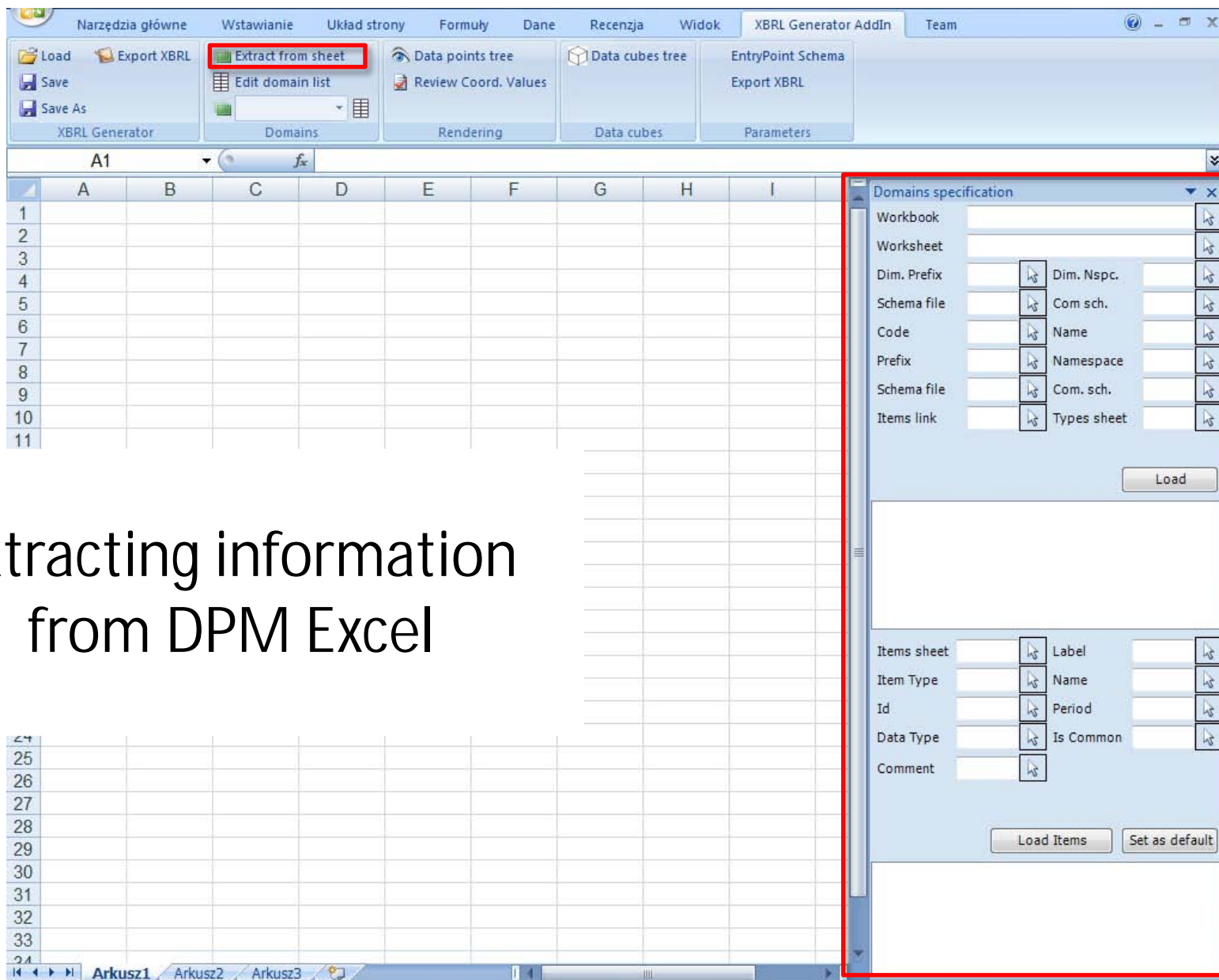
Version 2012-02-15

# General information

- developed in order to facilitate creation of taxonomies according to the draft Eurofiling architecture out of the Data Points Model in MS Excel format
  - automatic creation of primary items, dimensions, domains (structures of members) taxonomies consisting of schema files and linkbases (label and definition) out of the Excel DPM
  - interface for definition and output of tables linkbase (according to Eurofiling draft rendering schema and algorithms)
  - interface for definition and output of multidimensional data model (definition linkbase)
- important characteristics
  - requires .NET (v 3.5) and Excel libraries (2007 or higher) in use
  - no formal requirements set upfront (functionalities created and added on-the-fly)
  - no XBRL validation (some rules included for errors discovered during testing)
  - limited customization possible with many rules hardcoded

# Overview of functionalities

- hardcoded taxonomy architecture (common and EBA/ECB/EIOPA/... specific definitions, separate taxonomies for base, domain and dimension items) and possibility to customize basic generation data (file names, namespaces, data types)
- reads information from worksheets in the correctly formatted DPM Excel workbook: definitions of items (worksheets discovered by hyperlinks or set manually) and relations (basing on worksheet name including "\_D" at the end) and allows for editing in tool specific interface
- **generates taxonomies (common and domain specific) for:**
  - primary items: items definitions (schema), labels (linkbase)
  - dimensions: explicit and typed (schema, typed domain is referenced), labels (linkbase)
  - domains: members (schema) and their standard labels (linkbase), subdomains for dimensions – structures and specific labels (linkbases with custom ELRs)
- **table linkbase (and associated files) design interface and output**
  - uses information extracted from the DPM Excel worksheet in the step described above
  - outputs table linkbase files (schema, rendering and generic label linkbases, including folders structure)
- **definition linkbase for data cubes model - design interface and output**
  - uses information extracted from the DPM Excel worksheet and table definition, described in the steps above
  - outputs linkbase files (schema, definition and label linkbases, including folders structure)
- save of extracted, rendering and data model information (zipped xml file in custom format with .exc extension); load possible at any time in future (prompts for files: DPM Excel and Excels used for rendering)



Extracting information  
from DPM Excel

# Domains specification interface

The screenshot shows a window titled "Domains specification" with a close button (X) in the top right corner. The window contains a form with the following fields and labels:

Workbook	1	
Worksheet	2	
Dim. Prefix	3	Dim. Nspc.
Schema file	5	Com sch.
Code	7	Name
Prefix	9	Namespace
Schema file	11	Com. sch.
Items link	13	Types sheet

Each field is represented by a text box with a number inside and a mouse cursor icon to its right. At the bottom right of the window is a "Load" button.

1. file location and name of a workbook (DPM Excel file)
2. name of a worksheet containing basic generation data
- characteristics of dimension taxonomies:*
  3. prefix of common and domain specific items
  4. namespace of common and domain specific items
  5. path and schema file name for domain specific items
  6. path and schema file name for common items
7. base/domain code (not used in the output)
8. name (used by rendering interface)
  9. prefix of common and domain specific items
  10. namespace of common and domain specific items
  11. path and schema file name for domain specific items
  12. path and schema file name for common items
13. link to worksheet defining items (base, domains & dimensions)
14. name of worksheet defining data types

# Example of domains specification

#	Code	Name	Prefix	Namespace	Schema file name	Common schema files	Dimensions prefix	Dimensions namespace	Dimensions schema file name	Dimensions common schema file name
0	base	<a href="#">Base items</a>	base	<a href="http://www.eurofiling.info/base">http://www.eurofiling.info/base</a>	<a href="eu/main/dsi/base/dsibase.xsd">eu/main/dsi/base/dsibase.xsd</a>	<a href="eu/main/com/base/combase.xsd">eu/main/com/base/combase.xsd</a>	dim	<a href="http://www.eurofiling.info/dim">http://www.eurofiling.info/dim</a>	<a href="eu/main/dsi/dim/dsidim.xsd">eu/main/dsi/dim/dsidim.xsd</a>	<a href="eu/main/com/dim/comdim.xsd">eu/main/com/dim/comdim.xsd</a>
1	CT	<a href="#">Categories</a>	dCT	<a href="http://www.eurofiling.info/dCT">http://www.eurofiling.info/dCT</a>	<a href="eu/main/dsi/d/dCT/dsidCT.xsd">eu/main/dsi/d/dCT/dsidCT.xsd</a>	<a href="eu/main/com/d/dCT/comdCT.xsd">eu/main/com/d/dCT/comdCT.xsd</a>				
2	CI	<a href="#">Comprehensive income</a>	dCI	<a href="http://www.eurofiling.info/dCI">http://www.eurofiling.info/dCI</a>	<a href="eu/main/dsi/d/dCI/dsidCI.xsd">eu/main/dsi/d/dCI/dsidCI.xsd</a>	<a href="eu/main/com/d/dCI/comdCI.xsd">eu/main/com/d/dCI/comdCI.xsd</a>				
3	AT	<a href="#">Amount types</a>	dAT	<a href="http://www.eurofiling.info/dAT">http://www.eurofiling.info/dAT</a>	<a href="eu/main/dsi/d/dAT/dsidAT.xsd">eu/main/dsi/d/dAT/dsidAT.xsd</a>	<a href="eu/main/com/d/dAT/comdAT.xsd">eu/main/com/d/dAT/comdAT.xsd</a>				
4	PL	<a href="#">Portfolios</a>	dPL	<a href="http://www.eurofiling.info/dPL">http://www.eurofiling.info/dPL</a>	<a href="eu/main/dsi/d/dPL/dsidPL.xsd">eu/main/dsi/d/dPL/dsidPL.xsd</a>	<a href="eu/main/com/d/dPL/comdPL.xsd">eu/main/com/d/dPL/comdPL.xsd</a>				
5	SE	<a href="#">Sectors</a>	dSE	<a href="http://www.eurofiling.info/dSE">http://www.eurofiling.info/dSE</a>	<a href="eu/main/dsi/d/dSE/dsidSE.xsd">eu/main/dsi/d/dSE/dsidSE.xsd</a>	<a href="eu/main/com/d/dSE/comdSE.xsd">eu/main/com/d/dSE/comdSE.xsd</a>				
6	GA	<a href="#">Geographical and political areas</a>	dGA	<a href="http://www.eurofiling.info/dGA">http://www.eurofiling.info/dGA</a>	<a href="eu/main/dsi/d/dGA/dsidGA.xsd">eu/main/dsi/d/dGA/dsidGA.xsd</a>	<a href="eu/main/com/d/dGA/comdGA.xsd">eu/main/com/d/dGA/comdGA.xsd</a>				
7	CU	<a href="#">Currencies</a>	dCU	<a href="http://www.eurofiling.info/dCU">http://www.eurofiling.info/dCU</a>	<a href="eu/main/dsi/d/dCU/dsidCU.xsd">eu/main/dsi/d/dCU/dsidCU.xsd</a>	<a href="eu/main/com/d/dCU/comdCU.xsd">eu/main/com/d/dCU/comdCU.xsd</a>				
8	TI	<a href="#">Time intervals</a>	dTI	<a href="http://www.eurofiling.info/dTI">http://www.eurofiling.info/dTI</a>	<a href="eu/main/dsi/d/dTI/dsidTI.xsd">eu/main/dsi/d/dTI/dsidTI.xsd</a>	<a href="eu/main/com/d/dTI/comdTI.xsd">eu/main/com/d/dTI/comdTI.xsd</a>				
9	CD	<a href="#">Continuing/Discontinued</a>	dCD	<a href="http://www.eurofiling.info/dCD">http://www.eurofiling.info/dCD</a>	<a href="eu/main/dsi/d/dCD/dsidCD.xsd">eu/main/dsi/d/dCD/dsidCD.xsd</a>	<a href="eu/main/com/d/dCD/comdCD.xsd">eu/main/com/d/dCD/comdCD.xsd</a>				
10	BA	<a href="#">Before/After</a>	dBA	<a href="http://www.eurofiling.info/dBA">http://www.eurofiling.info/dBA</a>	<a href="eu/main/dsi/d/dBA/dsidBA.xsd">eu/main/dsi/d/dBA/dsidBA.xsd</a>	<a href="eu/main/com/d/dBA/comdBA.xsd">eu/main/com/d/dBA/comdBA.xsd</a>				
11	CL	<a href="#">Control</a>	dCL	<a href="http://www.eurofiling.info/dCL">http://www.eurofiling.info/dCL</a>	<a href="eu/main/dsi/d/dCL/dsidCL.xsd">eu/main/dsi/d/dCL/dsidCL.xsd</a>	<a href="eu/main/com/d/dCL/comdCL.xsd">eu/main/com/d/dCL/comdCL.xsd</a>				
12	RP	<a href="#">Related parties</a>	dRP	<a href="http://www.eurofiling.info/dRP">http://www.eurofiling.info/dRP</a>	<a href="eu/main/dsi/d/dRP/dsidRP.xsd">eu/main/dsi/d/dRP/dsidRP.xsd</a>	<a href="eu/main/com/d/dRP/comdRP.xsd">eu/main/com/d/dRP/comdRP.xsd</a>				
13	RT	<a href="#">Risk types</a>	dRT	<a href="http://www.eurofiling.info/dRT">http://www.eurofiling.info/dRT</a>	<a href="eu/main/dsi/d/dRT/dsidRT.xsd">eu/main/dsi/d/dRT/dsidRT.xsd</a>	<a href="eu/main/com/d/dRT/comdRT.xsd">eu/main/com/d/dRT/comdRT.xsd</a>				
14	MA	<a href="#">Markets</a>	dMA	<a href="http://www.eurofiling.info/dMA">http://www.eurofiling.info/dMA</a>	<a href="eu/main/dsi/d/dMA/dsidMA.xsd">eu/main/dsi/d/dMA/dsidMA.xsd</a>	<a href="eu/main/com/d/dMA/comdMA.xsd">eu/main/com/d/dMA/comdMA.xsd</a>				
15	RS	<a href="#">Reporting scope</a>	dRS	<a href="http://www.eurofiling.info/dRS">http://www.eurofiling.info/dRS</a>	<a href="eu/main/dsi/d/dRS/dsidRS.xsd">eu/main/dsi/d/dRS/dsidRS.xsd</a>	<a href="eu/main/com/d/dRS/comdRS.xsd">eu/main/com/d/dRS/comdRS.xsd</a>				
16	EC	<a href="#">Entity codes</a>	dEC	<a href="http://www.eurofiling.info/dEC">http://www.eurofiling.info/dEC</a>	<a href="eu/main/dsi/d/dEC/dsidEC.xsd">eu/main/dsi/d/dEC/dsidEC.xsd</a>	<a href="eu/main/com/d/dEC/comdEC.xsd">eu/main/com/d/dEC/comdEC.xsd</a>				

Selection from worksheet is made by clicking on an arrow (right hand side of the field)

Domains specification

Workbook

D:\Eurofiling\DataPointsModel.xlsx

Worksheet

NAVI

Dim. Prefix

dim

Dim. Nspc.

<http://www.eurofiling.info/dim>

Schema file

eu/main/dsi/dim/dsidim.xsd

Com sch.

eu/main/com/dim/comdim.xsd

Code

b2

Name

c2

Prefix

d2

Namespace

e2

Schema file

f2

Com. sch.

g2

Items link

c2

Types sheet

DT

Load

# Data types definitions

	A	B	C	D	E	F
1	Short name	Local name	Prefix	Schema location	Namespace	One letter abbreviation
2	monetary	monetaryItemType	xbrii	<a href="http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd">http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd</a>	<a href="http://www.xbrl.org/2003/instance">http://www.xbrl.org/2003/instance</a>	m
3	decimal	decimalItemType	xbrii	<a href="http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd">http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd</a>	<a href="http://www.xbrl.org/2003/instance">http://www.xbrl.org/2003/instance</a>	c
4	integer	integerItemType	xbrii	<a href="http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd">http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd</a>	<a href="http://www.xbrl.org/2003/instance">http://www.xbrl.org/2003/instance</a>	i
5	date	dateItemType	xbrii	<a href="http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd">http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd</a>	<a href="http://www.xbrl.org/2003/instance">http://www.xbrl.org/2003/instance</a>	d
6	string	stringItemType	xbrii	<a href="http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd">http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd</a>	<a href="http://www.xbrl.org/2003/instance">http://www.xbrl.org/2003/instance</a>	s
7	none	pureItemType	xbrii	<a href="http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd">http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd</a>	<a href="http://www.xbrl.org/2003/instance">http://www.xbrl.org/2003/instance</a>	n
8	boolean	booleanItemType	xbrii	<a href="http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd">http://www.xbrl.org/2003/xbrii-instance-2003-12-31.xsd</a>	<a href="http://www.xbrl.org/2003/instance">http://www.xbrl.org/2003/instance</a>	b
9	percent	percentItemType	num	<a href="http://www.xbrl.org/dtr/type/numeric-2009-12-16.xsd">http://www.xbrl.org/dtr/type/numeric-2009-12-16.xsd</a>	<a href="http://www.xbrl.org/dtr/type/numeric">http://www.xbrl.org/dtr/type/numeric</a>	p
10	domain	domainItemType	nonnum	<a href="http://www.xbrl.org/dtr/type/nonNumeric-2009-12-16.xsd">http://www.xbrl.org/dtr/type/nonNumeric-2009-12-16.xsd</a>	<a href="http://www.xbrl.org/dtr/type/non-numeric">http://www.xbrl.org/dtr/type/non-numeric</a>	x
11						

- "Short name" is used when declaring data type of an item
- declaration of custom data types outside of scope of the tool (value assertions to be used)

# Loading of domain information

Domains specification

Workbook	D:\Eurofiling\DataPointsModel.xlsx		
Worksheet	NAVI		
Dim. Prefix	dim	Dim. Nspc.	http://www.eurofiling.info/dim
Schema file	eu/main/dsi/dim/dsidim.xsd	Com sch.	eu/main/com/dim/comdim.xsd
Code	b2	Name	c2
Prefix	d2	Namespace	e2
Schema file	f2	Com. sch.	g2
Items link	c2	Types sheet	DT

Load

Base items

- Categories
- Comprehensive income
- Amount types
- Portfolios
- Sectors
- Geographical and political areas
- Currencies
- Time intervals
- Continuing/Discontinued
- Before/After
- Control
- Related parties
- Risk types
- Markets
- Reporting scope
- Entity codes

Items sheet	base_	Label	
Item Type		Name	
Id		Period	
Data Type		Is Common	
Comment			

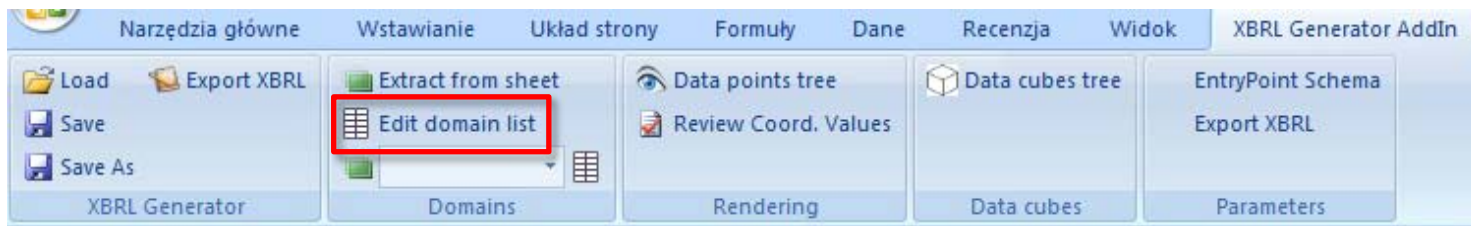
Load Items Set as default

Found domain definition: Base items  
Found domain definition: Categories  
Found domain definition: Comprehensive income  
Found domain definition: Amount types  
Found domain definition: Portfolios  
Found domain definition: Sectors  
Found domain definition: Geographical and political areas  
Found domain definition: Currencies  
Found domain definition: Time intervals  
Found domain definition: Continuing/Discontinued  
Found domain definition: Before/After  
Found domain definition: Control  
Found domain definition: Related parties  
Found domain definition: Risk types

List of loaded domains

Loading process (task list)





## Review of loaded domains information

→

Edit Domains and Items							
IsPrimary/ItemsDom:	Code	Name	Prefix	Namespace	SchemaFilename	CommonSchemaFilename	
<input checked="" type="checkbox"/>	base	Base items	base	http://www.eurofiling.info/base	eu/main/dsi/base/dsibase.xsd	eu/main/com/base/combase.xsd	
<input type="checkbox"/>	CT	Categories	dCT	http://www.eurofiling.info/dCT	eu/main/dsi/d/dCT/dsidCT.xsd	eu/main/com/d/dCT/comdCT.xsd	
<input type="checkbox"/>	CI	Comprehensive i...	dCI	http://www.eurofiling.info/dCI	eu/main/dsi/d/dCI/dsidCI.xsd	eu/main/com/d/dCI/comdCI.xsd	
<input type="checkbox"/>	AT	Amount types	dAT	http://www.eurofiling.info/dAT	eu/main/dsi/d/dAT/dsidAT.xsd	eu/main/com/d/dAT/comdAT.xsd	
<input type="checkbox"/>	PL	Portfolios	dPL	http://www.eurofiling.info/dPL	eu/main/dsi/d/dPL/dsidPL.xsd	eu/main/com/d/dPL/comdPL.xsd	
<input type="checkbox"/>	SE	Sectors	dSE	http://www.eurofiling.info/dSE	eu/main/dsi/d/dSE/dsidSE.xsd	eu/main/com/d/dSE/comdSE.xsd	
<input type="checkbox"/>	GA	Geographical an...	dGA	http://www.eurofiling.info/dGA	eu/main/dsi/d/dGA/dsidGA.xsd	eu/main/com/d/dGA/comdGA.xsd	
<input type="checkbox"/>	CU	Currencies	dCU	http://www.eurofiling.info/dCU	eu/main/dsi/d/dCU/dsidCU.xsd	eu/main/com/d/dCU/comdCU.xsd	
<input type="checkbox"/>	TI	Time intervals	dTI	http://www.eurofiling.info/dTI	eu/main/dsi/d/dTI/dsidTI.xsd	eu/main/com/d/dTI/comdTI.xsd	
<input type="checkbox"/>	CD	Continuing/Disco...	dCD	http://www.eurofiling.info/dCD	eu/main/dsi/d/dCD/dsidCD.xsd	eu/main/com/d/dCD/comdCD.xsd	
<input type="checkbox"/>	BA	Before/After	dba	http://www.eurofiling.info/dba	eu/main/dsi/d/dba/dsidBA.xsd	eu/main/com/d/dba/comdba.xsd	
<input type="checkbox"/>	CL	Control	dCL	http://www.eurofiling.info/dCL	eu/main/dsi/d/dCL/dsidCL.xsd	eu/main/com/d/dCL/comdCL.xsd	
<input type="checkbox"/>	RP	Related parties	dRP	http://www.eurofiling.info/dRP	eu/main/dsi/d/dRP/dsidRP.xsd	eu/main/com/d/dRP/comdRP.xsd	
<input type="checkbox"/>	RT	Risk types	dRT	http://www.eurofiling.info/dRT	eu/main/dsi/d/dRT/dsidRT.xsd	eu/main/com/d/dRT/comdRT.xsd	
<input type="checkbox"/>	MA	Markets	dMA	http://www.eurofiling.info/dMA	eu/main/dsi/d/dMA/dsidMA.xsd	eu/main/com/d/dMA/comdMA.xsd	
<input type="checkbox"/>	RS	Reporting scope	dRS	http://www.eurofiling.info/dRS	eu/main/dsi/d/dRS/dsidRS.xsd	eu/main/com/d/dRS/comdRS.xsd	
<input type="checkbox"/>	EC	Entity codes	dEC	http://www.eurofiling.info/dEC	eu/main/dsi/d/dEC/dsidEC.xsd	eu/main/com/d/dEC/comdEC.xsd	
*							

IsCommon	Name	Id	Label	Period	Item Type	Data Type	Comment
*							

setting primary items declaration in DPM Excel

# Items characteristics interface

The screenshot shows a web interface for defining item characteristics. It consists of two columns of input fields, each with a number in a blue box and a mouse cursor icon to its right. The fields are labeled as follows:

Field Number	Field Label
1	Items sheet
2	Label
3	Item Type
4	Name
5	Id
6	Period
7	Data Type
8	Is Common
9	Comment

At the bottom right of the form are two buttons: "Load Items" and "Set as default".

1. name of worksheet (or name of A1 cell) defining base or domain items (input automatically from "Items link" in domain specification interface or manually)  
*cell from first row (usually row 2) of column containing characteristics of a primary item, dimension or domain member:*
2. standard label (reflected in linkbase file in standard ELR and label role)
3. one of the following item types: Primary item, Explicit dimension, Typed dimension, Member, Typed domain (impacts @substitutionGroup attribute value)
4. XBRL element @name attribute value
5. XBRL element @id attribute value
6. value of @periodType attribute ("duration" or "instant")
7. value of @dataType attribute; "Short name" from worksheet set as "Types sheet" in Domain specification interface); e.g. string, monetary, date, domain, ...
8. indication if an item is common (with "x" or any value) or domain specific (empty)
9. comment (not used for taxonomy generation, possibly as documentation label)

# Example of items characteristics definition

	A	B	C	D	E	F	G	H	I	J	K
1	Nav	Base items	Item type	Name	ID	Period	Data type	Common	Comment	Balance	Reference
2	1	Abstract	Primary item	ad1	base_ad1	duration	string	x			
3	1	Assets	Primary item	mi1	base_mi1	instant	monetary	x		debit	
4	2	Assets and liabilities	Primary item	mi2	base_mi2	instant	monetary			debit	
5	3	Change in equity	Primary item	md3	base_md3	duration	monetary			credit	
6	4	Collateral or other credit enhancement received as security	Primary item	mi4	base_mi4	instant	monetary			debit	
7	5	Commitments and financial guarantees given	Primary item	mi5	base_mi5	instant	monetary	x		credit	
8	3	Commitments and financial guarantees received	Primary item	mi3	base_mi3	instant	monetary	x		debit	
9	6	Entity name	Primary item	sd6	base_sd6	duration	string				
10	7	Entry date	Primary item	dd7	base_dd7	duration	date				
11	8	Equity	Primary item	mi8	base_mi8	instant	monetary	x		credit	
12	9	Equity and liabilities	Primary item	mi9	base_mi9	instant	monetary			credit	
13	10	Expense	Primary item	md10	base_md10	duration	monetary			debit	
14	11	Income	Primary item	md11	base_md11	duration	monetary			credit	
15	12	Income/(Expense)	Primary item	md12	base_md12	duration	monetary			credit	
16	13	Liabilities	Primary item	mi13	base_mi13	instant	monetary	x		credit	
17	14	Removal date	Primary item	dd14	base_dd14	duration	date				
18	15	Voting rights	Primary item	pi15	base_pi15	instant	percent				
19											
20											

"Set as default": applies the same start cells (B2, C2, ...) for items discovery to all defined (found automatically via links or set manually) domain worksheets

Items sheet	base_	Label	b2
Item Type	c2	Name	d2
Id	e2	Period	f2
Data Type	g2	Is Common	h2
Comment	i2		

Load Items Set as default

# Attribute „Abstract“

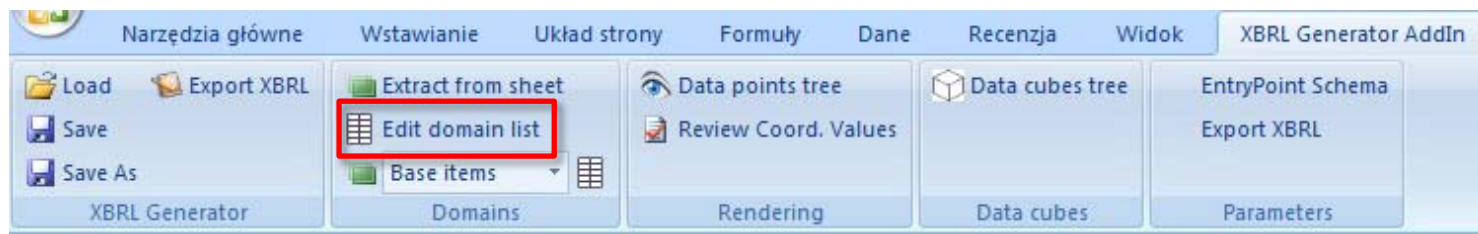
- There is no information in Excel worksheet and data model structure concerning item's „abstract“ attribute
- The tool generates to XBRL taxonomy element with abstract attribute=„true“ if:
  - item is PrimaryItem and its name starts with „a“
  - item is not PrimaryItem

in other cases abstract attribute = „false“

# Domain structure (subdomains)

	A	B	C	D	E	F	G	H	I	J
1	<a href="#">Navi</a>	Geographical and political areas - Structure	Level	Label	Default	Type	Comment	Definition		
2	dGA_01	http://www.eurofiling.info/dsi/dGA_01								Dimension: Counterparty residence [1]
3	dim_CR	Counterparty residence	0	Counterparty residence						
4	dGA_x1	Total / Not-applicable	1	Total / Not-applicable	true					
5	dGA_eu	EU	2	EU						
6	dGA_emu	EMU	3	EMU						
7	dGA_x2	Other than EMU in EU	3	Other than EMU in EU						
8	dGA_x4	Other than EU	2	Other than EU						
9	dGA_02	http://www.eurofiling.info/dsi/dGA_02								Dimension: Counterparty residence [2]
10	dim_CR	Counterparty residence	0	Counterparty residence						
11	dGA_x1	Total / Not-applicable	1	Total / Not-applicable						
12	dGA_emu	EMU	2	EMU						
13	dGA_x3	Other than EMU	2	Other than EMU						
14	dGA_03	http://www.eurofiling.info/dsi/dGA_03								Dimension: Jurisdiction of incorporation
15	dim_JI	Jurisdiction of incorporation	0	Jurisdiction of incorporation						
16	dGA_emu	EMU	1	EMU						
17	dGA_x2	Other than EMU in EU	1	Other than EMU in EU						
18	dGA_x4	Other than EU	1	Other than EU						
19										
NAVI TABLES DT BASE BASE D CT CT D CI CI D AT AT D PL PL D SE SE D GA GA D CU CU D TI TI D										

- worksheet name: "{Items sheet}\_D"
- starts from second row and discovers all not-empty rows
- for role types:
  - column A: roleType @id attribute
  - column B: roleType roleURI
  - column J: roleType definition
  - declaration of a roleType placed in domain's schema file (usedOn: definition and label link)
- for dimensions and members:
  - column A: XBRL item @id attribute
  - column B: ELR specific label and tree structure of definition linkbase basing on indentation (arcroles hardcoded)
  - column C: nesting level (supportive in case indentation is lost)
  - column D: standard label (for vlookup function)
  - column G: information if an item is a default member
- columns E, F, H and I – for future functionalities (national extensions, types of subdomains, etc)

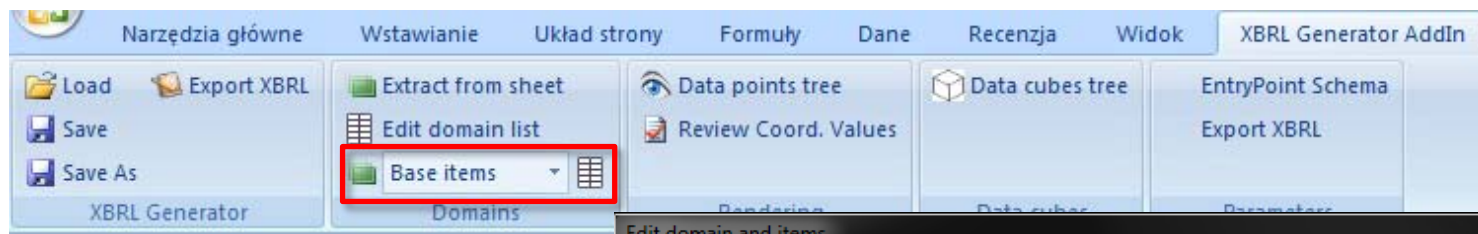


## Review of loaded data (1)

	IsPrimaryItemsDom	Code	Name	Prefix	Namespace	SchemaFilename	CommonSchemaFile	
▶	<input checked="" type="checkbox"/>	base	Base items	base	http://www.eurof...	eu/main/dsi/bas...	eu/main/com/ba...	
	<input type="checkbox"/>	CT	Categories	dCT	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	
	<input type="checkbox"/>	CI	Comprehensive i...	dCI	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	
	<input type="checkbox"/>	AT	Amount types	dAT	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	
	<input type="checkbox"/>	PL	Portfolios	dPL	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	
	<input type="checkbox"/>	SE	Sectors	dSE	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	
	<input type="checkbox"/>	GA	Geographical an...	dGA	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	
	<input type="checkbox"/>	CU	Currencies	dCU	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	
	<input type="checkbox"/>	TI	Time intervals	dTI	http://www.eurof...	eu/main/dsi/d/d...	eu/main/com/d/...	

	IsCommon	Name	Id	Label	Period	Item Type	Data Type	Comment
▶	<input checked="" type="checkbox"/>	ad1	base_ad1	Abstract	duration	PrimaryItem	string	
	<input checked="" type="checkbox"/>	mi1	base_mi1	Assets	instant	PrimaryItem	monetary	
	<input type="checkbox"/>	mi2	base_mi2	Assets and liabili...	instant	PrimaryItem	monetary	
	<input type="checkbox"/>	md3	base_md3	Change in equity	duration	PrimaryItem	monetary	
	<input type="checkbox"/>	mi4	base_mi4	Collateral or other...	instant	PrimaryItem	monetary	
	<input checked="" type="checkbox"/>	mi5	base_mi5	Commitments and...	instant	PrimaryItem	monetary	
	<input checked="" type="checkbox"/>	mi3	base_mi3	Commitments and...	instant	PrimaryItem	monetary	
	<input type="checkbox"/>	sd6	base_sd6	Entity name	duration	PrimaryItem	string	
	<input type="checkbox"/>	dd7	base_dd7	Entry date	duration	PrimaryItem	date	
	<input type="checkbox"/>	mi0	base_mi0	Entity	instant	PrimaryItem	monetary	



drop-down list

## Review of loaded data (2)

Edit domain and items

Code:  Prefix:  Namespace:

Name:

Schema Filename:  Common Schema Filename:

Is Primary Items Domain: ☒

Domain Items:

	Name	Id	Label	Comment	ItemType	Parent
▶	ad1	base_ad1	Abstract		PrimaryItem	ExcelXBRLGen....
	mi1	base_mi1	Assets		PrimaryItem	ExcelXBRLGen....
	mi2	base_mi2	Assets and liability...		PrimaryItem	ExcelXBRLGen....
	md3	base_md3	Change in equity		PrimaryItem	ExcelXBRLGen....
	mi4	base_mi4	Collateral or other...		PrimaryItem	ExcelXBRLGen....
	mi5	base_mi5	Commitments and...		PrimaryItem	ExcelXBRLGen....
	mi3	base_mi3	Commitments and...		PrimaryItem	ExcelXBRLGen....
	sd6	base_sd6	Entity name		PrimaryItem	ExcelXBRLGen....
	dd7	base_dd7	Entry date		PrimaryItem	ExcelXBRLGen....
	mi8	base_mi8	Equity		PrimaryItem	ExcelXBRLGen....
	mi9	base_mi9	Equity and liabilities		PrimaryItem	ExcelXBRLGen....

Id:  Name:

Label:

Item Type:  Data Type:

Period:  Is Common: ☒

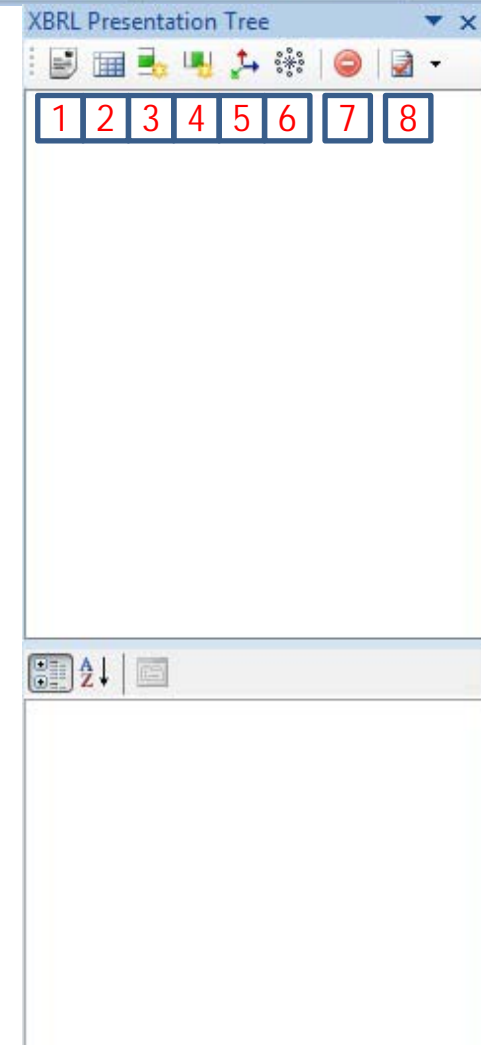
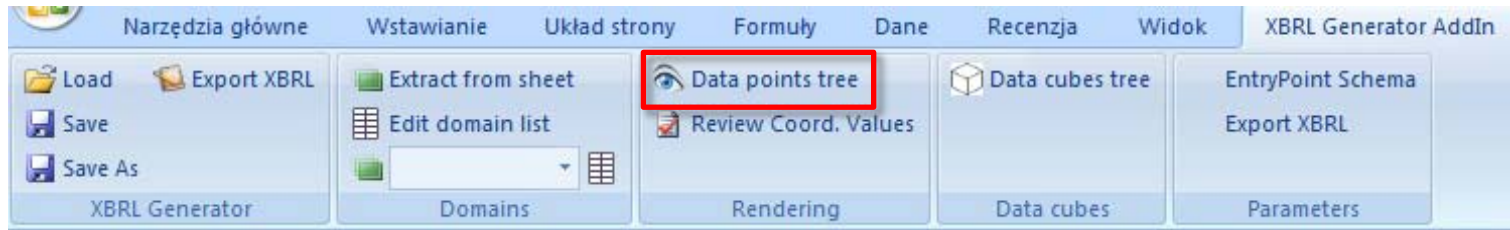
Comment:

# Defining rendering information

## Overview

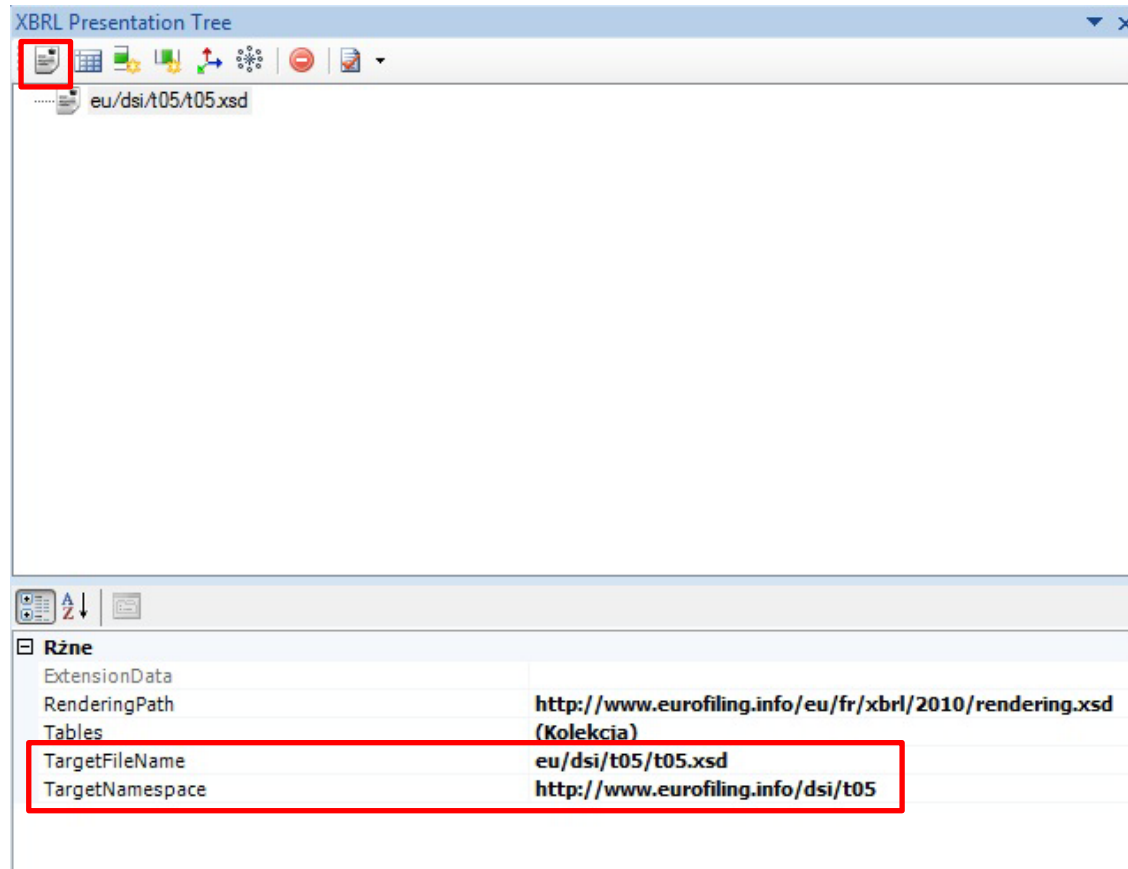
- input:
  - information extracted from DPM Excel and stored in XBRL Taxonomy Generation AddIn
  - business templates (**BT**) in Excel format
- functionality:
  - splitting of BTs in statements and tables (i.e. components of statements)
  - reflecting columns/rows of BTs as tree structure (x and y axis) of rendering linkbase (automatic or manual)
  - addition of hidden/dropdown (template application) information (z axis)
  - assigning of items (base items, members for dimension) as axis coordinates
- output:
  - schema files (roleType definitions)
  - rendering linkbase files
  - generic label linkbase files (for row/columns coordinates)





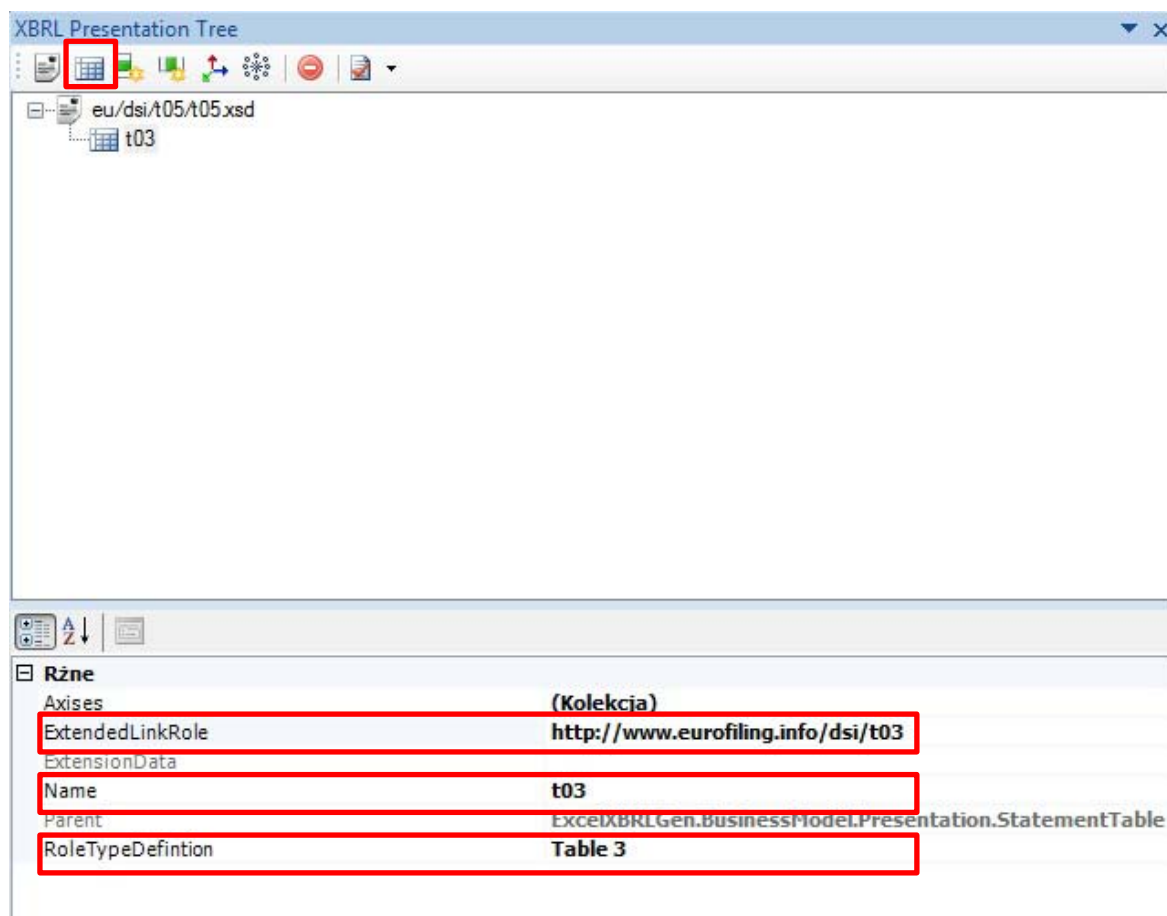
1. add a statement (schema containing role types definitions and referencing rendering and generic labels linkbases)
  - file name (and prefix at the same time) and folder location
  - target namespace
2. add a table
3. automatically create coordinates for y axis from BT rows
4. automatically create coordinates for y axis from BT columns
5. adds z axis
6. adds coordinates on any axis or other coordinate (possible also with right click on axis or coordinate)
7. removes definition of a statement, table, axis or coordinate
8. updates items attributes

# Adding a statement



- TargetFileName: file name (and prefix at the same time) and folder location
- TargetNamespace: target namespace of a template schema

# Adding a table



- ExtendedLinkRole: roleType roleURI
- Name: roleType @id
- RoleTypeDefinition: roleType definition

# Creation of rows and columns coordinates (rendering tree structure for axis and generic labels)

- automatic by marking a range of cells in Excel (+ CTRL allows to mark more areas if needed):
  - coordinate labels read from cells content
  - hierarchy
    - rows:
      - top to bottom for order
      - left to right for levels
        - » based on indentation
        - » based on columns nesting
      - possible issues with merged cells and mixing columns based with indentation based levels
    - columns:
      - left to right for order
      - top to bottom for levels
      - possible issues with merged cells
    - possible „drag and drop” for moving defined coordinates in the tree structure
  - manually: adding coordinate by coordinate and setting their labels and hierarchies

# Automatic creation of rows coordinates

B8      fx      Debt securities

Tables

Table 3 - Impairment of debt instruments

		1	2
Debt securities		1	
Central banks		2	
General governments		3	
Credit institutions		4	
Other financial corporations		5	
Corporates		6	
Loans		7	
Central banks		8	
General governments		9	
Credit institutions		10	
Other financial corporations		11	
Non-financial corporations, Corporates		12	
Non-financial corporations, Retail		13	
Households, Corporates		14	
Households, Retail		15	
Total	IFRS 7.37	16	

Unimpaired      ≤ 90 days

1      2

XBRL Presentation Tree

- eu/tpl/t05/t05.xsd
  - t03
    - Row
      - Debt securities ()
        - Central banks ()
        - General governments ()
        - Credit institutions ()
        - Other financial corporations ()
        - Corporates ()
      - Loans ()
        - Central banks ()
        - General governments ()
        - Credit institutions ()
        - Other financial corporations ()
        - Non-financial corporations, Corporates ()
        - Non-financial corporations, Retail ()
        - Households, Corporates ()
        - Households, Retail ()
      - Total ()

Rzne

Axes	(Kolekcja)
ExtendedLinkRole	<a href="http://www.eurofiling.info/dsi/t03">http://www.eurofiling.info/dsi/t03</a>
ExtensionData	
Name	t03
Parent	ExcelXBRLGen.BusinessModel.Presentation
RoleTypeDefintion	Table 3

ExtendedLinkRole

Extended link role for the current table

tables      t01      t02      t03      t04      t05      t06

AT-AT/      AT-AT/

21

# Automatic creation of columns coordinates

PL: PL/ Measured at amortised cost

	Past due but not impaired				Impaired [gross carrying amount]	Specific allowance s for individuall y assessed financial assets	Specific allowance s for collectivel y assessed financial assets	Collective allowance s for incurred but not reported losses	Collateral and other credit enhancem ents received as security for the related impaired	Impaired [net carrying amount]	Carrying amount
	Unimpaired	≤ 90 days	> 90 days ≤ 180days	> 180 days ≤ 1year							
	IFRS 7.37 (a); IG 26-28					IAS 39 AG 84-92; IFRS 7.37 (b)	IAS 39 AG 84-92	IAS 39 AG 84-92	IFRS 7.37 (c)	IAS 39.58 70	
	1	2	3	4	5	6	7	8	9	10	11
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23	IFRS 7.37	16									

**XBRL Presentation Tree**

- eu/tp/105/105.xsd
  - t03
    - Row
      - Column
        - Unimpaired ()
        - Past due but not impaired ()
          - ≤ 90 days ()
          - > 90 days ≤ 180days ()
          - > 180 days ≤ 1year ()
          - > 1year ()
        - Impaired [gross carrying amount] ()
          - Specific allowances for individually assessed financial assets ()
          - Specific allowances for collectively assessed financial assets ()
          - Collective allowances for incurred but not reported losses ()

**Rznie**

Axis Type	Column (Kolekcja)
Data Points	
ExtensionData	
Id	a17
Parent	ExcelXBRLGen.BusinessModel.Presentation

**Axis Type**  
Current Axis Type. It can take one of the following values: Column, Row or Z axis.

## Adding of Z-axis

## Manual adding of a coordinate and setting its label

	A	B	C	D	E	F	G
1	Tables						
2		<b>Table 3 - Impairment of debt instruments</b>					
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

PL: PL/ Measured at

Past due but not in

Unimpaired

≤ 90 days

> 90 days ≤ 180days

> 180days

IFRS 7.37 (a); IG

1 2 3

Debt securities

Central banks

General governments

Credit institutions

Other financial corporations

Corporates

Loans

Central banks

General governments

XBRL Presentation Tree

eu/tpl/t05/t05.xsd

t03

Row

Column

Z Axis

Measured at amortised cost portfolio ()

Rżne

Abstract False

Cell code

Children (Kolekcja)

Coordinate reference

Dimension Values (Kolekcja)

Excel cell location

ExtensionData

Id ac50

Parent

**Text Measured at amortised cost portfolio**

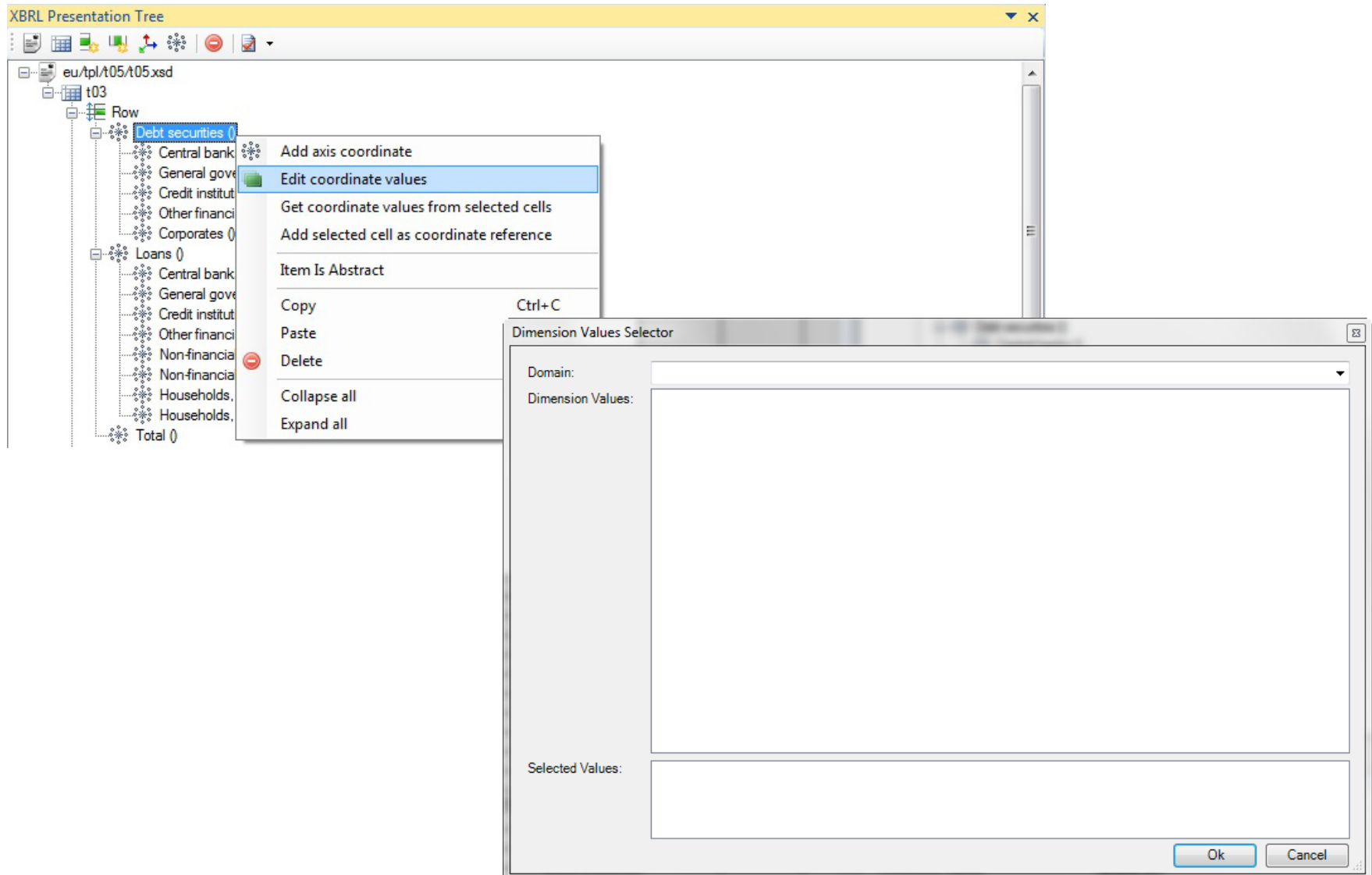
Time reference

**Text**

Axis coordinate description.



# Editing coordinate values [1] (base or dimension members)



# Editing coordinate values [2] (base or dimension members)

select a domain from a drop-down list

select dimensions from a domain and exactly one member for each of them (subdomains view) or "none" to remove a dimension inherited from upper level coordinates

review all selected coordinate values

Dimension Values Selector

Domain: Categories [CT]

Dimension Values:

- Base items [base]
- Categories [CT]
- Comprehensive income [CI]
- Amount types [AT]
- Portfolios [PL]
- Sectors [SE]
- Geographical and political areas [GA]
- Currencies [CU]
- Time intervals [TI]
- Continuing/Discontinued [CD]
- Before/After [BA]
- Control [CL]
- Related parties [RP]
- Risk types [RT]
- Markets [MA]
- Reporting scope [RS]
- Entity codes [EC]

Dimension Values Selector

Domain: Categories [CT]

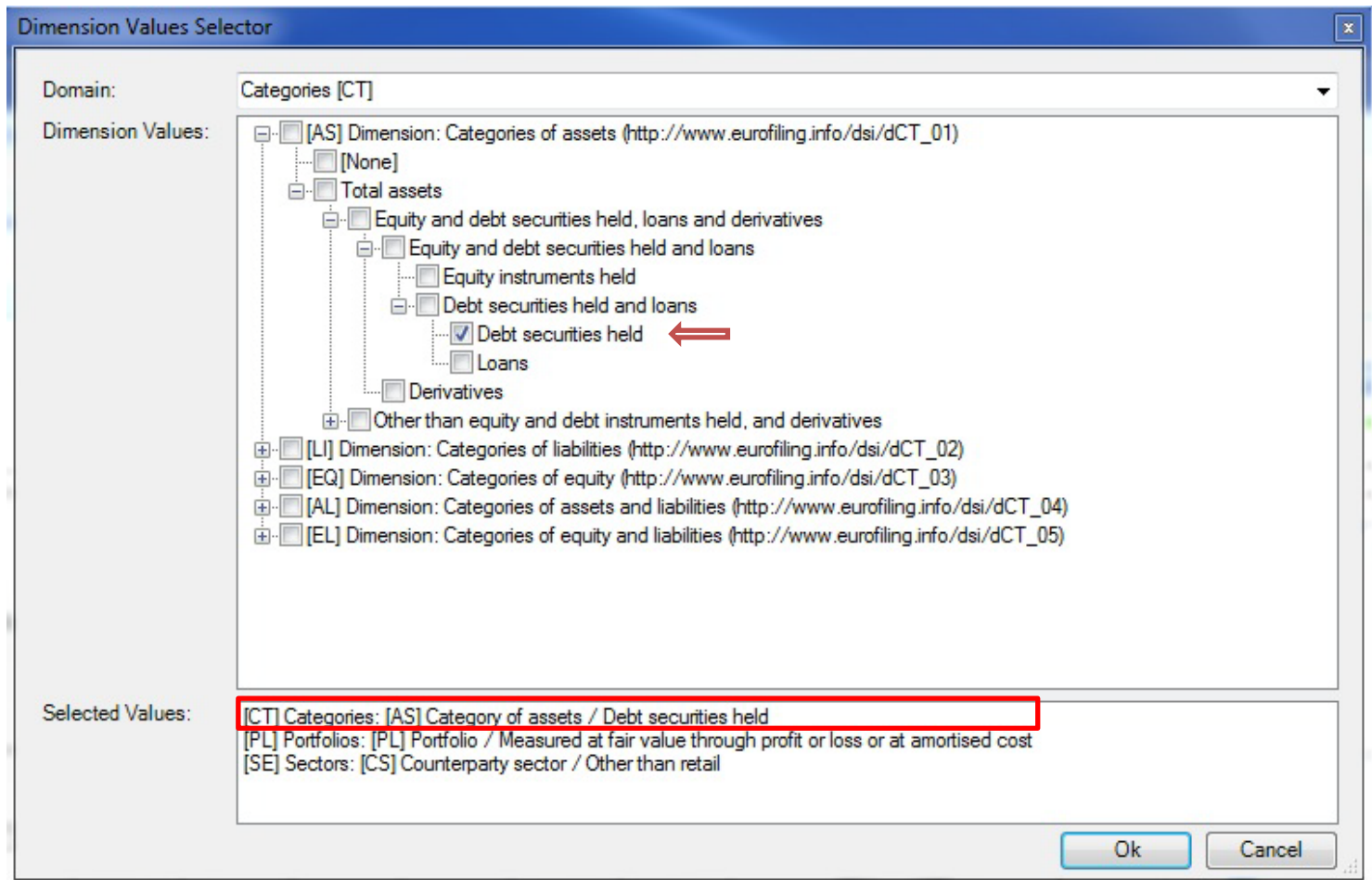
Dimension Values:

- ☐ [AS] Dimension: Categories of assets ([http://www.eurofiling.info/dsi/dCT\\_01](http://www.eurofiling.info/dsi/dCT_01))
  - ☐ [None]
  - ☐ Total assets
    - ☐ Equity and debt securities held, loans and derivatives
      - ☐ Equity and debt securities held and loans
        - ☐ Equity instruments held
        - ☐ Debt securities held and loans
          - ☒ Debt securities held
          - ☐ Loans
      - ☐ Derivatives
    - ☐ Other than equity and debt instruments held, and derivatives
- ☐ [LI] Dimension: Categories of liabilities ([http://www.eurofiling.info/dsi/dCT\\_02](http://www.eurofiling.info/dsi/dCT_02))
- ☐ [EQ] Dimension: Categories of equity ([http://www.eurofiling.info/dsi/dCT\\_03](http://www.eurofiling.info/dsi/dCT_03))
- ☐ [AL] Dimension: Categories of assets and liabilities ([http://www.eurofiling.info/dsi/dCT\\_04](http://www.eurofiling.info/dsi/dCT_04))
- ☐ [EL] Dimension: Categories of equity and liabilities ([http://www.eurofiling.info/dsi/dCT\\_05](http://www.eurofiling.info/dsi/dCT_05))

Selected Values: [CT] Categories: [AS] Category of assets / Debt securities held

Ok Cancel

# Assigning coordinate values (1)



# Assigning coordinate values (2)

Dimension Values Selector

Domain: Portfolios [PL]

Dimension Values:

- ☐ [PL] Dimension: Portfolio [01] ([http://www.eurofiling.info/dsi/dPL\\_01](http://www.eurofiling.info/dsi/dPL_01))
  - ☐ [None]
  - ☐ Total portfolio
    - ☐ Other than held for sale
      - ☐ IFRS 9 portfolios
        - ☐ Measured at fair value through profit or loss or other comprehensive income or at amortised cost
          - ☒ Measured at fair value through profit or loss or at amortised cost ←
          - ☐ Measured at fair value through other comprehensive income
        - ☐ Hedge accounting
      - ☐ Other than held for sale portfolios outside IFRS 9
    - ☐ Held for sale
      - ☐ Of which: Other than hedges of net investments in foreign operations
- ☐ [PL] Dimension: Portfolio [02] ([http://www.eurofiling.info/dsi/dPL\\_02](http://www.eurofiling.info/dsi/dPL_02))
- ☐ [PL] Dimension: Portfolio [03] ([http://www.eurofiling.info/dsi/dPL\\_03](http://www.eurofiling.info/dsi/dPL_03))
- ☐ [PL] Dimension: Portfolio [04] ([http://www.eurofiling.info/dsi/dPL\\_04](http://www.eurofiling.info/dsi/dPL_04))

Selected Values:

[CT] Categories: [AS] Category of assets / Debt securities held

[PL] Portfolios: [PL] Portfolio / Measured at fair value through profit or loss or at amortised cost

[SE] Sectors: [CS] Counterparty sector / Other than retail

Ok Cancel

# Assigning coordinate values (3)

Dimension Values Selector

Domain: Sectors [SE]

Dimension Values:

- ☐ [CS] Dimension: Counterparty sector [01] ([http://www.eurofiling.info/dsi/dSE\\_01](http://www.eurofiling.info/dsi/dSE_01))
- ☐ [CS] Dimension: Counterparty sector [02] ([http://www.eurofiling.info/dsi/dSE\\_02](http://www.eurofiling.info/dsi/dSE_02))
- ☐ [None]
- ☐ Total / Not-applicable
- ☐ Retail
  - ☒ Other than retail ←
  - ☐ Central banks
  - ☐ General governments
  - ☐ Credit institutions
  - ☐ Other financial corporations
- ☐ Corporates

Selected Values:

[CT] Categories: [AS] Category of assets / Debt securities held  
[PI] Portfolios: [PI1] Portfolio / Measured at fair value through profit or loss or at amortised cost  
**[SE] Sectors: [CS] Counterparty sector / Other than retail**

Ok Cancel

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# Additional features and rules of XBRL Presentation Tree interface

Axes, coordinates and coordinate values can be:

- dragged and dropped:
  - with CTRL: copy
  - without CTRL: move
- copied / pasted / deleted
  - Ctrl+C, Ctrl+V, Del

Rules:

- axis can be placed only on tables
- coordinates can be dropped only on axis or other coordinates
- coordinates values can be dropped only on other coordinates

The screenshot displays the XBRL Presentation Tree interface. The top pane shows a tree structure for the file 'eu/tpl/t03/t03.xsd'. The tree includes a 'Row' element containing 'Debt securities ()', which is further expanded to show 'Central bank', 'General gove', 'Credit institut', 'Other financi', and 'Corporates ()'. Below this are 'Loans ()', 'Total ()', 'Column', and 'Z Axis'. A right-click context menu is open over the 'Debt securities ()' node, offering options: 'Add axis coordinate', 'Edit coordinate values', 'Get coordinate values from selected cells' (highlighted), 'Add selected cell as coordinate reference', 'Item Is Abstract', 'Copy' (Ctrl+C), 'Paste' (Ctrl+V), 'Delete' (Del), 'Collapse all', and 'Expand all'.

The bottom pane shows a table with the title 'Rzne' (likely 'Różnice' - Differences). The table lists various properties and their values for the selected 'Debt securities' coordinate.

Property	Value
Abstract	False
Cell code	
Children	(Kolekcja)
Coordinate reference	
Dimension Values	(Kolekcja)
Excel cell location	\$B\$8
ExtensionData	System.Runtime.Serialization.Exter
Id	ac109
Parent	
Text	Debt securities
Time reference	

XBRL Presentation Tree

eu/tpl/t05/t05.xsd  
eu/tpl/t03/t03.xsd  
t03  
Row  
Debt securities (1)  
Category of assets / Debt securities held  
Counterparty sector / Other than retail  
Central banks (2)  
Counterparty sector / Central banks  
General governments (3)  
Credit institutions (4)  
Other financial corporations (5)  
Corporates (6)  
Loans (7)  
Total (16)  
Column  
Z Axis  
eu/tpl/t07/t07.xsd

Table 3 - Impairment of debt instruments

Debt securities	
Central banks	
General governments	
Credit institutions	
Other financial corporations	
Corporates	
Loans	
Central banks	
General governments	
Credit institutions	
Other financial corporations	
Non-financial corporations, Corporates	
Non-financial corporations, Retail	
Households, Corporates	
Households, Retail	
Total	IFRS 7

Rznie

Abstract	False
Cell code	16
Children	(Kolekcja)
Coordinate reference	IFRS 7.37
Dimension Values	(Kolekcja)
Excel cell location	\$B\$23
ExtensionData	System.Runtime.Serialization.ExtensionDataObject
Id	ac48
Parent	
Text	Total
Time reference	

## Other characteristics of coordinate

- Abstract: coordinate does not result in a new row or column but is just a header of headers
- Cell code: number code of row/column (coordinate-code generic label)
- Coordinate reference : coordinate generic documentation label
- Excel cell location:
  - if coordinate is created manually the tool allows to link the coordinate to a specific cell in a worksheet
  - in case of automatic creation of coordinates the link is also made automatically and stored in the tool (can be overridden)
- Id: unique code given assigned to a coordinate that is later used as a label on coordinate resource
- Text: generic label (created automatically together with axis or manually)
- Time reference: indication of beginning & ending balance or offset in time (e.g. minus 1 year, minus 1 quarter, etc)
- Children, Parent, Dimension Values – collection of other coordinates or coordinate values



# Setting coordinate as abstract

PL: PL/ Measured at amortised cost

		Past due but not impaired							
	Unimpaired	≤ 90 days	> 90 days ≤ 180days	> 180 days ≤ 1year	> 1year	Impaired [gross carrying amount]	Specific allowances for individually assessed financial assets	Specific allowances for collectively assessed financial assets	Collo
		IFRS 7.37 (a); IG 26-28					IAS 39 AG 84-92; IFRS 7.37 (b)	IAS 39 AG 84-92	IAS 8
1	1	2	3	4	5	6	7	8	
2	2								
3	3								
4	4								

XBRL Presentation Tree

- eu/tpl/t05/t05.xsd
  - eu/tpl/t03/t03.xsd
    - t03
      - Row
        - Column
          - Unimpaired ()
            - Past due but not impaired ()
              - Amount type / Unimpaired
                - Abstract / Assets
                  - ≤ 90 days ()
                    - > 90 days ≤ 180days ()
                      - > 180 days ≤ 1year ()
                        - > 1year ()
                          - Impaired [gross carrying am
                            - Specific allowances for ind
                              - Specific allowances for col

Context: t03

Item Is Abstract

Copy Ctrl+C

Paste Ctrl+V

Delete Del

Collapse all

Expand all

# Adding coordinate reference

The screenshot displays an XBRL software interface with a table on the left and an XBRL Presentation Tree on the right. A context menu is open over the tree, highlighting the option 'Add selected cell as coordinate reference'.

**Table Data:**

|    | I         | J   | K  | L  | M   |
|----|-----------|---|--|--|---|
| 1  |           |   |  |  |   |
| 2  | ised cost |   |  |  |   |
| 3  |           |   |  |  |   |
| 4  |           |   |  |  |   |
| 5  | > 1year   | Impaired<br>[gross<br>carrying<br>amount] | Specific<br>allowances<br>for<br>individually<br>assessed<br>financial<br>assets | Specific<br>allowances<br>for<br>collectively<br>assessed<br>financial<br>assets | Collec<br>allowa<br>for inc<br>but repo<br>loss |
| 6  |           |   | IAS 39 AG<br>84-92; IFRS<br>7.37 (b)   | IAS 39 AG<br>84-92   | IAS 39<br>84-92                                 |
| 7  | 5         | 6   | 7  | 8  | 9   |
| 8  |           |   |  |  |   |
| 9  |           |   |  |  |   |
| 10 |           |   |  |  |   |
| 11 |           |   |  |  |   |
| 12 |           |   |  |  |   |
| 13 |           |   |  |  |   |
| 14 |           |   |  |  |   |
| 15 |           |   |  |  |   |
| 16 |           |   |  |  |   |
| 17 |           |   |  |  |   |
| 18 |           |   |  |  |   |
| 19 |           |   |  |  |   |
| 20 |           |   |  |  |   |
| 21 |           |   |  |  |   |

**XBRL Presentation Tree:**

- eu/tpl/t05/t05.xsd
  - eu/tpl/t03/t03.xsd
    - t03
      - Row
        - Column
          - Unimpaired ()
            - Past due but not impaired ()
              - Amount type / Unimpaired
                - Abstract / Assets
                  - ≤ 90 days ()
                    - > 90 days ≤ 180days ()
                      - > 180 days ≤ 1year ()
                        - > 1year ()
                          - Impaired [gross carrying amount] ()
                            - Specific allowances for individually assessed financial assets (b)** (Selected)
                              - Amount type / Specific allowances for individually as
                                - Abstract / Assets
                                  - Specific allowances for collectively assessed financial as

**Context Menu:**

      - Add axis coordinate
      - Edit coordinate values
      - Get coordinate values from selected cells
      - Add selected cell as coordinate reference**
      - Item Is Abstract
      - Copy (Ctrl+C)
      - Paste (Ctrl+V)
      - Delete (Del)
      - Collapse all
      - Expand all

**Bottom Panel:**

      - Ržne
        - Abstract
        - Cell code
        - Children
        - Coordinate reference
        - Dimension Values
        - Excel cell location
        - ExtensionData
        - Id
        - Parent
        - Text
        - Time reference

# Review of coordinate values

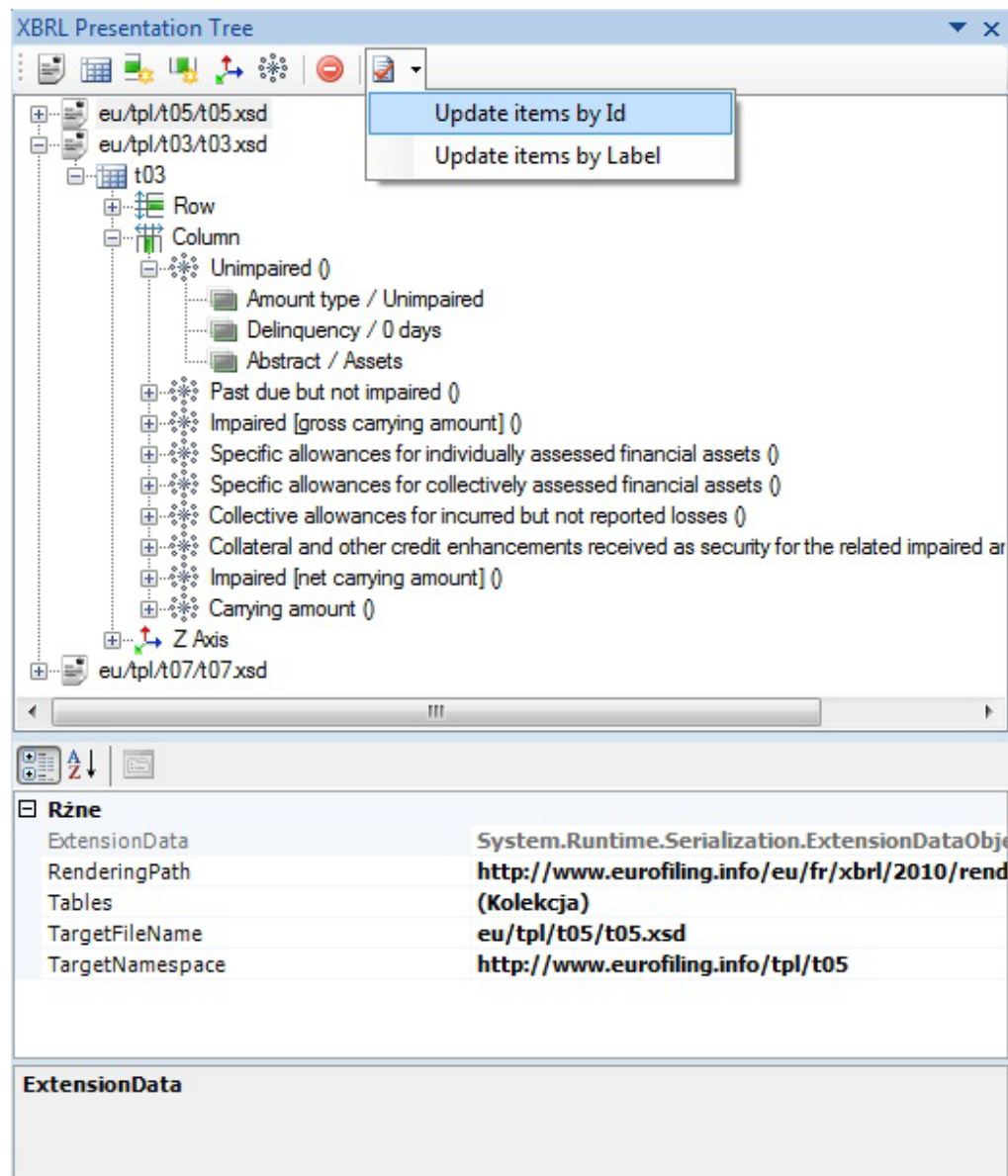
The screenshot shows the XBRL Generator AddIn interface. The 'Review Coord. Values' button is highlighted in the 'Data points tree' group. The 'Coordinate Values' pane is open, displaying the following information:

- Axis coordinate values:**
  - Reporting scope [RS/RS]:** CRD consolidation [dRS\_x1]
- Row coordinate values:**
  - Category of assets [CT/AS]:** Debt securities held [dCT\_x7]
  - Counterparty sector [SE/CS]:** General governments [dSE\_x5]
- Column coordinate values:**
  - Abstract [base/ad1]:** Assets [base\_mi1]
  - Amount type [AT/AT]:** Unimpaired [dAT\_x20]
  - Delinquency [TI/DL]:** > 90 days ≤ 180days [dTI\_gt90d\_le180d]
- Cell code:**

The background shows a table titled 'Table 3 - Impairment of debt instruments' with columns for 'Unimpaired', '≤ 90 days', '> 90 days ≤ 180days', and '> 180days'. The table is filtered by 'PL/ Measured'. The cell at row 10, column 3 is highlighted with a red box.

intersection of information from all axis for a specified cell

# Updating Items Attributes [1]

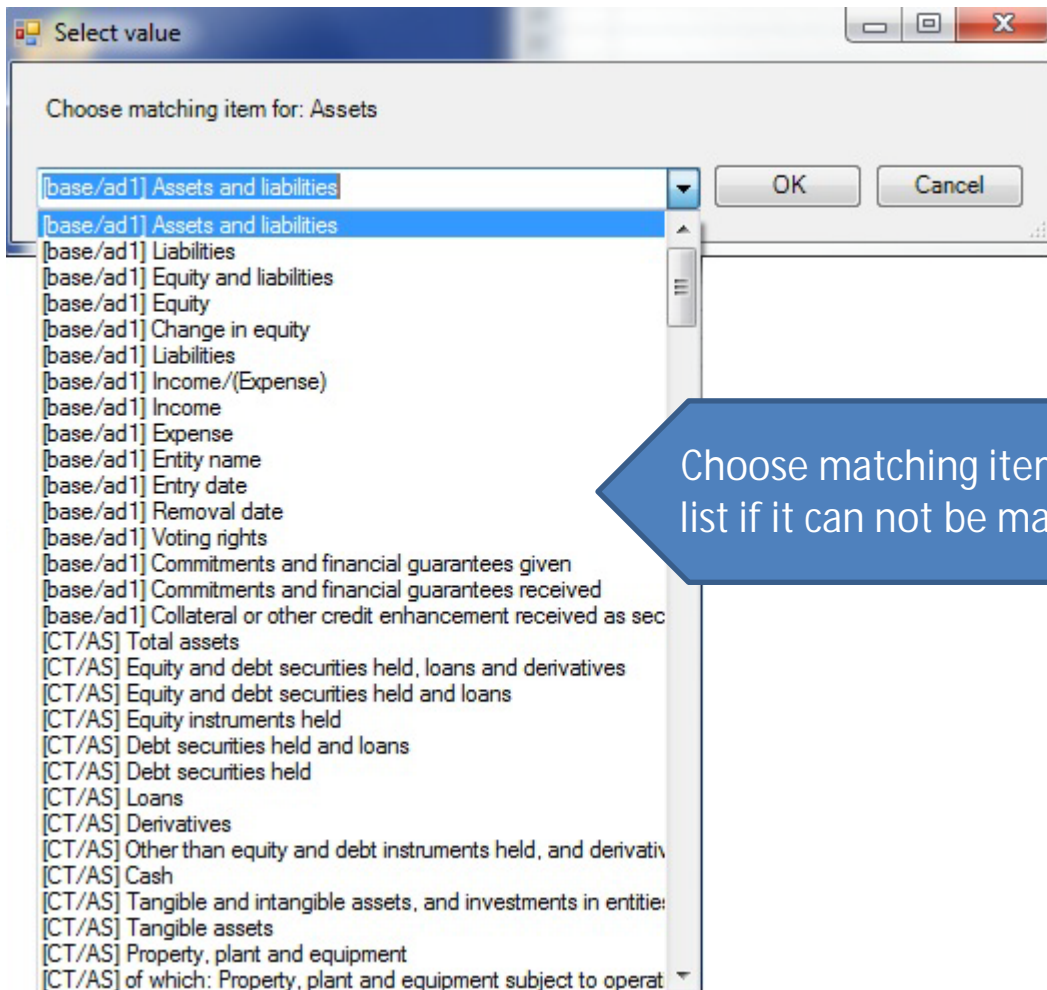


Changes in DataModel  
(after reloading information from  
DPM Excel)  
are not applied automatically into  
statements definition (XBRL  
Presentation Tree) and need to be  
reconciled manually.

This function allows to find and  
eliminate discrepancies assuming  
that:

- items IDs
  - items Labels
- have not been changed.

# Updating Items Attributes [2]



The tool automatically updates item values matched by Id or Label.

If no matching item is found, user can choose item manually from the current data model.

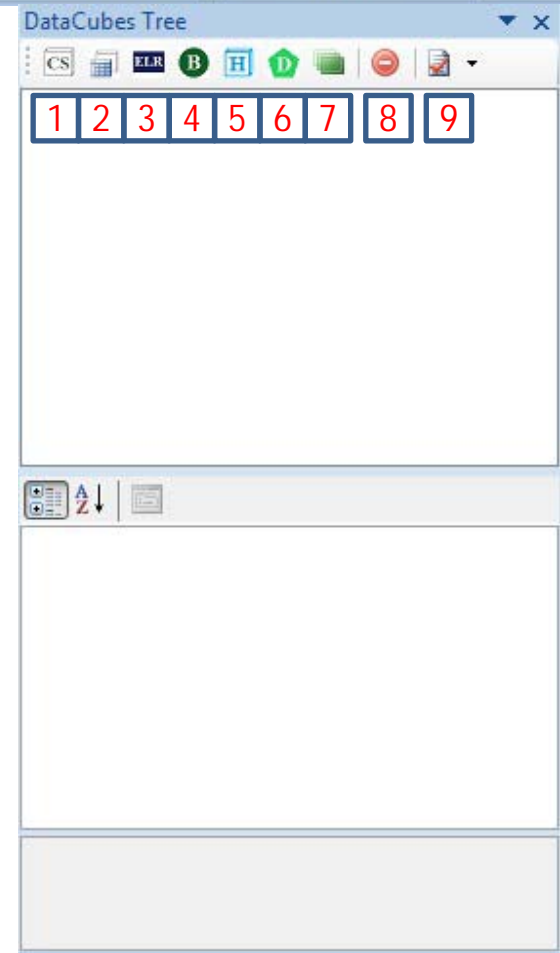
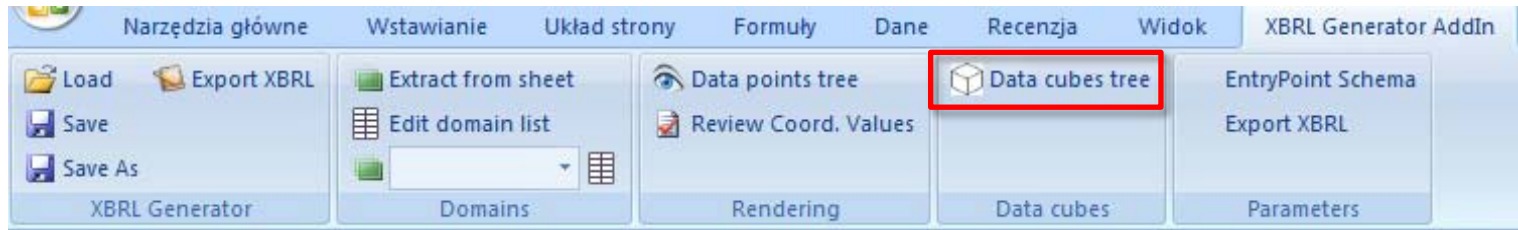
Choose matching item from a drop-down list if it can not be matched automatically

# Defining data cube information

## Overview

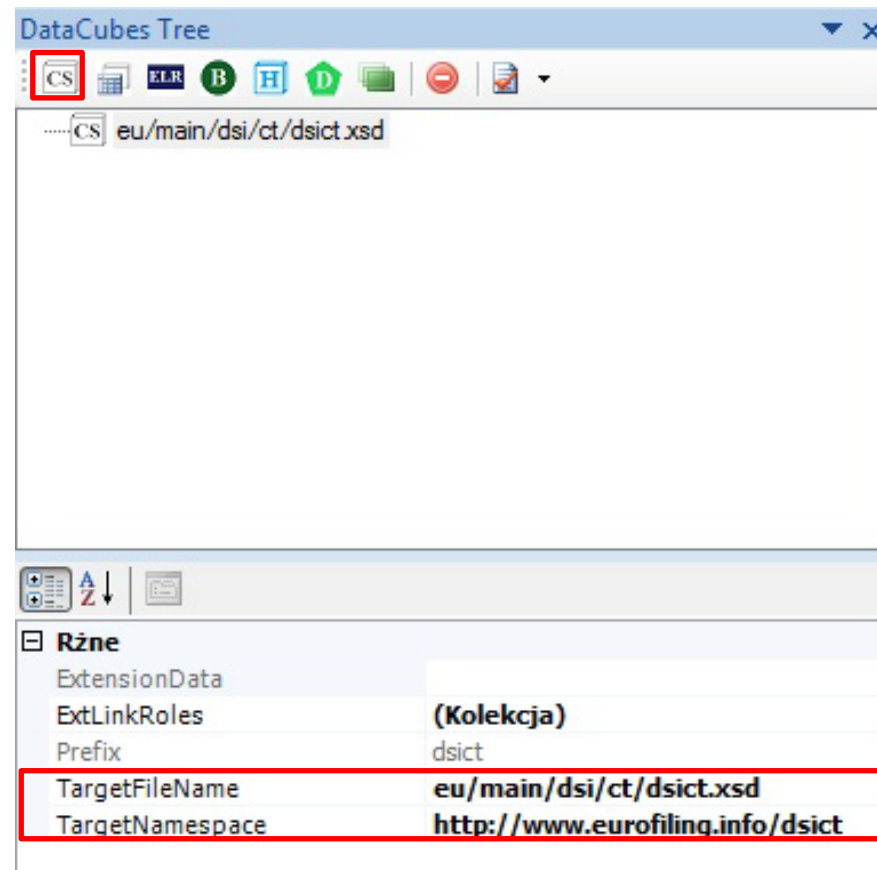
- input:
  - information extracted from DPM Excel and stored in XBRL Taxonomy Generation AddIn
  - rendering information: statements, tables, coordinates (XBRL Presentation Tree)
- functionality:
  - addition of data cubes (complete scope and statement data cubes), roles, hypercubes and assigning of items to them
  - automatic generation of statement cubes for statement tables
- output:
  - schema files (roleType definitions)
  - data cubes definition linkbase files
  - label linkbase files





1. add a complete scope data cube
  - file name (and prefix at the same time) and folder location
  - target namespace
2. create a statement cube for a selected statement /table
3. add extended link role (ELR)
4. add base elements to ELR
5. add hypercube to ELR
6. add dimension to hypercube
7. add member to base / dimension
8. remove definition of a data cube, role, hypercube or member
9. update items attributes
  - by id
  - by label

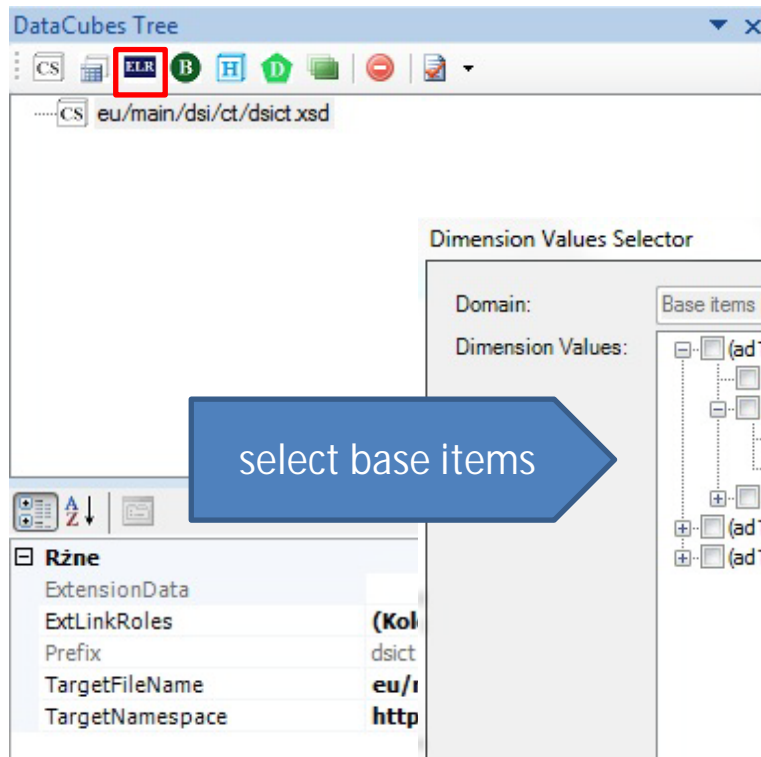
# Adding a complete scope data cube



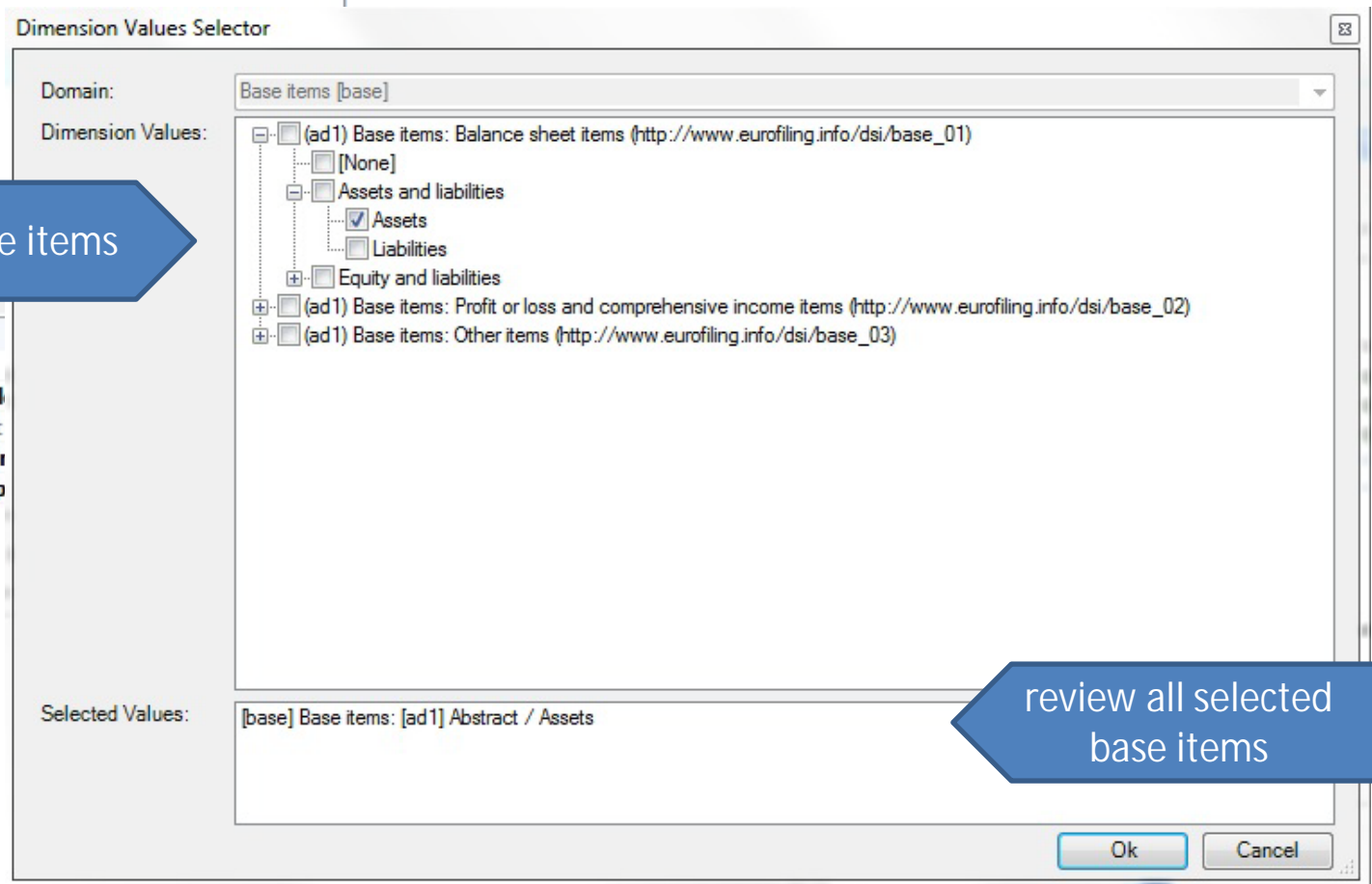
- TargetFileName: file name (and prefix at the same time) and folder location
- TargetNamespace: target namespace of a schema file



# Adding an Extended Link Role [1]

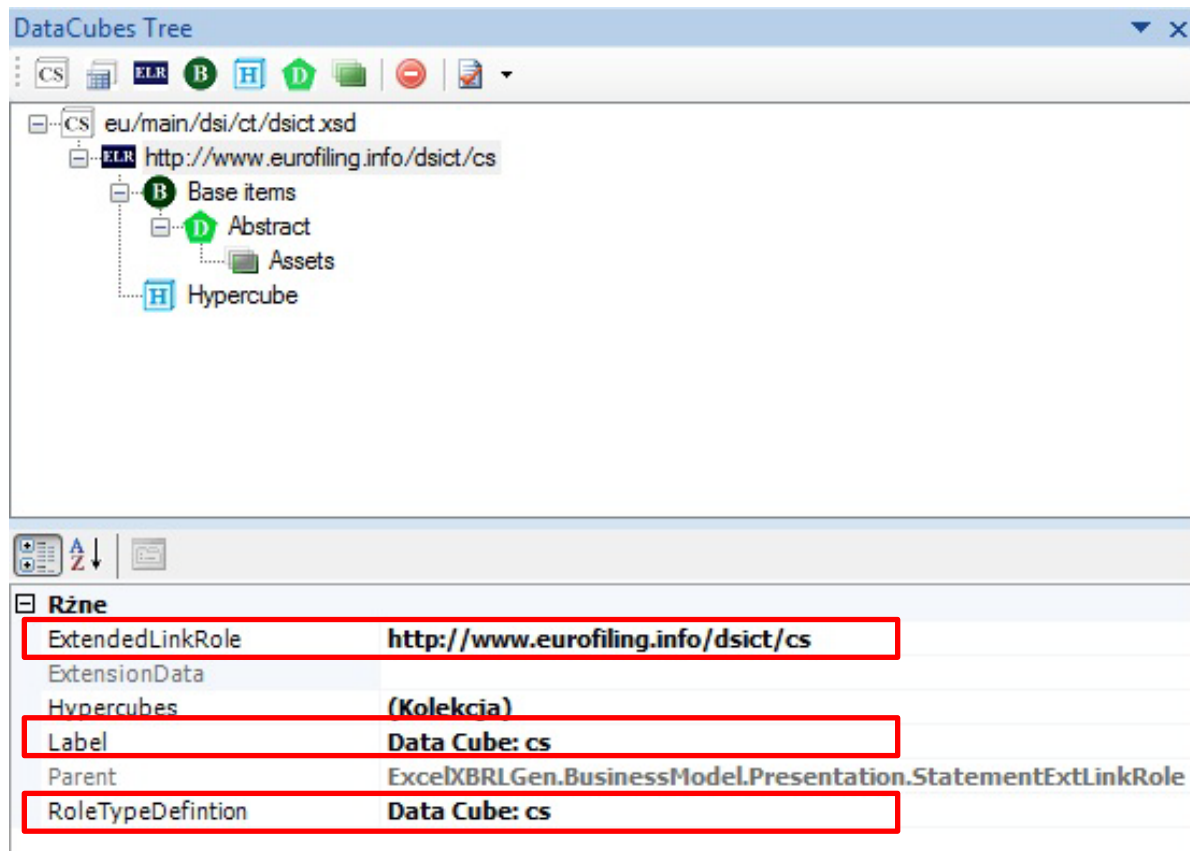


ELR is added with chosen base items and empty hypercube.



If no primary item is selected, ELR is added with empty domain (Base items).

# Adding an Extended Link Role [2]



- ExtendedLinkRole: ELR name, displayed in Data Cubes Tree
- Label: expected to be used as generic label
- RoleTypeDefinition: roleType definition

# Technical Extended Link Roles

ELRs in Data Cubes Tree include all full-structured Hypercubes (with dimensions and dimension members).

While model is exported to XBRL technical ELRs for additional Hypercubes, repeated dimensions are generated automatically in definition linkbase files.



Technical ELR:

[http://www.eurofiling.info/dsict/cs\\_notAll\\_01](http://www.eurofiling.info/dsict/cs_notAll_01)

| Role  | XBRL: Id   | XBRL: RoleURI   | XBRL: Definition   |
|---|--|---|--|
| Standard role   | <i>StR_Id</i>  | <i>StR_ELR</i>  | <i>StR_definition</i>  |
| Role of a separated dimension definition from the standard role     | <i>StR_Id</i><br>+ "_dim_" + <i>D_Id</i>                             | <i>StR_ELR</i><br>+ "_dim_" + <i>D_Id</i>                             | <i>StR_definition</i><br>+ " (Dim: " + <i>D_Id</i> + " )"                                  |
| Role of a separated HC definition from the standard role            | <i>StR_Id</i><br>+ "_notAll_" + <i>nn</i>                            | <i>StR_ELR</i><br>+ "_notAll_" + <i>nn</i>                            | <i>StR_definition</i><br>+ " - Exclusion " + <i>nn</i>                                     |
| Role of a separated dimension definition from the technical HC role | <i>StR_Id</i><br>+ "_notAll_" + <i>nn</i><br>+ "_dim_" + <i>D_Id</i> | <i>StR_ELR</i><br>+ "_notAll_" + <i>nn</i><br>+ "_dim_" + <i>D_Id</i> | <i>StR_definition</i><br>+ " - Exclusion " + <i>nn</i><br>+ " (Dim: " + <i>D_Id</i> + " )" |

# Adding a hypercube

**DataCubes Tree**

eu/main/dsi/ct/dsict.xsd

- ELR http://www.eurofiling.info/dsict/cs
  - Base items
    - Hypercube
      - Hypercube\_Exc01

**Rznie**

|                |   |
|----------------|---|
| Arcrole        | notAll  |
| ContextElement | Scenario  |
| Domains        | (Kolekcja)  |
| ExtensionData  |   |
| Id             | dsict_Hypercube_Exc01                                 |
| Label          | Hypercube Exclusion 01                                |
| Name           | Hypercube_Exc01                                       |
| Parent         | ExcelXBRLGen.BusinessModel.Presentation.ELRDefinition |

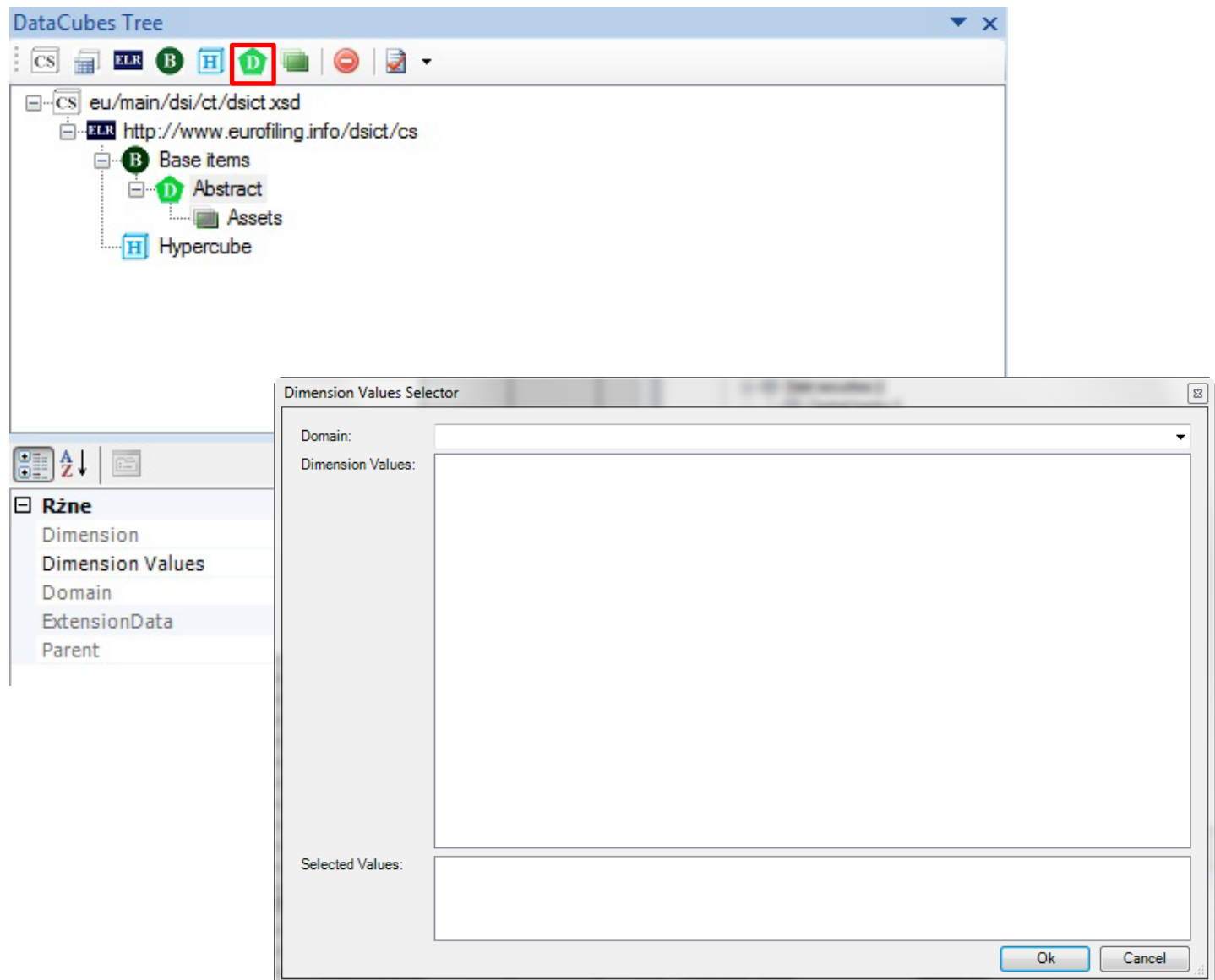
Arcrole notAll is set by default for the second and next HC in ELR – to change if needed.

- Arcrole: All/notAll - determines type of cube: including or excluding
- ContextElement: Scenario (set by default) or segment
- Id: unique id given assigned to a hypercube
- Label: displayed value in a data cubes tree, is a standard label (label layer)
- Name: XML name in schema, is not required to be unique for different HC

Attribute *@closed* is set automatically while model is exported to XBRL:

*@closed*= ' false' for HC-notAll, *@closed*= ' true ' for HC-All

# Adding breakdowns [1]



# Adding breakdowns [2]

The screenshot shows the 'Dimension Values Selector' dialog box. The 'Domain' is set to 'Categories [CT]'. The 'Dimension Values' list includes 'Base items [base]', 'Categories [CT]', 'Comprehensive income [CI]', 'Amount types [AT]', 'Portfolios [PL]', 'Sectors [SE]', 'Geographical and political areas [GA]', 'Currencies [CU]', 'Time intervals [TI]', 'Continuing/Discontinued [CD]', 'Before/After [BA]', 'Control [CL]', 'Related parties [RP]', 'Risk types [RT]', 'Markets [MA]', 'Reporting scope [RS]', and 'Entity codes [EC]'. A blue arrow points to the 'Categories [CT]' dropdown with the text 'select a domain form a drop-down list'. Below the 'Dimension Values' list, a blue arrow points to the 'Dimension Values' list with the text 'choose dimensions and domain members from selected domain'. The 'Dimension Values' list is expanded, showing a tree structure of categories. The 'Selected Values' field at the bottom shows '[CT] Categories: [AS] Category of assets / Debt securities held'. A blue arrow points to the 'Selected Values' field with the text 'review all selected members'. The 'Ok' and 'Cancel' buttons are at the bottom right.

Dimension Values Selector

Domain: Categories [CT]

Dimension Values:

- Base items [base]
- Categories [CT]
- Comprehensive income [CI]
- Amount types [AT]
- Portfolios [PL]
- Sectors [SE]
- Geographical and political areas [GA]
- Currencies [CU]
- Time intervals [TI]
- Continuing/Discontinued [CD]
- Before/After [BA]
- Control [CL]
- Related parties [RP]
- Risk types [RT]
- Markets [MA]
- Reporting scope [RS]
- Entity codes [EC]

select a domain form a drop-down list

choose dimensions and domain members from selected domain

Dimension Values Selector

Domain: Categories [CT]

Dimension Values:

- ☐ [AS] Dimension: Categories of assets ([http://www.eurofiling.info/dsi/dCT\\_01](http://www.eurofiling.info/dsi/dCT_01))
  - ☐ [None]
  - ☐ Total assets
    - ☐ Equity and debt securities held, loans and derivatives
      - ☐ Equity and debt securities held and loans
        - ☐ Equity instruments held
        - ☐ Debt securities held and loans
          - ☒ Debt securities held
          - ☐ Loans
      - ☐ Derivatives
    - ☐ Other than equity and debt instruments held, and derivatives
  - ☐ [LI] Dimension: Categories of liabilities ([http://www.eurofiling.info/dsi/dCT\\_02](http://www.eurofiling.info/dsi/dCT_02))
  - ☐ [EQ] Dimension: Categories of equity ([http://www.eurofiling.info/dsi/dCT\\_03](http://www.eurofiling.info/dsi/dCT_03))
  - ☐ [AL] Dimension: Categories of assets and liabilities ([http://www.eurofiling.info/dsi/dCT\\_04](http://www.eurofiling.info/dsi/dCT_04))
  - ☐ [EL] Dimension: Categories of equity and liabilities ([http://www.eurofiling.info/dsi/dCT\\_05](http://www.eurofiling.info/dsi/dCT_05))

Selected Values: [CT] Categories: [AS] Category of assets / Debt securities held

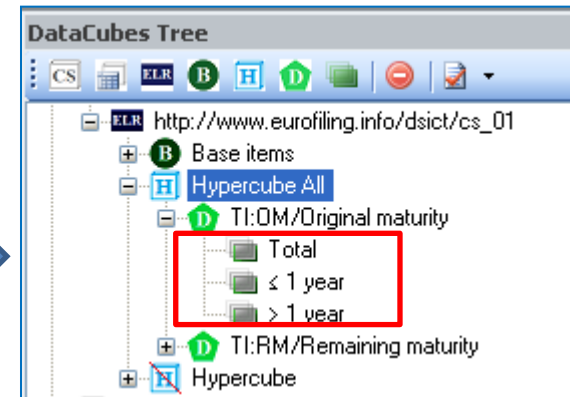
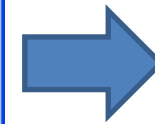
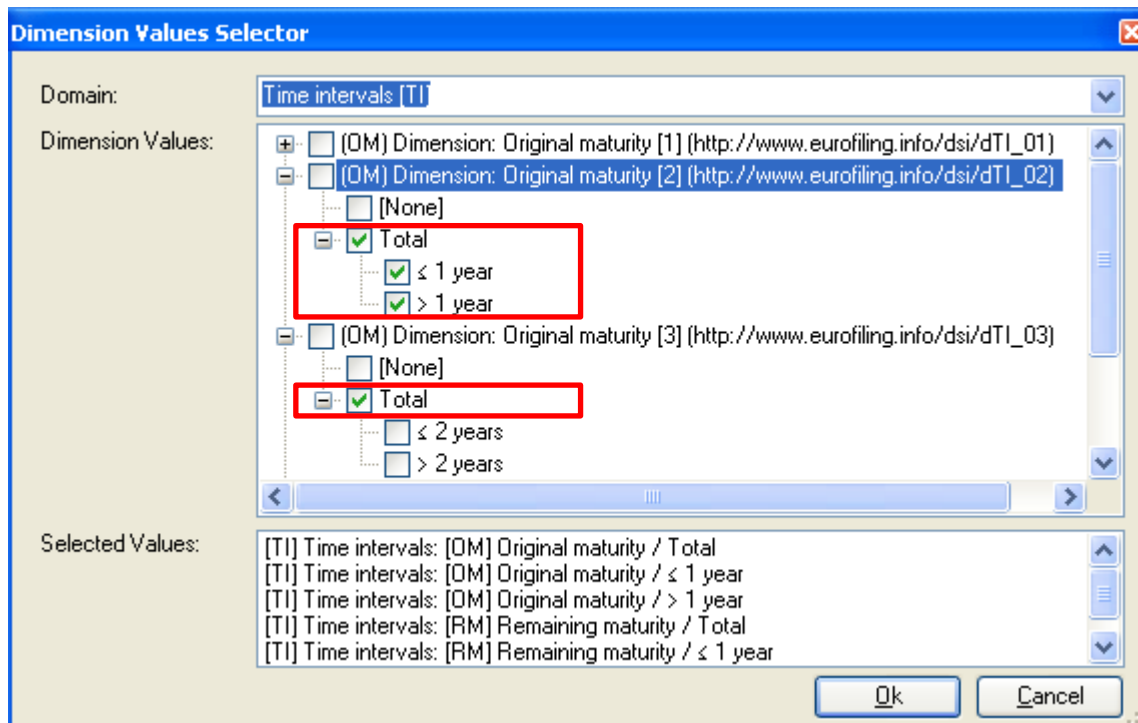
review all selected members

Ok Cancel

# Adding breakdowns [3]

Rules:

- no hierarchy on the list of dimension members
- members in a dimension are not duplicated



# Adding a member to dimension

DataCubes Tree

eu/main/dsi/ct/dsict.xsd

http://www.eurofiling.info/dsict/cs

- Base items
  - Abstract
  - Hypercube
    - GA:CR/Counterparty residence
      - EU

check/uncheck members from a list to add /delete from dimension

Add member to dimension

|                                     | Label                 | ItemType | Name | Comment | Id      |
|-------------------------------------|-----------------------|----------|------|---------|---------|
| <input type="checkbox"/>            | Total / Not-applic... | Member   | x1   |         | dGA_x1  |
| <input checked="" type="checkbox"/> | EU                    | Member   | eu   |         | dGA_eu  |
| <input type="checkbox"/>            | EMU                   | Member   | emu  |         | dGA_emu |
| <input type="checkbox"/>            | Other than EMU i...   | Member   | x2   |         | dGA_x2  |
| <input type="checkbox"/>            | Other than EU         | Member   | x4   |         | dGA_x4  |
| <input type="checkbox"/>            | Other than EMU        | Member   | x3   |         | dGA_x3  |

Id: dGA\_x1 Name: x1

Label: Total / Not-applicable

Item Type: Member Data Type: domain

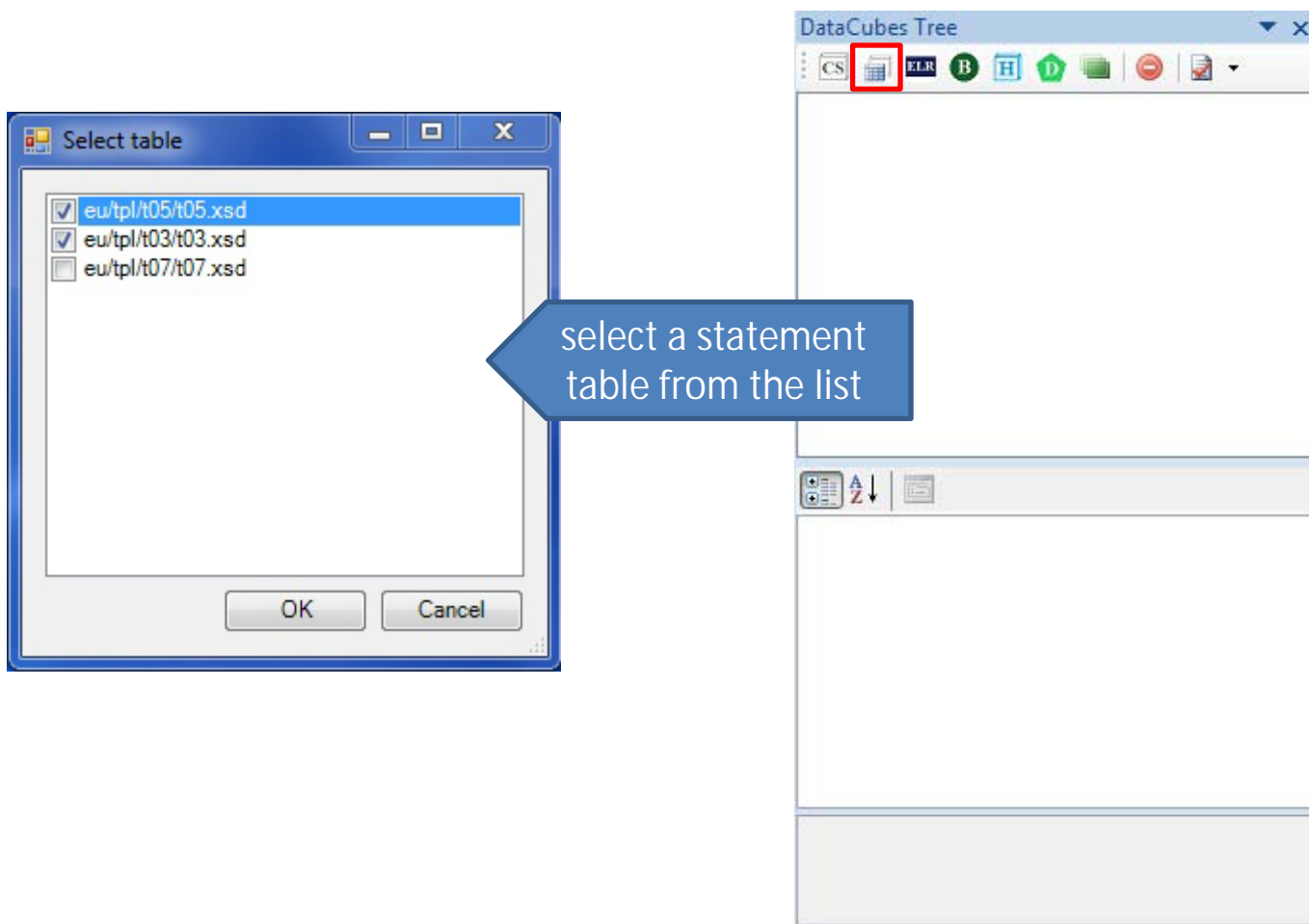
Period: duration Is Common: ☒

Comment:

OK Cancel



# Adding a statement cube [1]

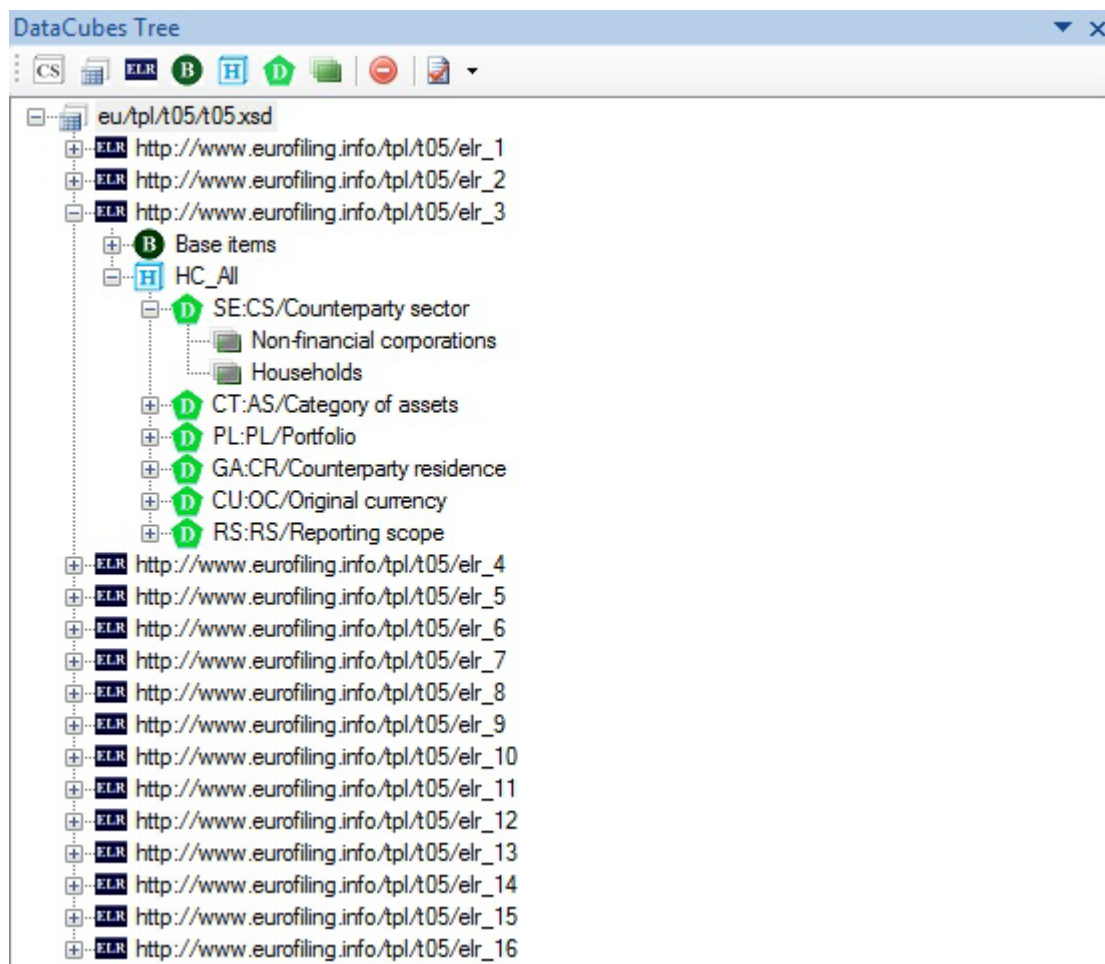


Function generates statement cube for a selected statement table.

The list does not include statements for which statement data cubes have been already generated.

# Adding a statement cube [2]

A set of ELR with hypercubes „All” is generated and covers all combinations of coordinates in the statement.



# Adding selected cell as HC exclusion [1]

The screenshot displays a software interface with a data table and a context menu. The table, titled "Table 5 - Assets by counterparty residence and currency", shows various asset categories and their values across different currencies and regions. A red box highlights a specific cell in the table. The context menu, titled "DataCubes Tree", is open over the highlighted cell, showing options to add or modify hypercube exclusions. The menu includes options like "Add Extended Link Role", "Add Base Elements", "Add Hypercube", "Add Breakdowns", "Add Member", "Add selected cell as HC Exclusion", "Integrate HyperCubes in ELR", "Undo", "Redo", "Copy", "Paste", "Delete", "Collapse all", and "Expand all". The "Add selected cell as HC Exclusion" option is highlighted.

|   | Total |                |                      |                |               |   |        |
|---|-------|----------------|----------------------|----------------|---------------|---|--------|
|   | EU    |                |                      |                | Other than EU |   |        |
|   | EMU   |                | Other than EMU in EU |                |               |   |        |
|   | EUR   | Other than EUR | EUR                  | Other than EUR |               |   |        |
|   | 1     | 2              | 3                    | 4              | 5             | 6 | 7      |
| Loans   | 1     |                |                      |                |               |   | CT: AS |
| of which: Non-financial corporation                                 | 2     |                |                      |                |               |   | CT: AS |
| of which: Households  | 3     |                |                      |                |               |   | CT: AS |
| Debt securities held  | 4     |                |                      |                |               |   | CT: AS |
| Equity instruments held   | 5     |                |                      |                |               |   | CT: AS |
| Derivatives   | 6     |                |                      |                |               |   | CT: AS |
| Equity and debt instruments held, and derivatives                   | 7     |                |                      |                |               |   | CT: AS |
| Other assets than equity and debt instruments held, and derivatives | 8     |                |                      |                |               |   | CT: AS |
| Total assets  | 9     |                |                      |                |               |   | CT: AS |

GA: CR/EM GA: CR/EMU GA: CR/Other er than EMU in EU GA: CR/Other than EMU in EU A: CR/EGA: CR/EU:CR/Total

CU: OC/EU R CU: OC/Other than EUR CU: OC/EU R CU: OC/Other than EUR CU: OC/Total CU: OC/Total

Base: Assi Base: Assets ise: Asse Base: Assets se: Assase: Assett: Assets

eu/main/dsi/ct/dsict.xsd  
eu/tpl/t05/t05.xsd  
http://www.eurofiling.info/tpl/t05

System gets coordinate values from selected cell and searches for ELR covering chosen value set. Then new HC exclusion is added to ELR or, if possible, existing HC exclusion is modified

# Adding selected cell as HC exclusion [2]

Added HC exclusion

The screenshot shows the 'DataCubes Tree' window on the left and the 'Rzne' (Properties) window on the right. In the tree, the 'Hypercube\_Exc\_01' node is highlighted with a red rectangle. The 'Rzne' window displays the following properties:

| Rzne           |   |
|----------------|---|
| Arcrole        | notAll  |
| ContextElement | Scenario  |
| Domains        | (Kolekcja)  |
| ExtensionData  |   |
| Id             | t05_Hypercube_Exc_01                                  |
| Label          | Hypercube Exclusion 01                                |
| Name           | Hypercube_Exc_01                                      |
| Parent         | ExcelXBRLGen.BusinessModel.Presentation.ELRDefinition |

Hypercube added to ELR: Data Cube: Table 5 sc\_15

OK

message where HC exclusion has been added

Hypercubes in ELR: Data Cube: Table 5 sc\_15 were modified

OK

message which HC exclusion has been modified

# Additional features and rules of Data Cubes Tree interface

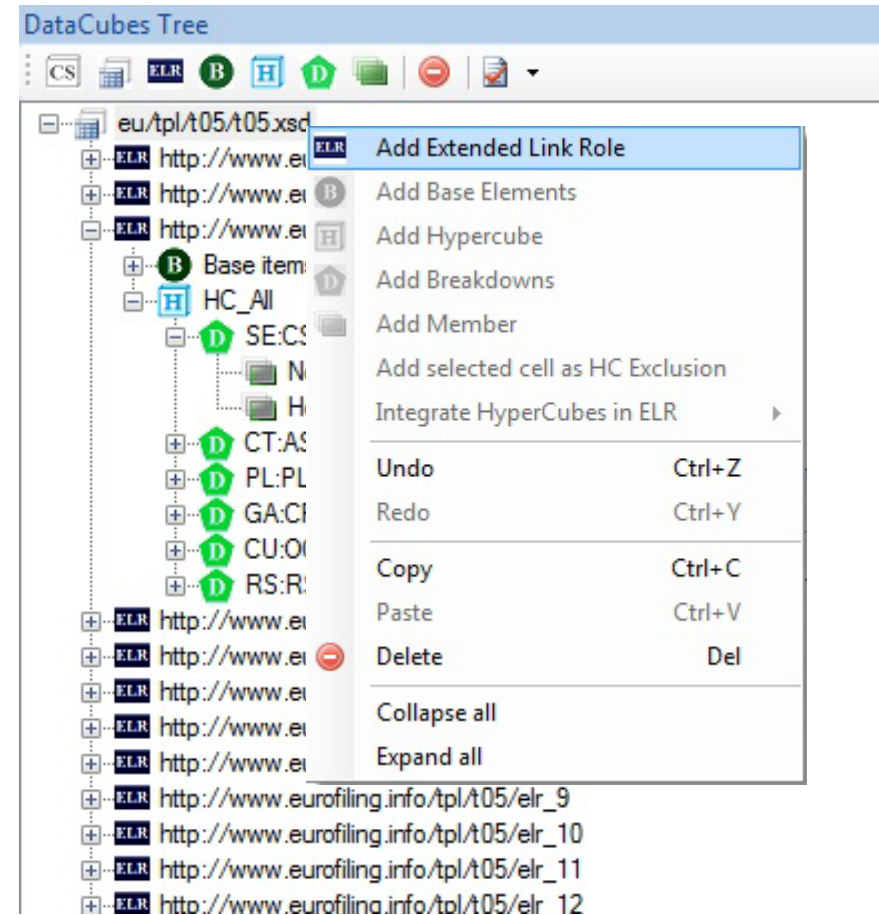
Data cubes, roles, hypercubes, dimensions and members can be:

- copied/pasted/deleted
  - Ctrl+C, Ctrl+V, Del
- dragged and dropped

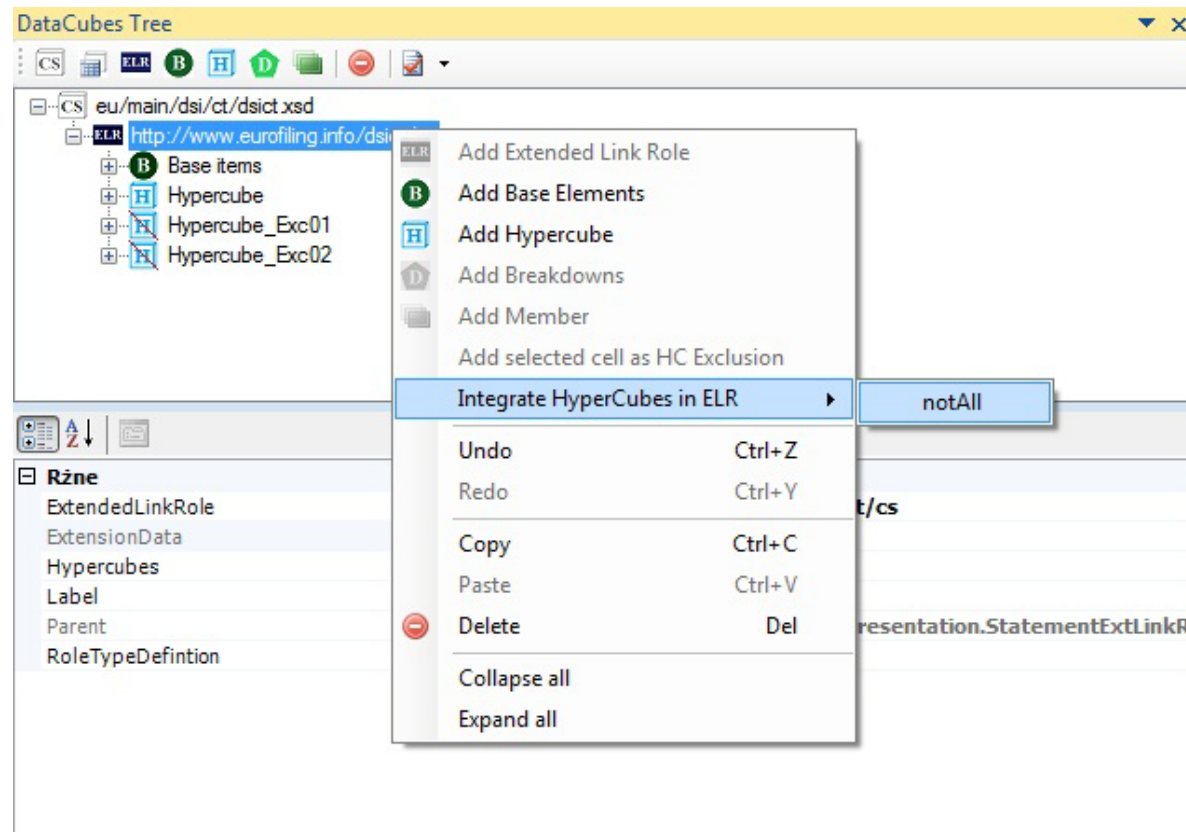
Rules:

- items can be dropped only on upper level
- only new elements are added while copying (dimension members are not duplicated)

All operations can be reversed with Undo/Redo functions or using Ctrl+Z and Ctrl+Y.



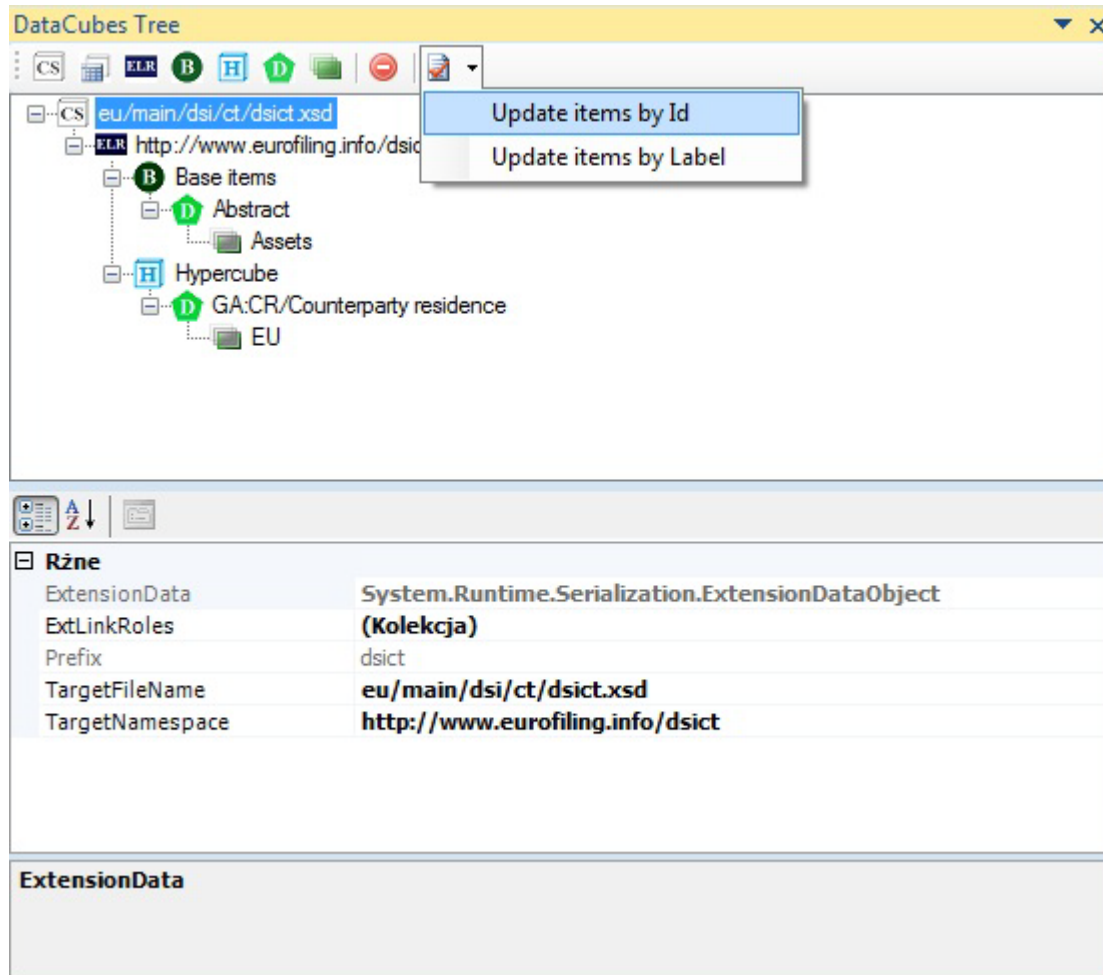
# Integrating hypercube exclusions in a role



Function optimizes HC exclusions in ELR. Hypercubes are joined if possible.



# Updating Items Attributes [1]

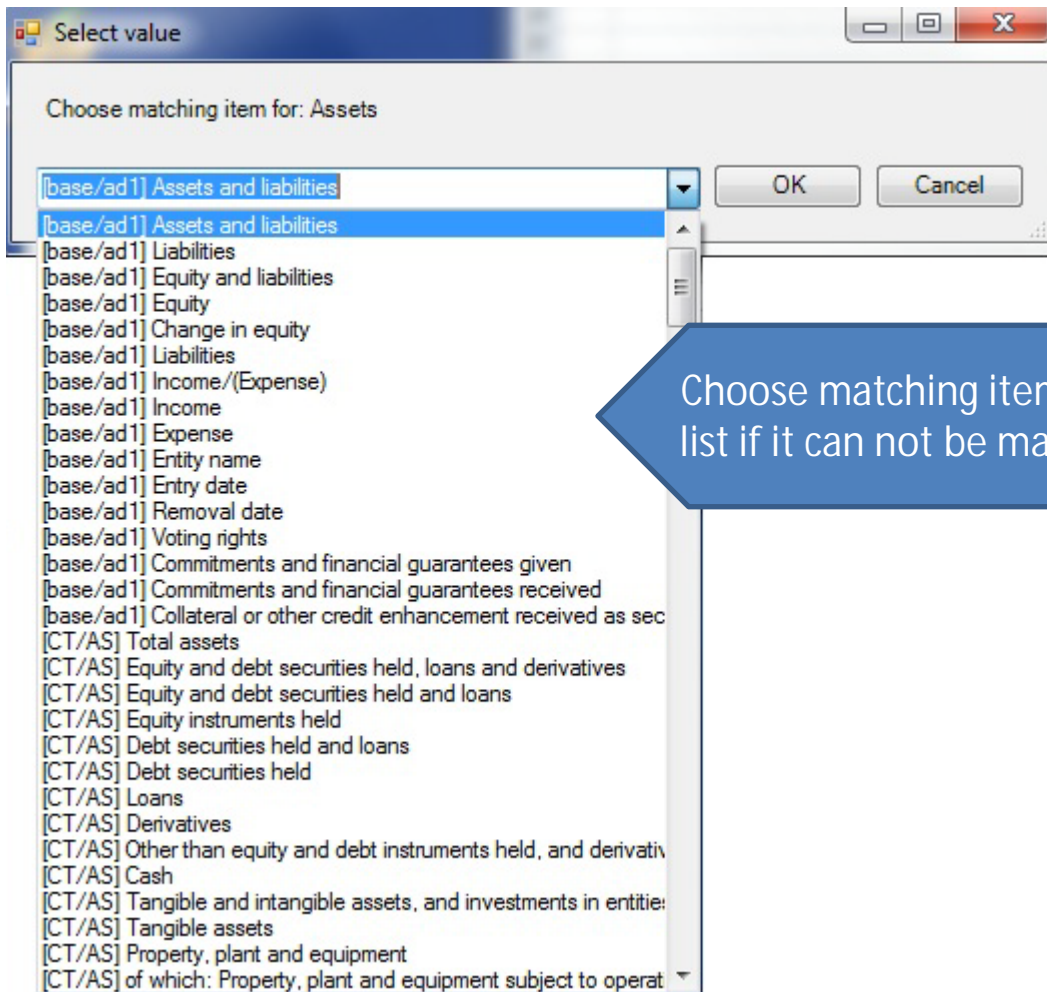


Changes in DataModel  
(after reloading information from  
DPM Excel)  
are not applied into data cubes  
definition (DataCubes Tree)  
automatically and need to be  
reconciled manually.

This function allows to find and  
eliminate discrepancies assuming  
that:

- items IDs
  - items Labels
- have not been changed.

# Updating Items Attributes [2]



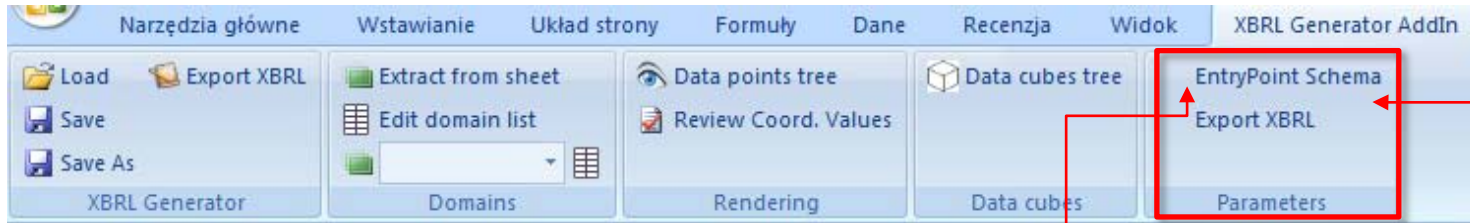
The tool automatically updates item values matched by Id or Label.

If no matching item is found, user can choose item manually from the current data model.

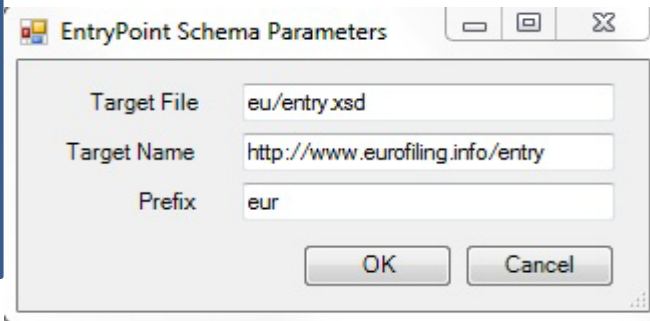
Choose matching item from a drop-down list if it can not be matched automatically



# Parameters

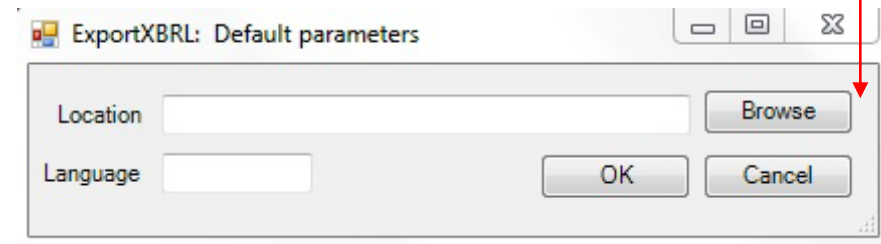


EntryPoint schema imports schemas of templates, data cubes, dimensions, base items



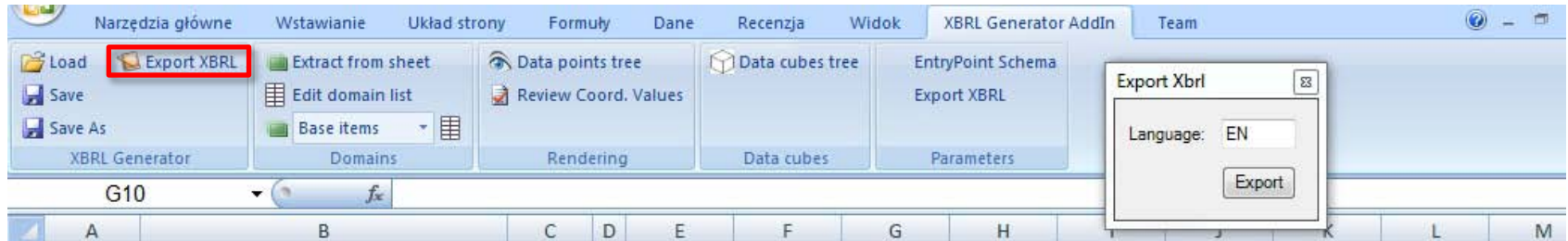
- Target File: file name of entry file
- Target Namespace: target namespace of entry
- Prefix: prefix used for target namespace identification

- Location: default output location
- Language: default output language

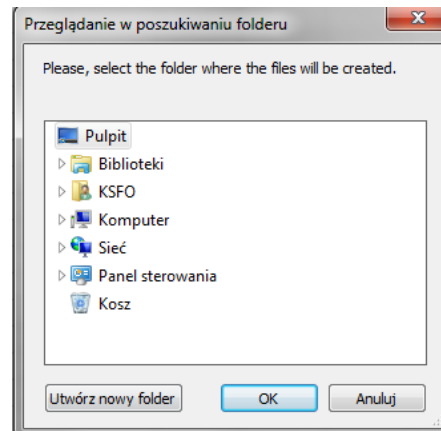


# Exporting to XBRL

- select output language:



- select output location:



- files and folder structure for primary items, domains and dimensions generated according to the DPM Excel definitions (Domains specification)
- files and folder structure for template schemas and table linkbase generated according to the Data points tree interface
- files and folder structure for data cubes (complete scope and statement) generated according to the Data Cube tree interface

# Try it yourself!

- Sample overview:  
<http://www.eurofiling.info/finrepTaxonomy/EurofilingProofOfConcept.pptx>
- Data Points Model:  
<http://www.eurofiling.info/finrepTaxonomy/DataPointsModel.xlsx>
- Original templates (tabels):  
<http://www.eurofiling.info/finrepTaxonomy/OriginalTemplates.xlsx>
- XBRL Taxonomy Generator load file:  
[http://www.eurofiling.info/finrepTaxonomy/XBRLTaxonomtGenerator\\_SampleT03T05T07.zip](http://www.eurofiling.info/finrepTaxonomy/XBRLTaxonomtGenerator_SampleT03T05T07.zip)
- Proof of concept taxonomy:  
<http://www.eurofiling.info/finrepTaxonomy/taxonomy.zip>

Questions: [info@eurofiling.info](mailto:info@eurofiling.info)

# ExcelXbrlGen – *Add in* Taxonomy Generator

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