DPM tutorial

15th XBRL Europe Day & 21th Eurofiling Workshop

1–3 June 2015

Thinking Forward.

Agenda

- Introduction to Data Point Modeling
- Challenges of data modeling
- CRR/CRDIV DPM
- Sol2 DPM
- Extending DPMs

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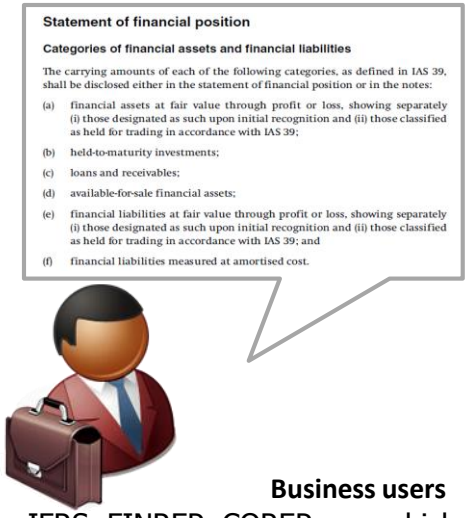
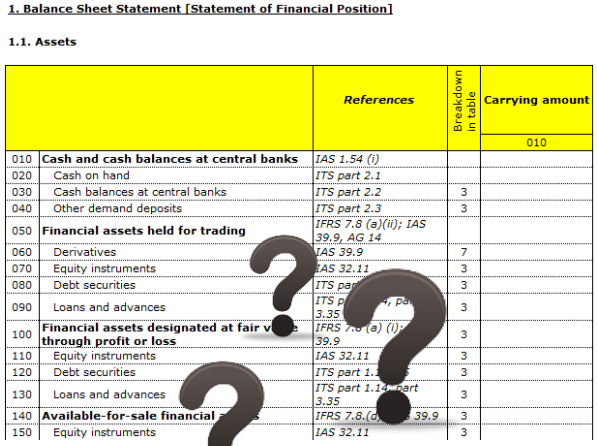
Introduction to Data Point Modeling

DPM tutorial

Thinking Forward.

What are the questions asked by business and IT experts?





Business users

- IFRS, FINREP, COREP, … - which accounting regime or standard?
- What do you mean by „financial" (IAS 39/IFRS9/...)?
- Where is it disclosed?
- Gross or net carrying amount?
- Any of it impaired or past due but not impaired yet? Or maybe it is measured at fair value? If so: which level?
- Which operations is it reported for? Banking book, assets management, ...?
- Is any of it portion transferred or partially derecognized?
- Is it audited or unaudited, solo or consolidated (if consolidated then which method)?
- …

„Financial assets"

IT

- Is it a number, date, text? If a number that what is the unit of measure?
- How is it related to other data – which package does it come with (frequency, types of entities)?
- Does it calculate to or from anything else?
- Are there any breakdowns applicable? Are they predefined or flexibly assigned by filers?
- What attributes apply to this data? How is it characterised?
- Which journal-entries roll-up to this value?
- …

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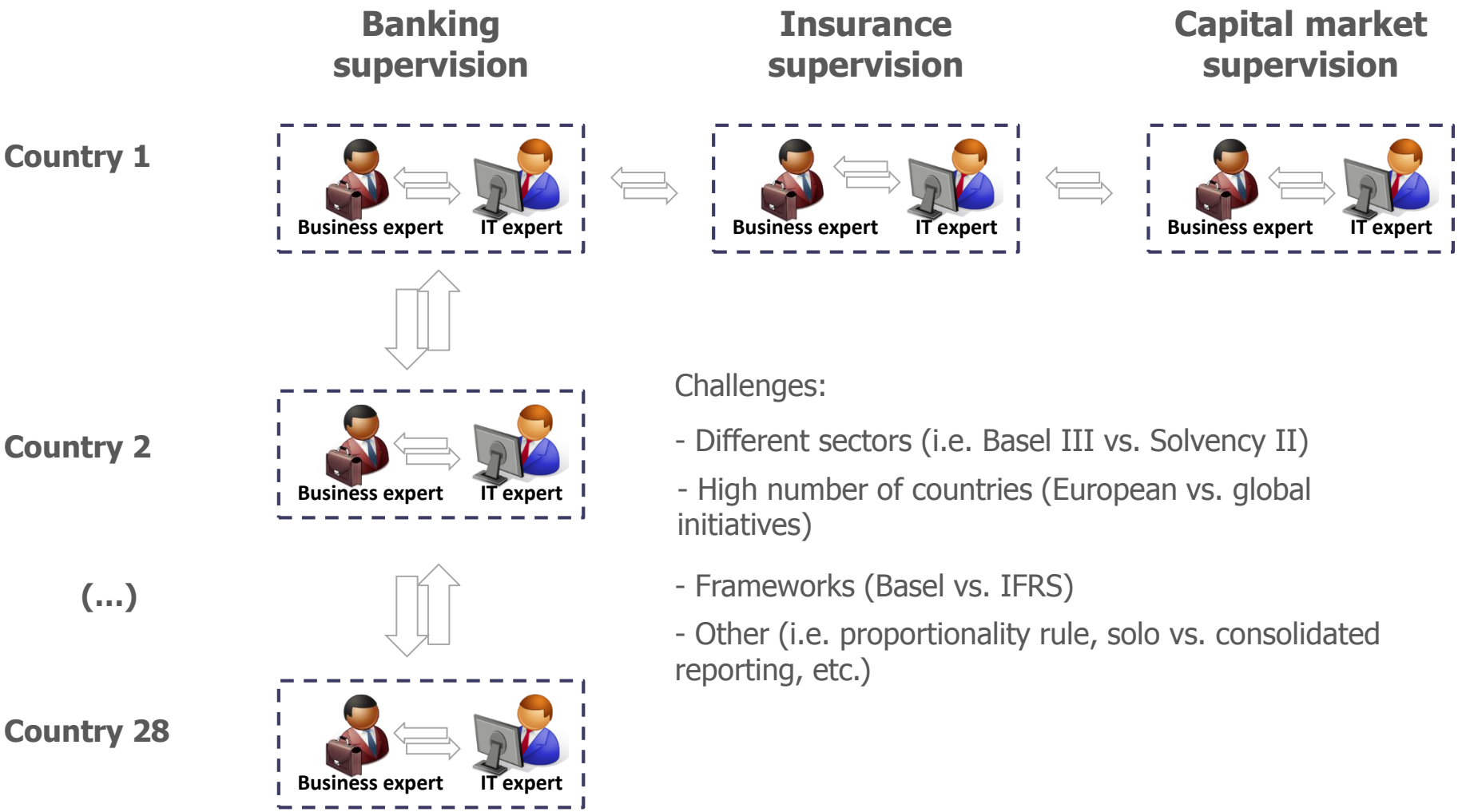
Business vs. IT issue is not the biggest challenge in EU



Challenges:

- Different sectors (i.e. Basel III vs. Solvency II)
- High number of countries (European vs. global initiatives)
- Frameworks (Basel vs. IFRS)
- Other (i.e. proportionality rule, solo vs. consolidated reporting, etc.)

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What are the options of dealing with the problem of communication?

DP_1234 | fx 1090910

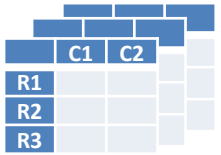
1. Balance Sheet Statement [Statement of Financial Position]

1.1. Assets

		References	Breakdown in table	Carrying amount
				010
010	**Cash and cash balances at central banks**	*IAS 1.54 (i)*		6 390 136
020	Cash on hand	*ITS part 2.1*		3 400 890
030	Cash balances at central banks	*ITS part 2.2*	3	2 980 234
040	Other demand deposits	*ITS part 2.3*	3	9 012
050	**Financial assets held for trading**	*IFRS 7.8 (a)(ii); IAS 39.9, AG 14*		2 358 292
060	Derivatives	*IAS 39.9*	7	1 090 910
070	Equity instruments	*IAS 32.11*	3	1 200 345
080	Debt securities	*ITS part 1.14, 15*	3	59 821
090	Loans and advances	*ITS part 1.14, part 3.35*	3	7 216

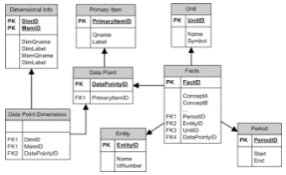
"form centric"

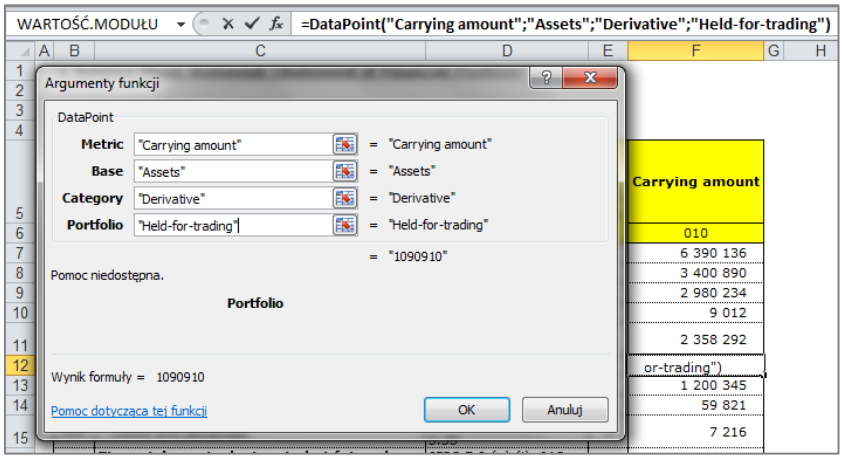
- based on presentation of data which conveys all semantics (interpretation in context of views)
- description based on table cells (row/column code, e.g. C6 or simply by row/column title concatenation)
- most common solution in projects with no input from business experts
- difficult to maintain and apply e.g. for analysis
- fillers map/extract to/from views (question and error prone)



"data centric"

- explicit and consistent definition irrespective of presentation
- every data cell fully described by business users with all necessary properties in order to explicitly express its meaning
- resulting data model supports data exchange (explicit information for filers) and usage (e.g. in analysis)





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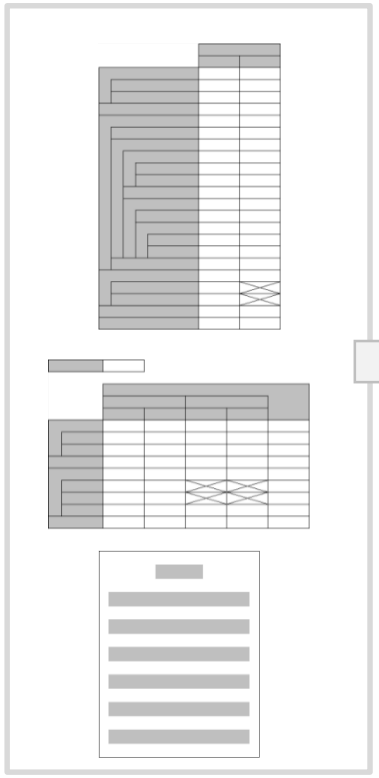
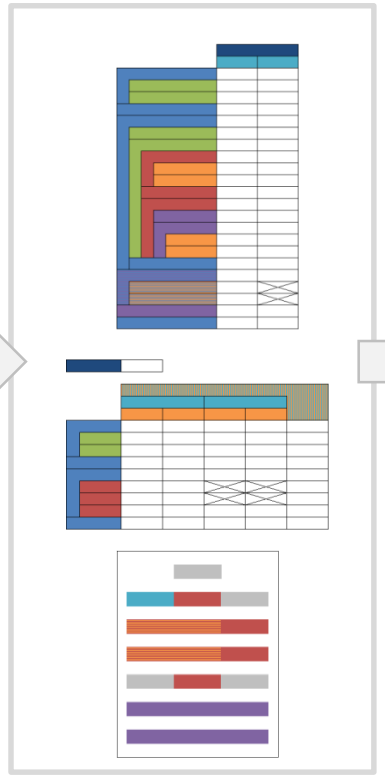
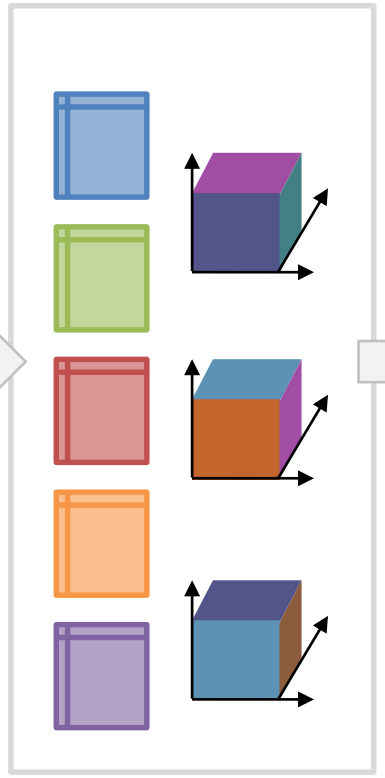
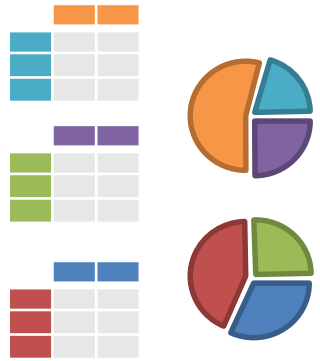
How to approach data centric modeling?

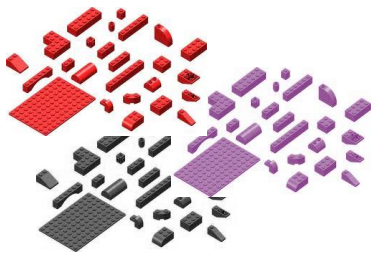






```
SELECT
SUM(factValue)
FROM allFacts
WHERE
item="assets"
AND
category="loans"
AND
amount="notional"
AND
…
```





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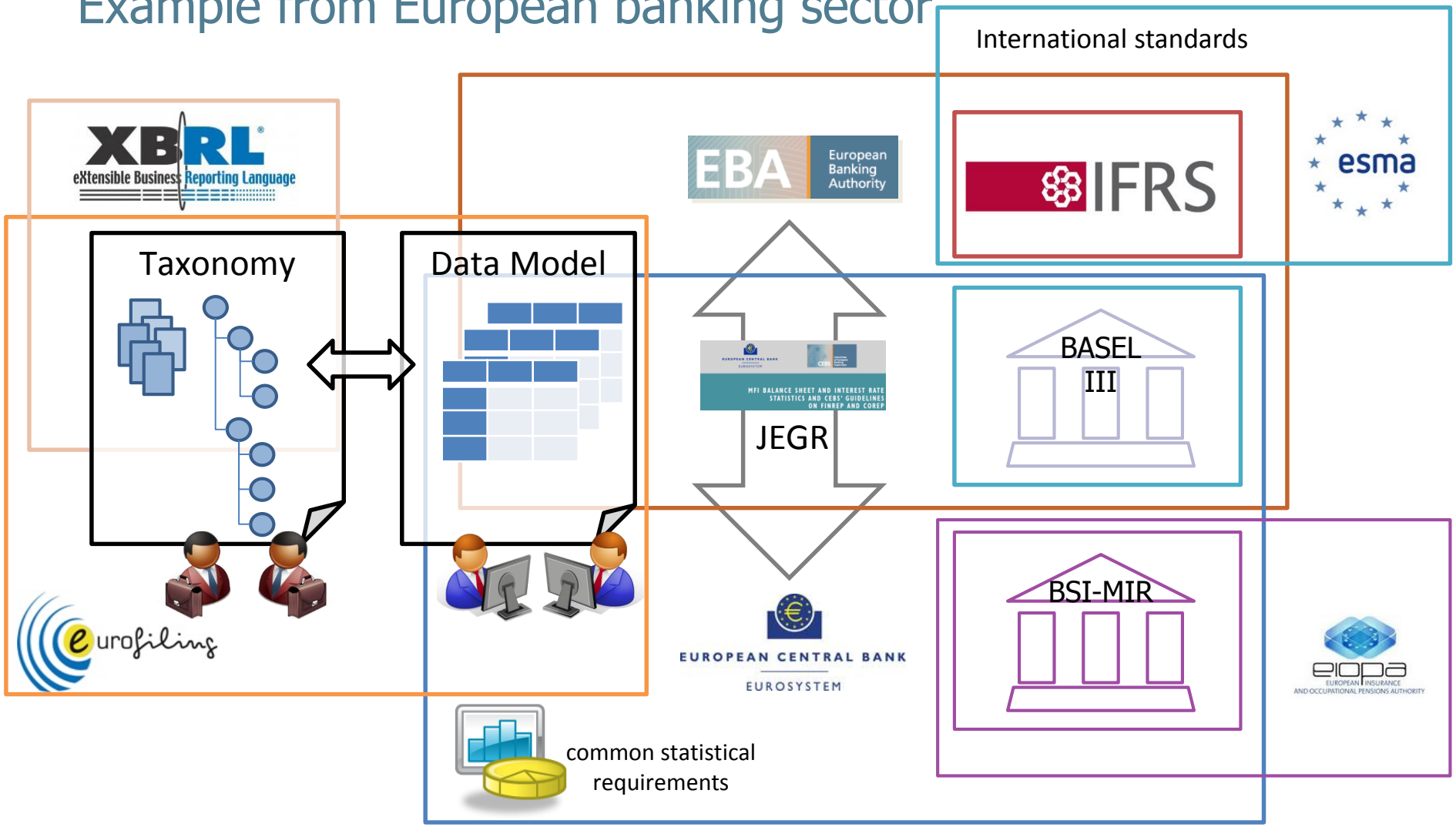
How to solve communication problem? Example from European banking sector



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How does DPM help in change communication?

- Template 3

  FINREP ver 1: 51 data points

  FINREP rev 2: 45 data points

- Identical cells?

  0!

- Why?

  different classification of instruments

  addition of economic hedges as a new portfolio

  introduction of breakdown by markets

- How to present this change?

3. Derivatives held for trading

By type of risk	By instrument	Carrying amount		Notional amount
		Assets	Liabilities	
Interest rate	Option/Cap/Floor/Collar/Swaption			
	IRS			
	FRA			
	Forward			
	Interest future			
	Other			
Equity	Equity forward			
	Equity future			
	Equity option			
	Warrant			
	Other			
Currency (FX)	FX forward			
	FX future			
	Cross currency swap			
	FX option			
	FX forward rate agreement			
	Other			

Financial Assets Held for Trading, Trading Derivatives, Equity Option

3. Derivatives held for trading

By type of risk	By product or by type of market	*References*	Carrying amount		Notional
			Assets	Liabilities	Total
Interest rate	O				
	Organized market options				
	Organized market other				
	of which: economic hedges				
Equity	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
	of which: economic hedges				
Foreign exchange	OTC options				
	Organized market other				
	of which: economic hedges				

Financial Assets Held for Trading, Trading Derivatives, Equity Option, OTC

Financial Assets Held for Trading, Trading Derivatives, Equity Option, Organized market

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How does DPM help in change communication?

3. Derivatives held for trading

By type of risk	By instrument	Carrying amount		Notional amount
		Assets	Liabilities	
Interest rate	Option/Cap/Floor/Collar/Swaption			
	IRS			
	FRA			
	Forward			
	Interest future			
	Other			
Equity	Equity forward			
	Equity future			
	Equity option			
	Warrant			
	Other			
Currency (FX)	FX forward			
	FX future			
	Cross currency swap			
	FX option			
	FX forward rate agreement			
	Other			

Category
Derivatives
Portfolio
Held for trading
Base item
Assets
Liabilities
Assets and/or Liabilities
Amount type
Carrying amount
Notional amount
Risk Type
Currency (FX)
Equity
Interest rate
Instruments
Option
Cross swap
Forward
FRA
Future
IRS
Warrant
Option/Cap/Floor/Collar/Swaption
Other than Option, Cross swap, Forward and Future
Other than Option, Warrant, Forward and Future
Other than Option/Cap/Floor/Collar/Swaption, IRS, FRA, Forward and Future

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How does DPM help in change communication?

3. Derivatives held for trading

By type of risk	By product or by type of market	*References*	Carrying amount		Notional
			Assets	Liabilities	Total
Interest rate	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
	of which: economic hedges				
Equity	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
	of which: economic hedges				
Foreign exchange	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
	of which: economic hedges				

Category
Derivatives
Portfolio
Held for trading
Held for trading, economic hedges
Base item
Assets
Liabilities
Assets and/or Liabilities
Amount type
Carrying amount
Notional amount
Risk Type
Currency (FX)
Equity
Interest rate
Instruments
Option
Other than options
Market
Organized market
OTC

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How does DPM help in change communication?

FINREP ver 1 vs FINREP rev 2

=

Portfolio
Held for trading

Instruments
Option
Cross swap
Forward
FRA
Future
IRS
Warrant
Option/Cap/Floor/Collar/Swaption
Other than Option, Cross swap, Forward and Future
Other than Option, Warrant, Forward and Future
Other than Option/Cap/Floor/Collar/Swaption, IRS, FRA, Forward and Future

+

Portfolio
Held for trading
Held for trading, economic hedges

Instruments
Option
Other than options

+

Market
Organized market
OTC

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What is the idea of a „data point”?

- identification of a **measure/metric** ***(XBRL primary item)*** and a component of each applicable **breakdown** ***(XBRL subdomains related to particular dimensions)*** describing this measure in order to **explicitly define a piece of information** (e.g. a cell in a template)
- **measure/metric**: shall cover data type information, instant vs. duration, basic business meaning that could be detailed using breakdowns

  FINREP: current approach: carrying amount, current period, …

  COREP: original exposure pre conversion factors, risk weighted exposure amount, …

  Solvency II: Monetary, Decimal, String, but also MD metrics, to be discussed later.

- **breakdown**: a view on a measure/metric from a certain perspective: decomposition of a metric according to a selected criterion

  disaggregation (with ‚+’ or ‚–’ sign) of a total (e.g. counterparty sector or residence)

  indicating certain notion (property) of a base item (e.g. solo vs. CRD consolidated vs. IFRS consolidated reporting scope, …)

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What are domains, subdomains, dimensions?

Subdomain 1:
- All (...)
  - Spain
  - Other than Spain

Subdomain 2:
- All
  - EMU
    - Spain
    - Other than Spain in EMU (...)
  - Other than EMU (...)

Dimensions:
- Location of activity
- Securitization partner residence
- Counterparty residence

Domain: Geographical and political areas
- All
- EMU (...)
- Spain
- Other than Spain
- Other than Spain in EMU (...)
- Other than EMU (...)

STATE UEM.12

SECURITIZATION AND OTHER TRANSFERS OF LOANS. (BUSINESS IN SPAIN)

Corresponding to the _____ of _____

ENTITY _____

Year	Month		P	State	Entity Code
		- -	T	4 2 1 2	

(Thousands of euros rounded)

Loans and credits	Net flows of loans transferred during the current quarter. With impact on reported balances (a)						Managed loans outstanding securitization (b)					
	Counterparty securitization companies and funds				Other partners		Total		Thereof: Counterparty securitization companies and funds of the euro area			
	Total		Of which: euro area						Spain		Other countries (c)	
RESIDENTS IN SPAIN												
Non-financial corporations	0006		0056				0156		0206		0256	
Households and NPISHs	0010				0110		0160		0210		0260	
RESIDENTS IN OTHER STATES EMU												
Non-financial corporations	0020		0070				0170		0220		0270	
Households and NPISHs	0024				0124		0174		0224		0274	
REST OF THE WORLD												
All sectors							0179		0229		0279	

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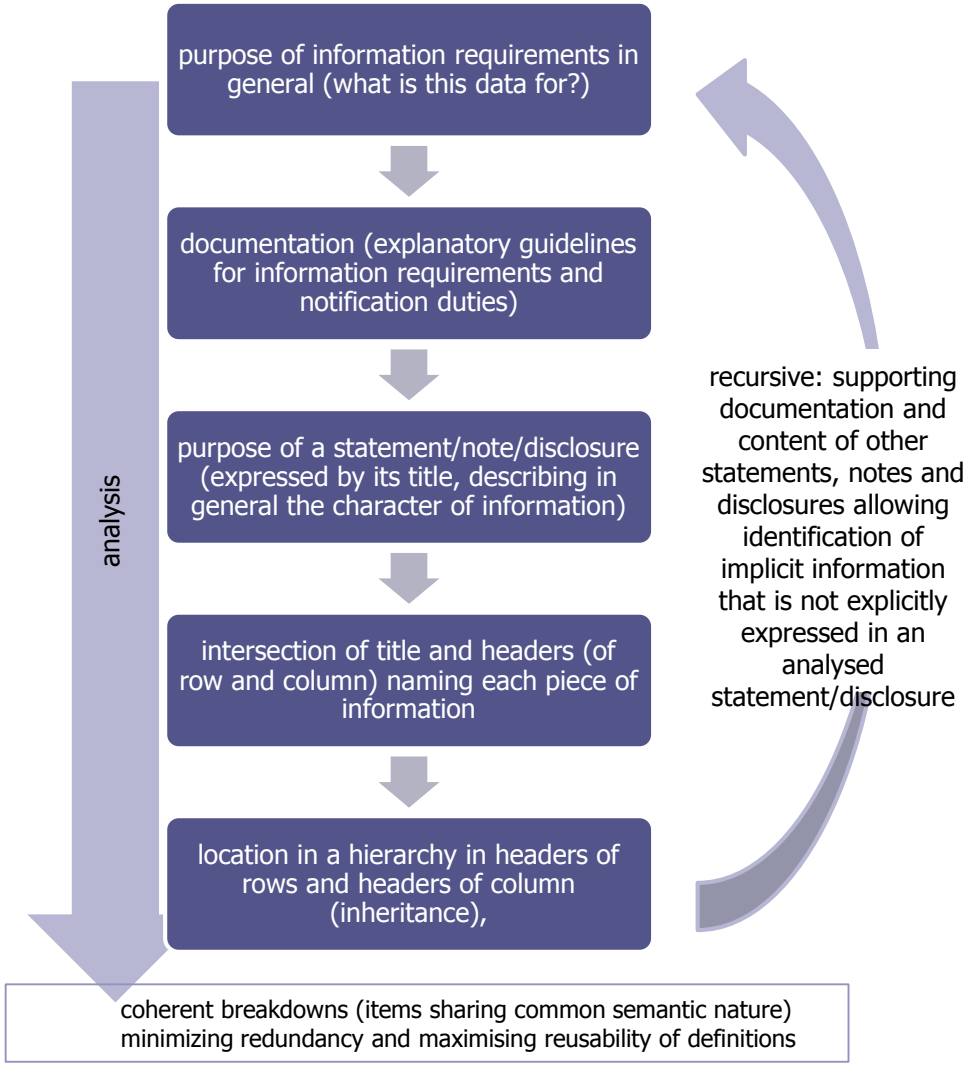
What is the general process of development of the DPM?



1. study the information requirements
2. analyse them by statements/disclosures (table by table, header by header according to the divide and conquer approach):
   A. identify measures (metrics) and list them down (if a measure is already listed – reuse it) identifying type of expected value and measurement in time (instant/duration)
   B. identify and name all breakdowns required to explicitly define each piece of information
      - preserve hierarchies (if applicable) with other already defined values (properties) or reuse existing values
      - if a value is not applicable to any existing hierarchy create a new one
3. review the measures and breakdowns and look for optimization (e.g. breakdowns of similar nature, functional relationships, etc)
4. add other necessary characteristics

Resulting DPM shall contain:

- a list of measures (name, label, data and period type, …) and hierarchy o measures (if applicable)
- a list of members and dimensions of each domain (name, label, item type, default member)
- a subdomains of each domain (subdomain name, hierarchy and order, alternative classifications)

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How to define the best data model?

$$\varphi_{i,a_i}(s) = \max\{0, u_i(a_i, s_{-i}) - u_i(s)\}.$$

$$s_i'(a_i) = \frac{s_i(a_i) + \varphi_{i,a_i}(s)}{\sum_{b_i \in A_i} s_i(b_i) + \varphi_{i,b_i}(s)} = \frac{s_i(a_i) + \varphi_{i,a_i}(s)}{1 + \sum_{b_i \in A_i} \varphi_{i,b_i}(s)}.$$

data modelling
it's not a science!

it's a (subjective)
result of discussion...

...and agreement!

Net carrying amount of not yet impaired but already past due (over 180 days but less than a year) debt securities held, issued in EUR by MFIs located in EMU with original maturity under one year, measured at amortised cost and relating only to business activities conduced in EU?

Locations of activities:
All / Not-applicable
EU
Other than EU (...)

Portfolios:
Total (...)
Fair value through profit or loss
Amortised cost

Impairment status:
All / Not-applicable
Impaired
Unimpaired

Time reference:
Current period end
Previous period end
Current period

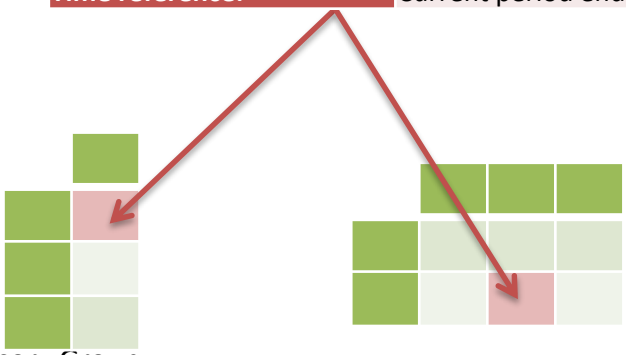
Base terms:
Assets
Liabilities
Equity
Off-balance sheet
Exposures

Categories:
Total (...)
Cash
Loans
Debt securities
Equity instruments
Tangible and intangible
Other than (...)

Amount types (metric):
Carrying amount
Gross carrying amount
(Specific allowances)
(Collective allowances)

Original currencies:
All / Not-applicable
EUR
Other than EUR

Base term:	Assets
Category:	Debt securities
Portfolio:	Amortised cost
Amount type:	Carrying amount
Impairment status:	Unimpaired
Past due period:	≥ 180 days < 1 year
Original currency:	EUR
Original maturity:	< 1 year
Counterparty sector:	MFIs
Counterparty residence:	EMU
Location of activity:	EU
Time reference:	Current period end



Past due periods:
All
< 180 days
≥ 180 days < 1 year
≥ 1 year

Original maturity:
All
< 1 year
≥ 1 year < 2 year
≥ 2 years

Counterparty sectors:
All / Not-applicable
MFIs
MMFs
MFIs other than MMFs
Central Administration
Other general government
Non-MFIs other than government

Counterparty residences:
All / Not-applicable
EMU
Other than EMU (...)

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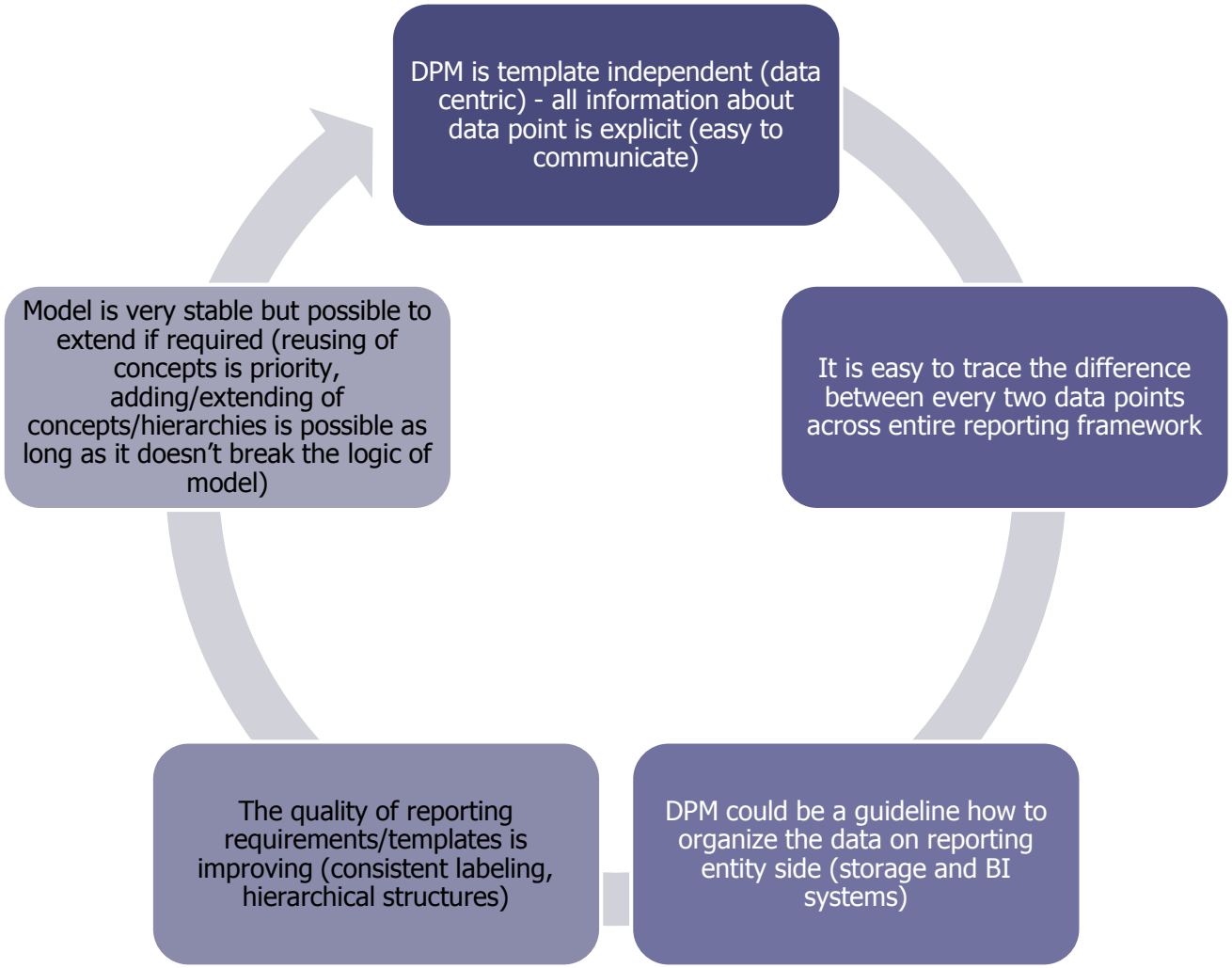
What are the benefits of using DPM?



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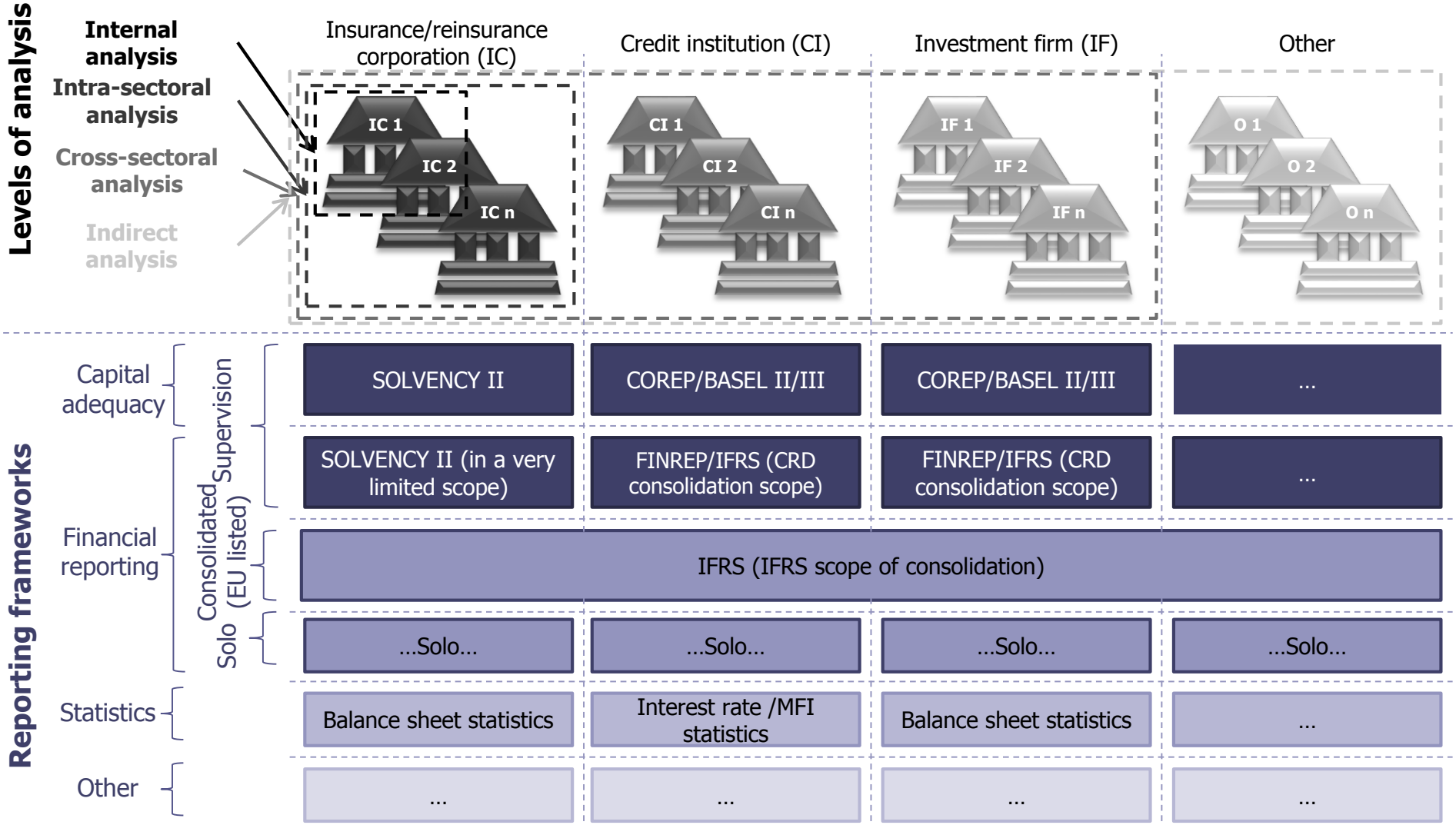
Sharing DPM dictionaries – general concept



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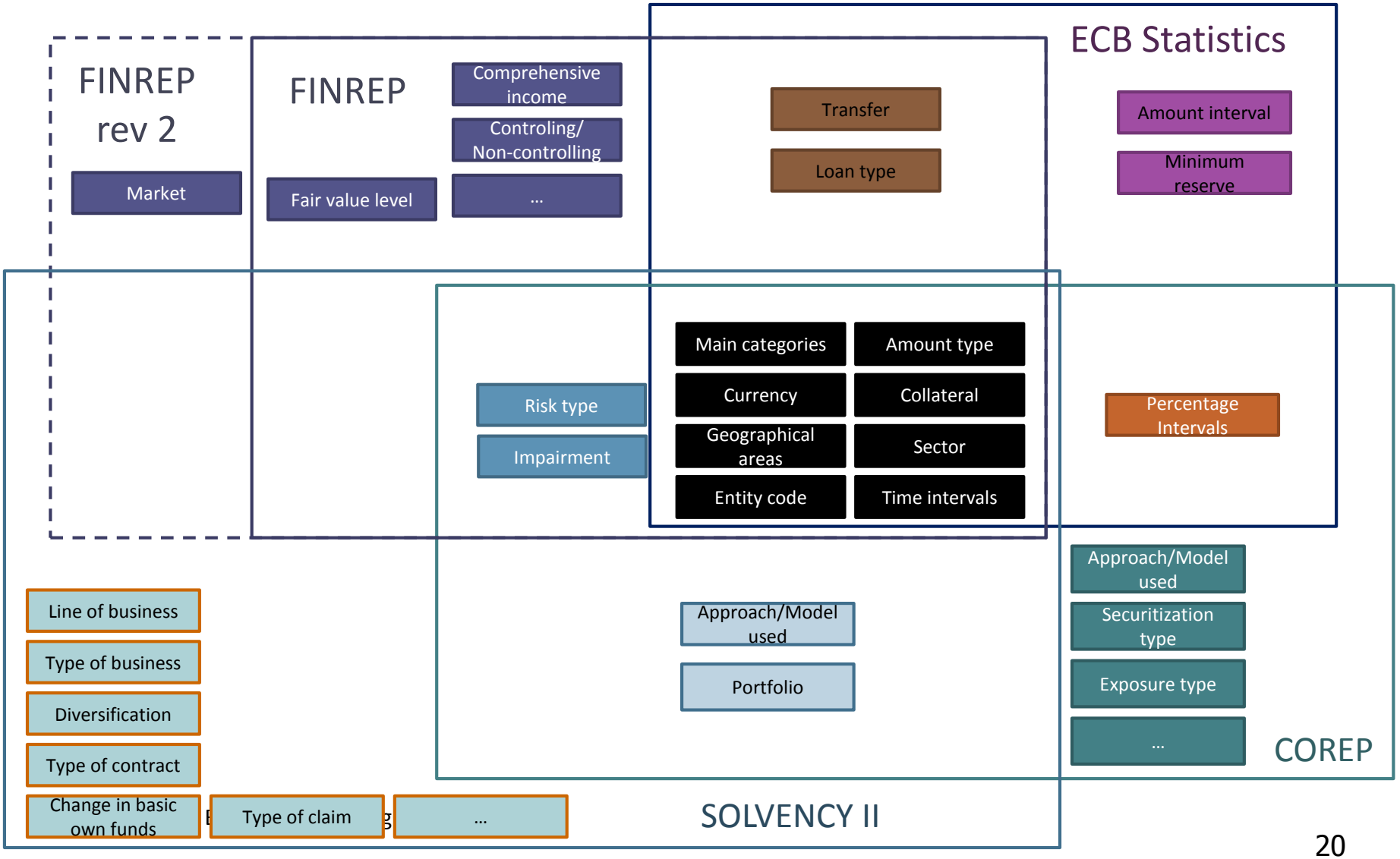
Sharing DPM dictionaries – example



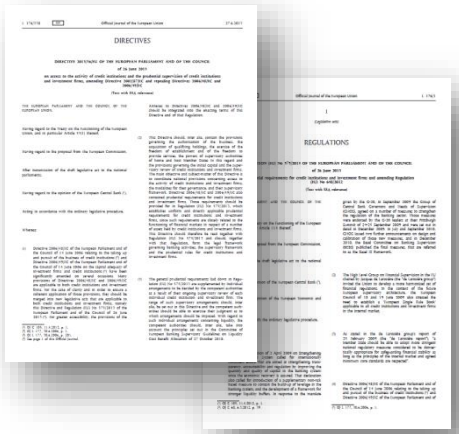
Challenges of data modeling

DPM tutorial

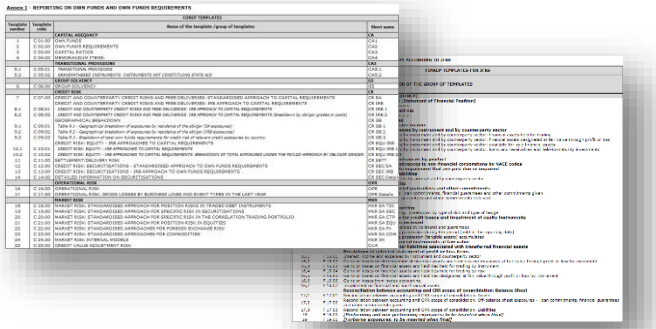
Thinking
Forward.

What are the input materials to develop DPM?

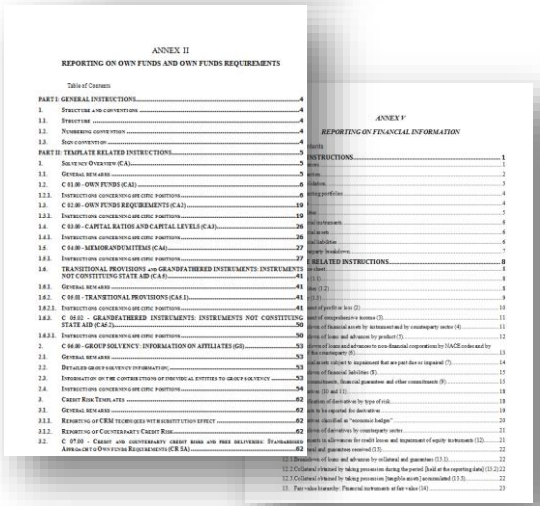
Directives and regulations



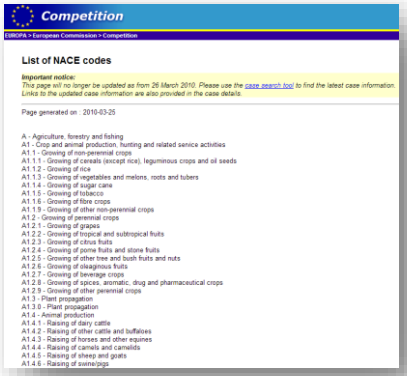
Tables



Instructions



Data models to be reused or extended…



… list is not complete…

… there are many versions…

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What is the relation of the table to other tables? Detailing – CRR/CRDIV case

1.1 Assets

		References	Breakdown in table	Carrying amount
				010
010	**Cash and cash balances at central banks**	*IAS 1.54 (i)*		
020	Cash on hand	*Annex V.Part 2.1*		
030	Cash balances at central banks	*Annex V.Part 2.2*	4	
040	Other demand deposits	*Annex V.Part 2.3*	4	
050	**Financial assets held for trading**	*IFRS 7.8(a)(ii); IAS 39.9, AG 14*		
060	Derivatives	*IAS 39.9*	10	
070	Equity instruments	*IAS 32.11*	4	
080	Debt securities	*Annex V.Part 1.24, 26*	4	
090	Loans and advances	*Annex V.Part 1.24, 27*	4	
100	**Financial assets designated at fair value through profit or loss**	*IFRS 7.8(a)(i); IAS 39.9*	4	
110	Equity instruments	*IAS 32.11*	4	
120	Debt securities	*Annex V.Part 1.24, 26*	4	
130	Loans and advances	*Annex V.Part 1.24, 27*	4	
140	**Available-for-sale financial assets**	*IFRS 7.8(d); IAS 39.9*	4	
150	Equity instruments	*IAS 32.11*	4	

4.1 Financial assets held for trading

		References	Carrying amount	Accumulated changes in fair value due to credit risk
				IFRS 7.9 (c); Annex V.Part
			010	020
010	**Equity instruments**	*IAS 32.11*		
020	of which: at cost	*IAS 39.46(c)*		
030	of which: credit institutions	*Annex V.Part 1.35(c)*		
040	of which: other financial corporations	*Annex V.Part 1.35(d)*		
050	of which: non-financial corporations	*Annex V.Part 1.35(e)*		
060	**Debt securities**	*Annex V.Part 1.24, 26*		
070	Central banks	*Annex V.Part 1.35(a)*		
080	General governments	*Annex V.Part 1.35(b)*		
090	Credit institutions	*Annex V.Part 1.35(c)*		
100	Other financial corporations	*Annex V.Part 1.35(d)*		
110	Non-financial corporations	*Annex V.Part 1.35(e)*		
120	**Loans and advances**	*Annex V.Part 1.24, 27*		
130	Central banks	*Annex V.Part 1.35(a)*		
140	General governments	*Annex V.Part 1.35(b)*		
150	Credit institutions	*Annex V.Part 1.35(c)*		
160	Other financial corporations	*Annex V.Part 1.35(d)*		
170	Non-financial corporations	*Annex V.Part 1.35(e)*		
180	Households	*Annex V.Part 1.35(f)*		

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What is the relation of the table to other tables? Detailing – Sol2 case

Own funds

Basic own funds	Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
Ordinary share capital (gross of own shares)	A1	B1		C1	
Share premium account related to ordinary share capital	A2	B2		C2	
Initial funds, members' contributions or the equivalent basic own - fund item for mutual and mutual-type undertakings	A3	B3		C3	
Subordinated mutual member accounts	A4		B4	C4	D4
Surplus funds	A6	B6			
Preference shares	A8		B8	C8	D8
Share premium account related to preference shares	A9		B9	C9	D9
Reconciliation reserve	A12	B12			
Subordinated liabilities	A13		B13	C13	D13
An amount equal to the value of net deferred tax assets	A15				D15
Other items approved by supervisory authority as basic own funds not specified above	A16	B16	B16A	C16	D16

Preference shares	Total	Tier 1	Of which counted under transitionals	Tier 2	Of which counted under transitionals	Tier 3
Dated preference shares	A79	B79	C79	D79	E79	F79
Undated preference shares with a call option	A80	B80	C80	D80	E80	F80
Undated preference shares with no contractual opportunity to redeem	A81	B81	C81	D81	E81	F81
Total preference shares	A82	B82	C82	D82	E82	F82

Description of preference shares	Amount	Is this counted under transitionals?	Counterparty (if specific)	issue date	First call date	Details of further call dates	Details of incentives to redeem
A87.1	B87.1	C87.1	D87.1	E87.1	F87.1	G87.1	H87.1
A87.n	B87.n	C87.n	D87.n	E87.n	F87.n	G87.n	H87.n

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What is the relation of the table to other tables? Mergers – CRR/CRDIV case

1.1 Assets

		References	Breakdown in table	Carrying amount
				010
010	**Cash and cash balances at central banks**	*IAS 1.54 (i)*		
020	Cash on hand	*Annex V.Part 2.1*		
030	Cash balances at central banks	*Annex V.Part 2.2*	4	
040	Other demand deposits	*Annex V.Part 2.3*	4	
050	**Financial assets held for trading**	*IFRS 7.8(a)(ii); IAS 39.9, AG 14*		
060	Derivatives	*IAS 39.9*	10	
070	Equity instruments	*IAS 32.11*	4	

1.2 Liabilities

		References	Breakdown in table	Carrying amount
				010
010	**Financial liabilities held for trading**	*IFRS 7.8 (e) (ii); IAS 39.9, AG 14-15*	8	
020	Derivatives	*IAS 39.9, AG 15(a)*	10	
030	Short positions	*IAS 39.AG 15(b)*	8	

10. Derivatives - Trading

	By type of risk / By product or by type of market	TEMPLATE NUMBER References	Carrying amount: Financial assets held for trading *Annex V.Part 2.69* 010	Carrying amount: Financial liabilities held for trading *Annex V.Part 2.69* 020
010	**Interest rate**	*Annex V.Part 2.67(a)*		
020	of which: economic hedges	*Annex V.Part 2.74*		
030	OTC options			
040	OTC other			
050	Organized market options			
060	Organized market other			
070	**Equity**	*Annex V.Part 2.67(b)*		
080	of which: economic hedges	*Annex V.Part 2.74*		
090	OTC options			
100	OTC other			
110	Organized market options			
120	Organized market other			
130	**Foreign exchange and gold**	*Annex V.Part 2.67(c)*		
140	of which: economic hedges	*Annex V.Part 2.74*		
150	OTC options			
160	OTC other			
170	Organized market options			
180	Organized market other			
190	**Credit**	*Annex V.Part 2.67(d)*		
200	of which: economic hedges	*Annex V.Part 2.74*		
210	Credit default swap			
220	Credit spread option			
230	Total return swap			
240	Other			
250	**Commodity**	*Annex V.Part 2.67(e)*		
260	of which: economic hedges	*Annex V.Part 2.74*		
270	**Other**	*Annex V.Part 2.67(f)*		
	of which: economic hedges	*Annex V.Part 2.74*		
290	**DERIVATIVES**	*IAS 39.9*		
300	of which: OTC - credit institutions	*Annex V.Part 1.35(c), 2.75(a)*		
310	of which: OTC - other financial corporations	*Annex V.Part 1.35(d), 2.75(b)*		
320	of which: OTC - rest	*Annex V.Part 2.75(c)*		

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What is the relation of the table to other tables? Mergers – Sol2 case

Balance sheet

Fund number	A0	
Assets	**Solvency II value**	**Statutory accounts value**
Goodwill		AS1
Deferred acquisition costs		AS24
Intangible assets	A2	A2
Deferred tax assets	A26	A26
Pension benefit surplus	A25B	A25B
Property, plant & equipement held for own use	A3	A3
Investments (other than assets held for index-linked and unit-linked funds)	A4	A4
Assets held for index-linked and unit-linked funds	A12	A12
Loans & mortgages	A14	A14
Loans & mortgages to individuals		
Other loans & mortgages		
Loans on policies		
Reinsurance recoverables from:		
Non-life and health similar to non-life		
Non-life excluding health		
Health similar to non-life		
Life and health similar to life, excluding health and index-linked and unit-linked		
Health similar to life		
Life excluding health and index-linked and unit-linked		
Life index-linked and unit-linked		
Deposits to cedants		
Insurance & intermediaries receivables		
Reinsurance receivables		
Receivables (trade, not insurance)		
Own shares		
Amounts due in respect of own fund items or initial fund called up but not yet paid in		
Cash and cash equivalents		
Any other assets, not elsewhere shown		
Total assets		

Assets and liabilities by currency

	Reporting currency	**Currencies**	**Other**	**Total**
Currency code	A1	B1		
Assets				
Investments (other than assets held for index-linked and unit-linked funds)	A3			
Other assets within scope of Assets-D1 (other than index-linked and unit-linked funds)	A4			
Assets held for index-linked and unit-linked funds	A5			
Reinsurance recoverables	A5A			
Deposits to cedants, insurance and intermediaries receivables and reinsurance receivables	A6			
Any other assets	A7			
Total assets	A7A			
Liabilities				
Technical provisions (excluding index-linked and unit-linked funds)	A8			
Technical provisions - index-linked and unit-linked funds	A9			
Deposits from reinsurers and insurance, intermediaries and reinsurance payables	A10			
Derivatives	A11			
Financial liabilities	A12			
Contingent liabilities	A13			
Any other liabilities	A14			
Total liabilites	A15			

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What is the relation of the table to other tables? Detailing of mergers – Sol2 case

Balance sheet

Fund number	A0	
Assets	**Solvency II value**	**Statutory accounts value**
Goodwill		AS1
Deferred acquisition costs		AS24
Intangible assets	A2	A2
Deferred tax assets	A26	A26
Pension benefit surplus	A25B	A25B
Property, plant & equipement held for own use	A3	A3
Investments (other than assets held for index-linked and unit-linked funds)	A4	A4
Property (other than for own use)	A5	A5
Participations	A6	A6
Equities	A7B	A7B
Equities - listed	A7	A7
Equities - unlisted	A7A	A7A
Bonds	A8E	A8E
Government Bonds	A8	A8
Corporate Bonds	A8A	A8A
Structured notes	A8C	A8C
Collateralised securities	A8D	A8D
Investment funds	A9	A9
Derivatives	A10A	A10A
Deposits other than cash equivalents	A10B	A10B
Other investments	A11	A11
Assets held for index-linked and unit-linked funds	A12	A12

	Identification section			Categorisation section						
	Legal name of the undertaking	ID Code	Type of structured product	Capital protection	Collateral	Collateral type	Underlying security / index / portfolio	Callable or Putable	Synthetic structured product (Y/N)	Prepayment structured product (Y/N)
Cell Number	A50	A1	A2	A3	A4	A5	A6	A8	A15	A16

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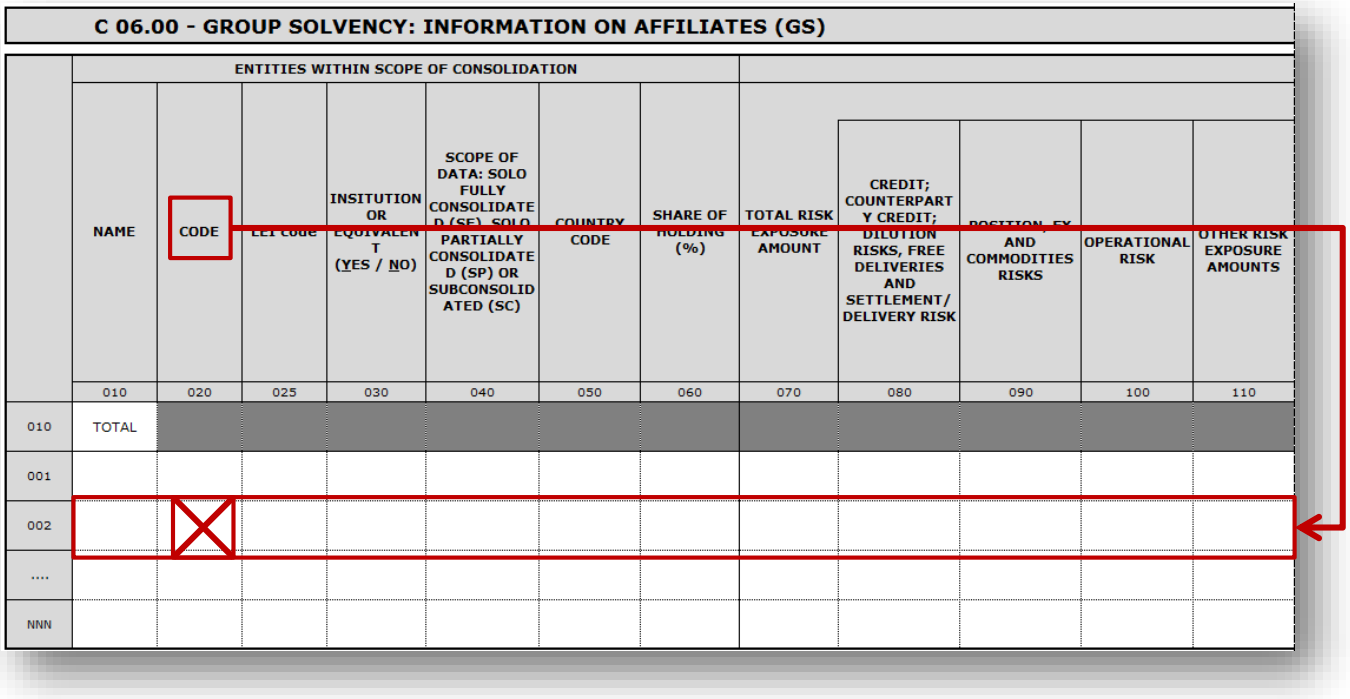
Is a table open or closed?



C 06.00 - GROUP SOLVENCY: INFORMATION ON AFFILIATES (GS)

	ENTITIES WITHIN SCOPE OF CONSOLIDATION											
	NAME	CODE	LEI code	INSITUTION OR EQUIVALENT (YES / NO)	SCOPE OF DATA: SOLO FULLY CONSOLIDATED (SE), SOLO PARTIALLY CONSOLIDATED (SP) OR SUBCONSOLIDATED (SC)	COUNTRY CODE	SHARE OF HOLDING (%)	TOTAL RISK EXPOSURE AMOUNT	CREDIT; COUNTERPARTY CREDIT; DILUTION RISKS, FREE DELIVERIES AND SETTLEMENT/ DELIVERY RISK	POSITION, FX AND COMMODITIES RISKS	OPERATIONAL RISK	OTHER RISK EXPOSURE AMOUNTS
	010	020	025	030	040	050	060	070	080	090	100	110
010	TOTAL											
001												
002												
....												
NNN												

Reporting code by code

- What is the key (<key value>) to gather information in rows (or columns)?
- Is the key composite?
- Is the key shared with other tables?

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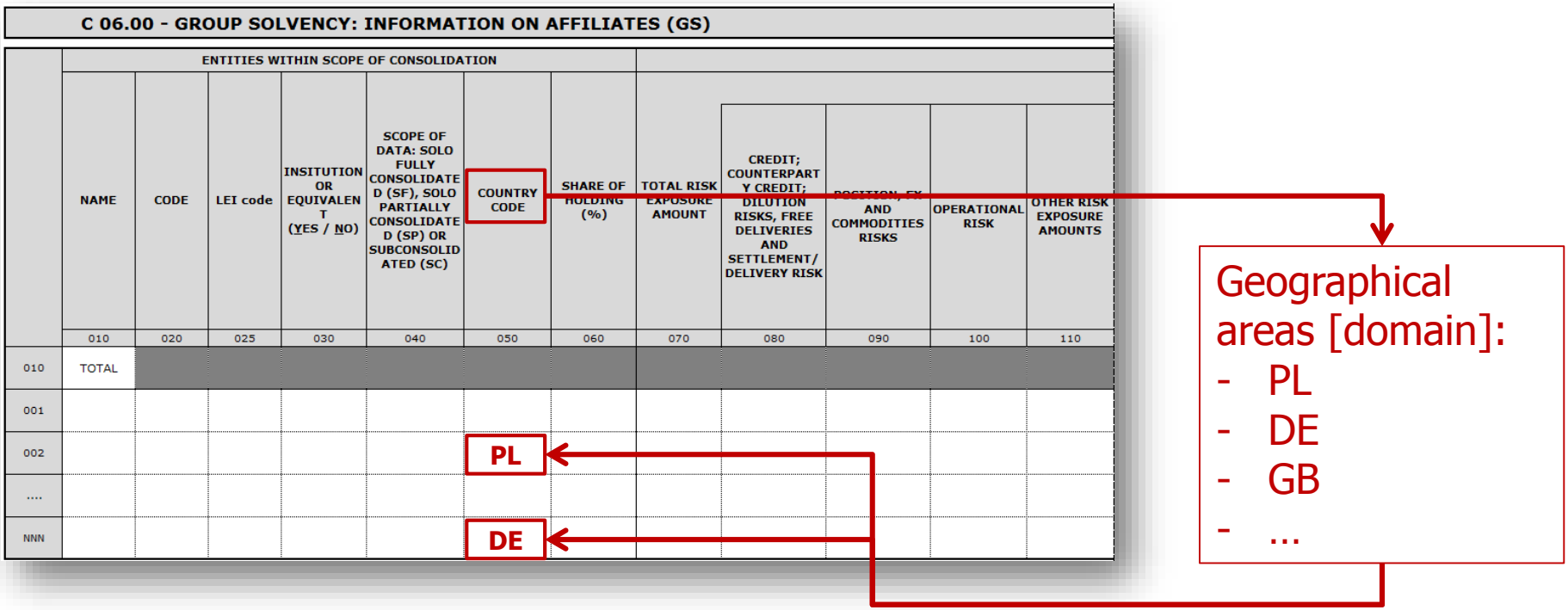
Are there any enumerations in open tables?



- Domain members could be reused as metrics

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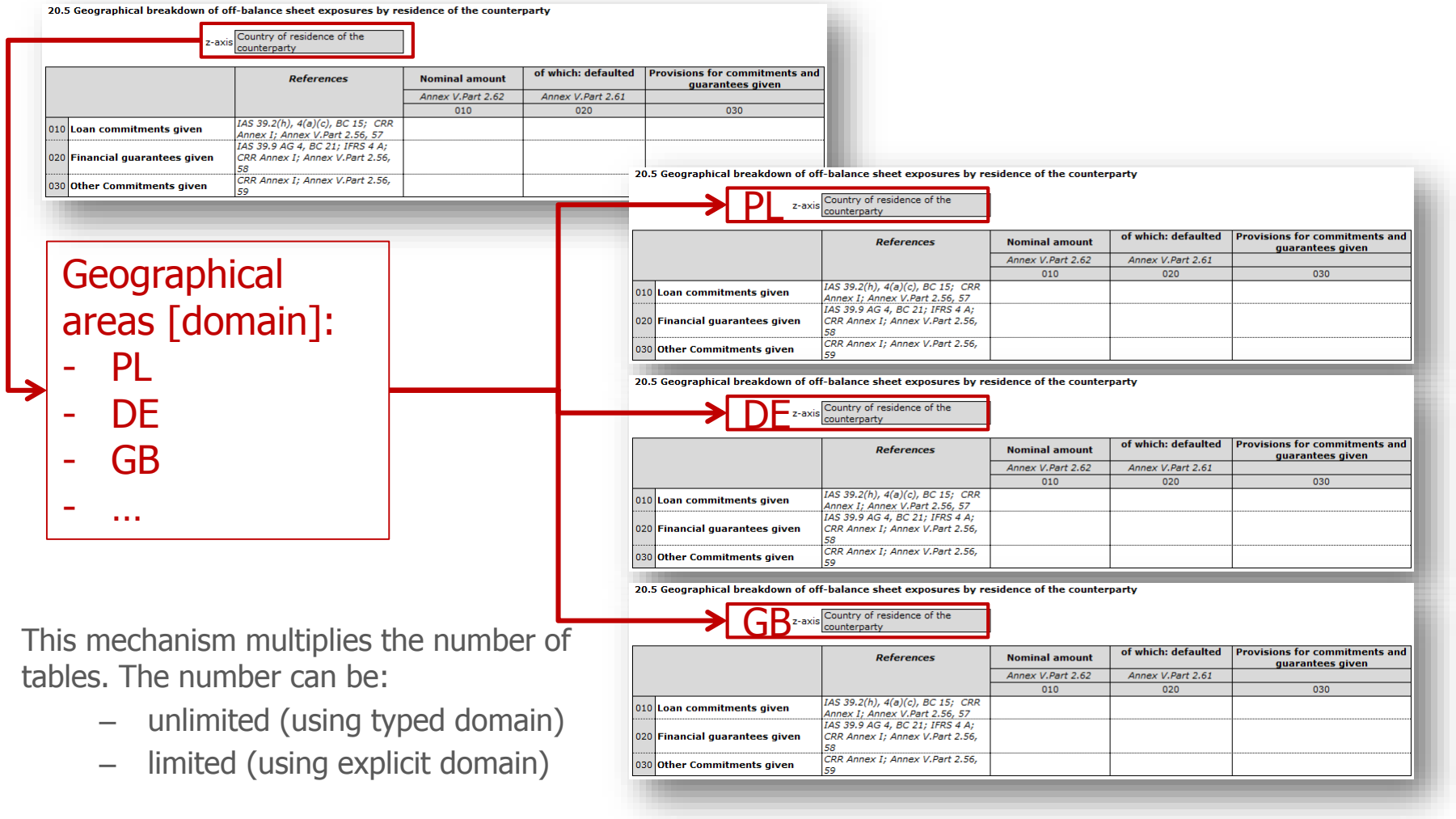
Is there Z-axis information?



This mechanism multiplies the number of tables. The number can be:

- unlimited (using typed domain)
- limited (using explicit domain)

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Does the same dimension apply to both: rows and columns?

C 08.01 - CREDIT AND COUNTERPARTY CREDIT RISKS AND FREE DELIVERIES: IRB APPROACH TO CAPITAL REQUIREMENTS (CR IRB 1)

IRB Exposure class:
Own estimates of LGD and/or conversion factors:

		INTERNAL RATING SYSTEM	ORIGINAL EXPOSURE PRE CONVERSION FACTORS		CREDIT RISK MITIGATION (CRM) TECHNIQUES WITH SUBSTITUTION EFFECTS ON THE EXPOSURE					EXPOSURE AFTER CRM SUBSTITUTION EFFECTS PRE CONVERSION FACTORS		EXPOSURE VALUE			
					UNFUNDED CREDIT PROTECTION			SUBSTITUTION OF THE EXPOSURE DUE TO CRM							
		PD ASSIGNED TO THE OBLIGOR GRADE OR POOL (%)		OF WHICH: LARGE FINANCIAL SECTOR ENTITIES AND UNREGULATED FINANCIAL ENTITIES	(-) GUARANTEES	(-) CREDIT DERIVATIVES	(-) OTHER FUNDED CREDIT PROTECTION	(-) TOTAL OUTFLOWS	TOTAL INFLOWS (+)		OF WHICH: OFF BALANCE SHEET ITEMS		OF WHICH: OFF BALANCE SHEET ITEMS	OF WHICH: ARISING FROM COUNTERPARTY CREDIT RISK	OF WHICH: LARGE FINANCIAL SECTOR ENTITIES AND UNREGULATED FINANCIAL ENTITIES
		010	020	030	040	050	060	070	080	090	100	110	120	130	140
	TOTAL EXPOSURES													???	
	BREAKDOWN OF TOTAL EXPOSURES BY EXPOSURE TYPES:														
020	On balance sheet items subject to credit risk														
030	Off balance sheet items subject to credit risk														
	Exposures / Transactions subject to counterparty credit risk														
040	Securities Financing Transactions														
050	Derivatives & Long Settlement Transactions														
060	From Contractual Cross Product Netting														
070	EXPOSURES ASSIGNED TO OBLIGOR GRADES OR POOLS: TOTAL														

Credit risk, counterparty credit risk, dilution risk and free deliveries

Type of risk (dimension):
- Not applicable/All risks
  - (...)
  - Credit risk, counterparty credit risk, dilution risk and free deliveries
    - Counterparty credit risk…
    - (...)

In such cases table must be reorganized (i.e. divided)

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What are the types of relations between tables? Normalization

Part of original not normalized Assets-D1 table

	Identification section												Categorisation section			Risk section		
	Portfolio	Fund number	Asset held in unit linked and index linked funds (Y/N)	ID Code	ID Code type	Asset pledged as collateral	Security Title	Issuer Name	Issuer Sector	Issuer Group (Code)	Issuer Country	Country of custody	Currency (ISO code)	CIC	Participation	External rating	Rating agency	Duration
Cell Number	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A15	A16	A17	A18	A20

Normalization process

Normalization (among others):

- Checking relation between information in the table
- Avoiding error prone repetition of information
- Searching for unique key to each sub-table

Normalized Assets-D1 table

Fund number	ID Code	Portfolio	Asset held in unit linked and index linked funds (Y/N)	Asset pledged as collateral	Country of custody	Quantity	Total par amount	Acquisition price	Total SII amount	Accrued interest
A2	A4	A1	A3	A6	A12					
						A22	A22A	A25	A26=A22*A23 +A30	A30

Information not instrument specific (i.e. portfolio, pledging as collateral)

ID Code	CIC	External rating	Rating agency	Issuer Sector	Issuer Country	Currency (ISO code)	Participation	Valuation method SII	Item Title	Issuer Name	Issuer Group (Code)	Duration	Unit SII price	Percentage of par SII value	Maturity date
A4	A15	A17	A18	A9	A11	A13	A16	A24							
									A7	A8	A10	A20	A23	A23A	A28

Information instrument specific (i.e. issuer, rating)

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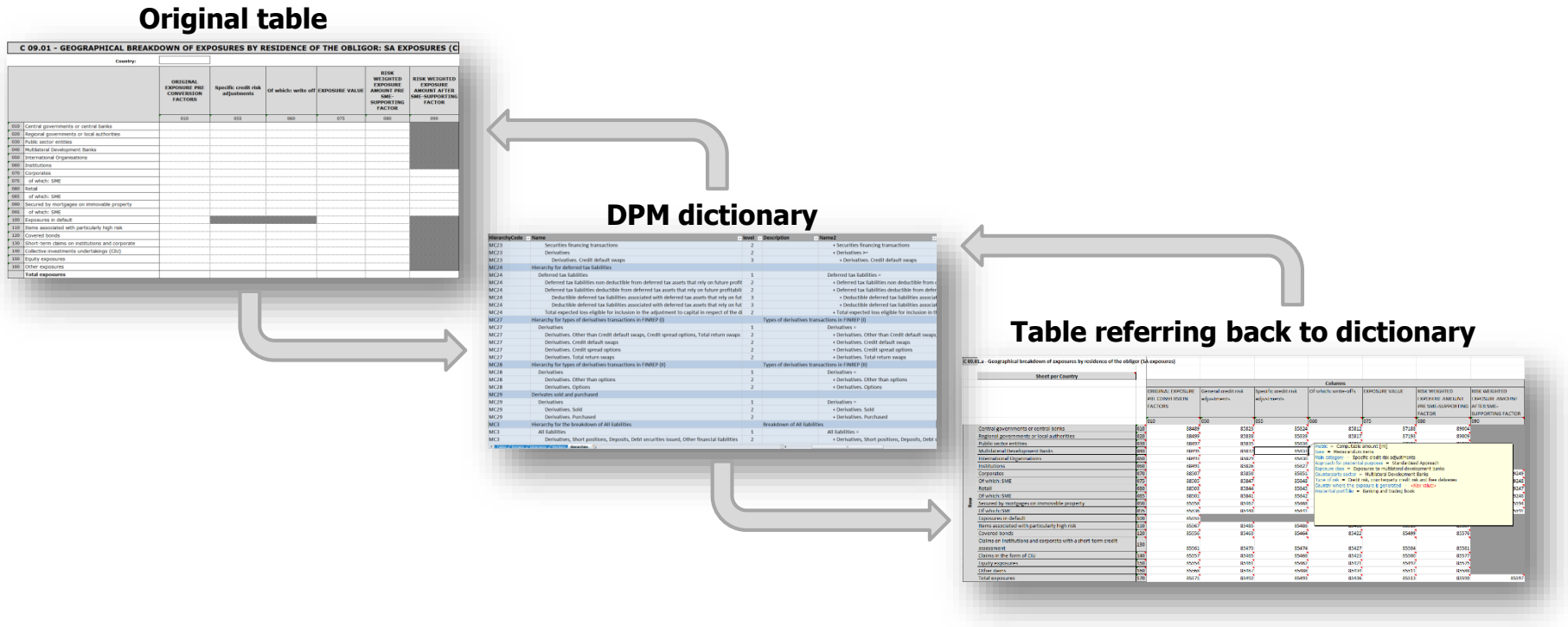
CRR/CRDIV DPM

DPM tutorial

Thinking Forward.

Relation between EBA deliverables



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Domains

DomainName	IsOpen	Description
Metric	FAŁSZ	Details the data type (eg monetary, percentage, string) of the data point. In XBRL, it is the "primary item". Generally, it indicates the "metrics" of the Main category provided (ie answers the question: how is measured?). It should be defined for each data point. In the case of monetary values, when the data point is referred to a period of time (ie duration), the member name shall finish in "(flow)". When the member name has other terminations, the data point is referred to a date (ie "stock" or "instant").
Base items	FAŁSZ	Defines the basic conceptual meaning of a data point. Identifies the framework in which a data point is included. For FINREP, it indicates in which group of element of the financial statement should be included the data point (eg assets, liabilities, equity, income, expenses). For COREP, it indicates whether the data point should be computed in the numerator (own funds) or the denominator (exposures) of the Pillar I solvency ratio. It determines whether the data point has a "debit" or a "credit" attribute.
Main category	FAŁSZ	Specifies the nature of the item reported (ie answers the question: what is reported?). For financial instruments, defines the instrument (eg deposits, debt securities issued…) or range of instruments reported. It should be defined for each data point.
Legal entity	PRAWDA	An association, corporation, partnership, proprietorship, trust, or individual that has legal standing in the eyes of law
Security	PRAWDA	Financial instrument that represents: an ownership position in a publicly-traded corporation (stock), a creditor relationship with governmental body or a corporation (bond), or rights to ownership as represented by an option.
Securitisation	PRAWDA	Pool of individual assets packaged as a security

Tables | Domains | Dimensions | Members | Hierarchies

- **Set of information that share semantic meaning** (should be easy to describe)
- **When adding a new information (domain member) it must be clear if**:

  Existing domain should be used (domains should be mutually exclusive)

  New domain should be added
- **Could be explicit or typed** (used in case of unlimited number of rows/columns/tables)

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Dimensions

DomainName	DimensionName	Description
Credit quality	**Exposures by Credit Quality steps at reporting date**	Defines the credit quality of the securitisation exposure position to the Credit Quality Steps scale at the reporting date.
Credit quality	**Exposures by Credit Quality steps at reporting date of the collateral**	For liquidity purposes, defines the "Exposures by Credit Quality steps at reporting date" of the collateral received
Currency	**Currency of the collateral**	Defines the currencies in which the collateral (or given or received) is denominated
Currency	**Currency of the exposure**	Defines the currency in which the item is denominated
Currency	**Currency with significant liabilities**	Defines the currencies of the significant liabilities
Event type	**Event Type**	Defines the type of event that has generated an operational loss.
Exposure classes	**Exposure class**	Defines the exposure class for capital requirement purposes
Exposure classes	**Exposure class before reassignment**	Defines the Exposure class an exposure was assigned to before reassignment to the current exposure class. Applicable for the exposure classes "Exposures in default" and "Exposures secured by mortgages on immovable property" in the Standardised Approach.
Exposure classes	**Exposure class of the collateral given**	For Liquidity purposes, defines the exposure class of the collateral given
Exposure classes	**Exposure class of the collateral received**	For Liquidity purposes, defines the exposure class of the collateral received
Exposure classes	**Exposure classes used for weightening purposes**	For Leverage Ratio templates, defines the assimilated EC used for weightening purposes
External ratings	**Credit rating agency /Covered bond regime**	For each issuance of covered bonds, specifies both the credit rating that rates the issuance and the local statutory regime
External ratings	**Use of external ratings**	Defines the type of credit external ratings applying to the exposure.
Geographical area	**Country of the market**	Defined the country in which is located the market on which the instrument is traded.
Geographical area	**Country where the exposure is generated**	Defines the country where the exposure is generated.
Geographical area	**Residence of counterparty**	Defines the geographical area where the counterparty of the contract or transaction resides.
Impairment	**Forbearance status**	Identifies the financial assets and off-balance sheet items with forbearance measures and, if applicable, the type of forbearance measures
Impairment	**Impairment status**	Status for monitoring credit quality of financial assets and off-balance sheet items (eg past due, impaired, defaulted).
Impairment	**Performing status**	Identifies the performing status of financial assets and off-balance sheet items (performing,

Tables | Domains | Dimensions | Members | Hierarchies

- Perspective to analyze the domain (should be easy to describe)
- More than one dimension could be used to determine a meaning of one domain
- Single dimension can't refer to more than one domain

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Domain members

DomainName	MemberName	DataType	PeriodType	RestrictedToMembersInHierarchy
Metric	Compliance with the retention requirement	Boolean [b]	Stock/Instant [i]	
Metric	Institution or equivalent	Boolean [b]	Stock/Instant [i]	
Metric	Is a group	Boolean [b]	Stock/Instant [i]	
Metric	Is a transaction where there is an exposure to underlying assets	Boolean [b]	Stock/Instant [i]	
Metric	Accounting standard	Code [e]	Stock/Instant [i]	AS1
Metric	Accounting treatment of the securitisation	Code [e]	Stock/Instant [i]	ZZ1
Metric	Approach used for the securitised exposures	Code [e]	Stock/Instant [i]	AP23
Metric	Origination date of the securitisation	Date [d]	Stock/Instant [i]	
Metric	Maturity value (days)	Integer [i]	Stock/Instant [i]	
Metric	Number of breaches during reporting period	Integer [i]	Stock/Instant [i]	
Metric	Value used for market risk, to be deducted from own funds	Monetary [m]	Stock/Instant [i]	
Metric	VAR	Monetary [m]	Stock/Instant [i]	
Metric	Applicable percentage limit for institutions	Percentage [p]	Stock/Instant [i]	
Metric	Average risk weight	Percentage [p]	Stock/Instant [i]	
Metric	Name of Holding entity	String [s]	Stock/Instant [i]	
Metric	Prudential consolidation	String [s]	Stock/Instant [i]	
Metric	Scope of data (levels of consolidation code)	String [s]	Stock/Instant [i]	
Base items	Assets			
Base items	Equity			
Main category	Capital conservation buffer			
Main category	Capital conservation buffer, Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State			
Main category	Capital instruments recognised temporally equivalent as minority interests			
Main category	Capital instruments recognised temporally equivalent as minority interests and instruments including minority interests			
Main category	Capital ratio			
Main category	Capital ratio including Pillar II adjustments			

Tables | Domains | Dimensions | Members | Hierarchies

- **Members of two domains are not typical:**

  Metric. Members of this domain cover: (i) Data type information (also specific case when value is restricted to members of predefined subdomain) and (ii) Period type

  Base items. Members of this domain are potential containers of debit/credit attribute

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Hierarchies of domain members

HierarchyCode	Name	level	Description	Name2
MC23	Securities financing transactions	2		+ Securities financing transactions
MC23	Derivatives	2		+ Derivatives >=
MC23	Derivatives. Credit default swaps	3		+ Derivatives. Credit default swaps
MC24	Hierarchy for deferred tax liabilities			
MC24	Deferred tax liabilities	1		Deferred tax liabilities =
MC24	Deferred tax liabilities non deductible from deferred tax assets that rely on future profit	2		+ Deferred tax liabilities non deductible from c
MC24	Deferred tax liabilities deductible from deferred tax assets that rely on future profitabili	2		+ Deferred tax liabilities deductible from defer
MC24	Deductible deferred tax liabilities associated with deferred tax assets that rely on fut	3		+ Deductible deferred tax liabilities associat
MC24	Deductible deferred tax liabilities associated with deferred tax assets that rely on fut	3		+ Deductible deferred tax liabilities associat
MC24	Total expected loss eligible for inclusion in the adjustment to capital in respect of the di	2		+ Total expected loss eligible for inclusion in th
MC27	Hierarchy for types of derivatives transactions in FINREP (I)		Types of derivatives transactions in FINREP (I)	
MC27	Derivatives	1		Derivatives =
MC27	Derivatives. Other than Credit default swaps, Credit spread options, Total return swaps	2		+ Derivatives. Other than Credit default swaps,
MC27	Derivatives. Credit default swaps	2		+ Derivatives. Credit default swaps
MC27	Derivatives. Credit spread options	2		+ Derivatives. Credit spread options
MC27	Derivatives. Total return swaps	2		+ Derivatives. Total return swaps
MC28	Hierarchy for types of derivatives transactions in FINREP (II)		Types of derivatives transactions in FINREP (II)	
MC28	Derivatives	1		Derivatives =
MC28	Derivatives. Other than options	2		+ Derivatives. Other than options
MC28	Derivatives. Options	2		+ Derivatives. Options
MC29	Derivates sold and purchased			
MC29	Derivatives	1		Derivatives =
MC29	Derivatives. Sold	2		+ Derivatives. Sold
MC29	Derivatives. Purchased	2		+ Derivatives. Purchased
MC3	Hierarchy for the breakdown of All liabilities		Breakdown of All liabilities	
MC3	All liabilities	1		All liabilities =
MC3	Derivatives, Short positions, Deposits, Debt securities issued, Other financial liabilities	2		+ Derivatives, Short positions, Deposits, Debt s

Tables / Domains / Dimensions / Members / Hierarchies

- Informs about relation (also arithmetical) between members of subdomain
- There could be more than one hierarchy disaggregating a domain member (so called alternative hierarchies)
- Members of subdomain could be potential value of a metric

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How to refer the CRR/CRDIV DPM dictionary from tables?

C 09.01.a - Geographical breakdown of exposures by residence of the obligor (SA exposures)

Sheet per Country

Row			Columns						
			ORIGINAL EXPOSURE PRE CONVERSION FACTORS	General credit risk adjustments	Specific credit risk adjustments	Of which: write-offs	EXPOSURE VALUE	RISK WEIGHTED EXPOSURE AMOUNT PRE SME-SUPPORTING FACTOR	RISK WEIGHTED EXPOSURE AMOUNT AFTER SME-SUPPORTING FACTOR
			010	050	055	060	075	080	090
	Central governments or central banks	010	88489	85823	85824	85812	87188	89004	
	Regional governments or local authorities	020	88499	85838	85839	85817	87193	89009	
	Public sector entities	030	88497	85835	85836				
	Multilateral Development Banks	040	88495	85832	85833				
	International Organisations	050	88493	85829	85830				
	Institutions	060	88491	85826	85827				
	Corporates	070	88507	85850	85851				9249
	Of which: SME	075	88505	85847	85848				9248
	Retail	080	88503	85844	85845				9247
	Of which: SME	085	88501	85841	85842				9246
	Secured by mortgages on immovable property	090	85558	85467	85468				5594
	Of which: SME	095	85536	85440	85441				5591
	Exposures in default	100	85555						
	Items associated with particularly high risk	110	85567	85485	85486				
	Covered bonds	120	85556	85463	85464	85422	85499	85576	
	Claims on institutions and corporate with a short-term credit assessment	130	85561	85473	85474	85427	85504	85581	
	Claims in the form of CIU	140	85557	85465	85466	85423	85500	85577	
	Equity exposures	150	85554	85461	85462	85421	85497	85575	
	Other items	160	85568	85487	85488	85434	85511	85588	
	Total exposures	170	85571	85492	85493	85436	85513	85590	85597

Metric = Computable amount [mi]
Base = Memorandum items
Main category = Specific credit risk adjustments
Approach for prudential purposes = Standardised Approach
Exposure class = Exposures to multilateral development banks
Counterparty sector = Multilateral Development Banks
Type of risk = Credit risk, counterparty credit risk and free deliveries
Country where the exposure is generated = <Key value>
Prudential portfolio = Banking and trading book

- Is information from dictionary explicitly reflected in „Table Layout and Data Point Categorization" file?

  Yes: dimension, domain member

  No: domain (only implicitly), hierarchy

- „Table Layout and Data Point Categorization" should not be analyzed in isolation from the hierarchical information about domain members

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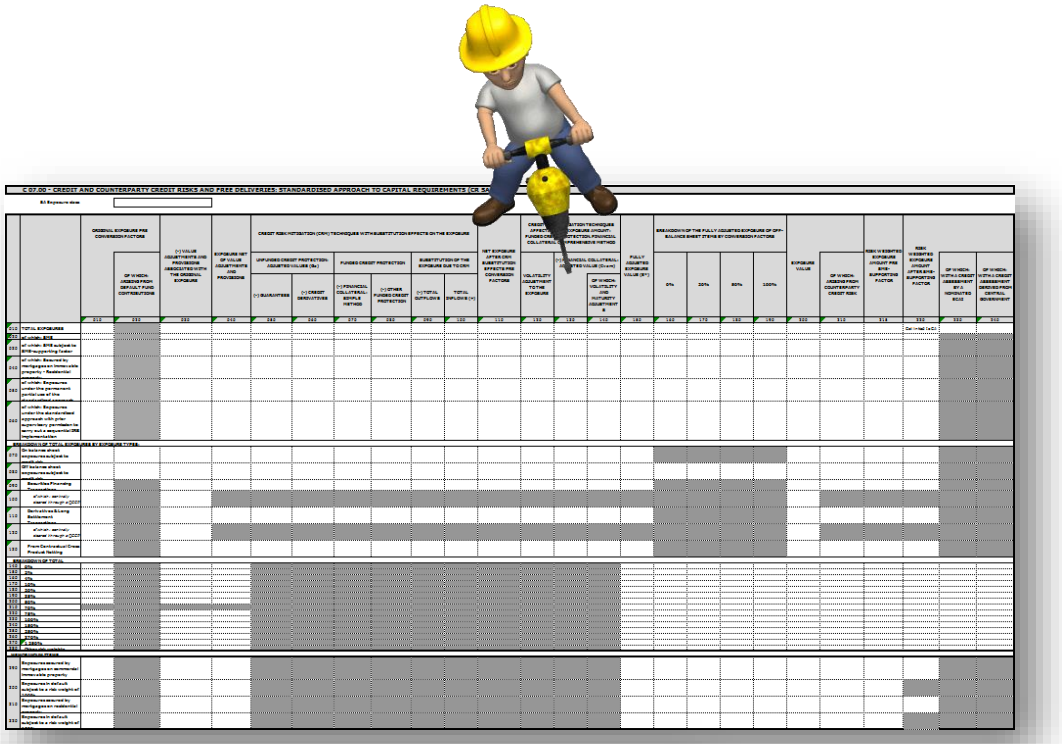
Let's analyze the CRR/CRDIV DPM

- Own funds closed table (C 07.00):



40.1 Group structure: "entity-by-entity"

LEI code	Entity code	Entity name	Entry date	Share capital	Equity of investee	Total assets of investee	Profit or (-) loss of investee	Residence of investee	Sector of investee	NACE Code	Accumulated equity interest (%)	Voting rights (%)	Group structure [relationship]	Accounting treatment [Accounting Group]	Accounting treatment [CRR Group]	Carrying amount	Acquisition cost	Goodwill link to Investee	Fair value of investments for which there are published price quotations
Annex V. Part 2.123, 124(a)	Annex V. Part 2.123, 124(b)	IFRS 12.12(a), 21(a)(i); Annex V. Part 2.123, 124(c)	Annex V. Part 2.123, 124(d)	Annex V. Part 2.123, 124(e)	IFRS 12.B12(b); Annex V. Part 2.123, 124(f)	IFRS 12.B12(b); Annex V. Part 2.123, 124(f)	IFRS 12.B12(b); Annex V. Part 2.123, 124(f)	IFRS 12.12.(b), 21.(a), (iii); Annex V. Part 2.123, 124(g)	Annex V. Part 2.123, 124(h)	Annex V. Part 2.123, 124(i)	IFRS 12.21(iv); Annex V. Part 2.123, 124(j)	IFRS 12.21(iv); Annex V. Part 2.123, 124(k)	IFRS 12.10(a)(i); Annex V. Part 2.123, 124(l)	IFRS 12.21(b); Annex V. Part 2.123, 124(m)	CRR art 423(b); Annex V. Part 2.123, 124(n)	Annex V. Part 2.123, 124(o)	Annex V. Part 2.123, 124(p)	Annex V. Part 2.123, 124(q)	IFRS 12.21(b)(iii); Annex V. Part 2.123, 124(r)
010	020	030	040	050	060	070	080	090	095	100	110	120	130	140	150	160	170	180	190

40.2 Group structure: "instrument-by-instrument"

Security code	Entity code	Holding company LEI code	Holding company code	Holding company name	Accumulated equity interest (%)	Carrying amount	Acquisition cost
Annex V. Part 2.125(a)	Annex V. Part 2.125(b)	Annex V. Part 2.125(c)	Annex V. Part 2.125(d)	Annex V. Part 2.125(e)	Annex V. Part 2.125(k)	Annex V. Part 2.125(k)	Annex V. Part 2.125(k)
010	020	030	040	050	060	070	080

Finrep IFRS open table
(F 40.1 and F 40.2)

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Sol2 DPM

DPM tutorial

Thinking Forward.

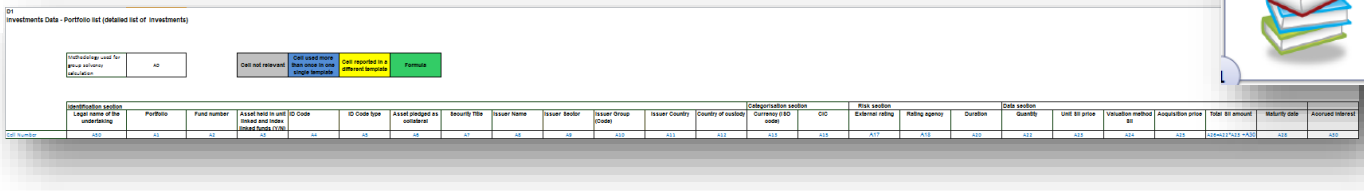
Sol2 DPM components

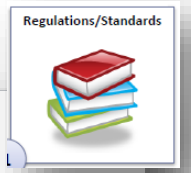
Input

DPM components

EIOPA Business Experts

Templates analysis and review





EIOPA Business Experts

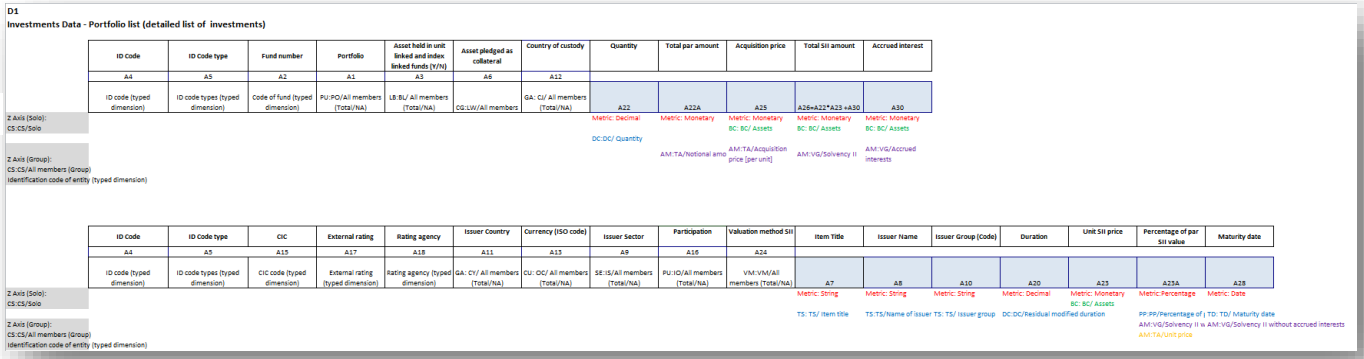
DPM creation (DPM file)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Label	Name	Default	Owner	Count	Comment	Hierarchy	Name	Sign	Weight	Owner	Usable	Applicabl	Comment			
2	Total/NA	x0	yes		24		1: Insurance classes						CB				
3	[O] Other	x1			1		Total/NA	x0	=								
4	1. Accident and sickness	x2			2		Non-life	x79	=	+							
5	2. Motor	x3			2		1. Accident and sickness	x2		+							
6	3. Fire and other damage to property	x4			2		2. Motor	x3	=	+							
7	4. Aviation, marine and transport	x5			2		Motor vehicle liability insurance [except carrier's liability]	x78		+				Country - K1			
8	5. General liability	x6			2		Motor other than motor vehicle liability insurance [except carrier's liability]	x76		+				Country - K1			
9	6. Credit and suretyship	x7			2		3. Fire and other damage to property	x4		+							
10	7. Non-life other than accident and sickness, motor, fire and other damage to property, aviation, marine and transport, general liability, credit and suretyship	x8			2		4. Aviation, marine and transport	x5		+							
11	ABS [asset backed securities]	x9			1		5. General liability	x6		+							
12	Annuities stemming from non-life insurance contracts	x10			1		6. Credit and suretyship	x7		+							
							7. Non-life other than accident and sickness, motor, fire										

Owners / Domains / Dimensions / met / BC / MC / AM / VM / DI / TR / TB / PU / SE / CG / LB / EL / CS / CM / CU / GA / PI / TS / LT / TD / NT / BR / PP / DC / CE / TI / RT / SC / PC / EX / AP / Typed domains / TypedDomains

EIOPA Business Experts

Templates normalization (if required) and annotation



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DPM dictionary file – details (1)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Label	Name	Default	Owner	Count	Comment	Hierarchy	Name	Sign	Weight	Owner	Usable	Applicable dim	Comment	
2	Total/NA	x0	yes		17		1: Type of assets and/or liabilities						AL		
3	Article 223 deduction	x1			2		Total/NA	x0	=						
4	Article 228 deduction	x2			2		Derivatives	x32	=	+					
5	Article 229 deduction	x3			2		Credit derivatives	x25		+					
6	Article 71 POF1 [1] deduction	x4			2		Derivatives other than credit derivatives	x37		+					
7	Article 71 POF1 [1] [2] deduction	x5			2		Equity instruments, loans and bonds	x43	=	+					
8	Article 71 POF1 [2] deduction	x6			2		Equity instruments	x39		+					
9	Bonds	x7			3		Loans and bonds	x82	=	+					
10	Bonds/Debt - collateralised	x8			2		Loans and bonds other than structured notes and collateralised s	x83		+					
11	Bonds/Debt - uncollateralised	x9			2		Structured notes and collateralised securities [other than tradab	x138		+					
12	Bonds securities other than structured notes and collateralised secu	x10			3		Structured notes and collateralised securities [tradable that are	x140		+					
13	Cash	x11			2		Other than derivatives, equity instruments and loans and bonds	x95	=	+					
14	Claim provisions [other than local GAAP specific]	x12			1		Deferred tax	x30		+					
15	Claim provisions other than new [other than local GAAP specific]	x13			1		Other than derivatives, equity instruments, loans, bonds and defe	x96		+					
16	Claims recoverables	x14			2		2: Type of transaction						TT	IGT1, IGT2, IGT3, IGT4	
17	Closed				1		Total/NA	x0	=						

Versioning | Owners | Domains | Dimensions | met HD | met MD | BC | MC | AM | VM | DI | TR | TB | PU | SE | CG | LB | EL | CS | CM | CU | GA | PI | TS | LT | TD | NT | BR | PP | DC | CE | TI | RT | SC | PC | EX | AP | BT

Owner of the DPM and potentialy the XBRL taxonomy based on it

List od domains of information identified in the tables/data model (i.e. Currencies)

List of dimensions: perspectives for subdomains analysis (i.e. Original currency or Reporting currency)

List of Metrics used in the dictionary. Each represents different data type

List of basic concepts identifying the most generic information of every data point (i.e. Assets, Claims paid)

Explicit domain (from the domain list) identifying related dimensions, domain members and its hierarchical subdomains (see next slide)

- It is a dictionary of information used in tables (later explicitly indicated in annotation) identifying the content of every datapoint and its relation/differences to other datapoints:

  Domains (unstructured list of domain members, default member can be identified)

  Subdomains (could be hierarchical, identifying arithmetical relation between domain members)

  Dimension (perspective to analyze a domain members, could be **typed** or **explicit**)

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DPM dictionary file – details (2)

List of all domain members of particular **domain**

Information about hierarchy of domain members of **subdomain**

Dimension (perspective for domain/subdomain analysis)

Label	Name	Default	Owner	Count	Comm	Hierarchy	Name	Sig	Weight	Owner	Applicabl	Comment
Total/NA	x0	yes	s2c	24		1: Insurance classes				s2c	CB	
1. Accident and sickness	x1		s2c	2		Total/NA	x0	=				
2. Motor	x2		s2c	2		Non-life	x75	=	+			
3. Fire and other damage to property	x3		s2c	2		1. Accident and sickness	x1		+			
4. Aviation, marine and transport	x4		s2c	2		2. Motor	x2	=	+			
5. General liability	x5		s2c	2		Motor vehicle liability insurance [except carrier's liability]	x74		+			S.04.01
6. Credit and suretyship	x6		s2c	2		Motor other than motor vehicle liability insurance [except carrie	x72		+			S.04.01
7. Non-life other than accident and sickness, motor, fire and other	x7		s2c	2		3. Fire and other damage to property	x3		+			
ABS [asset backed securities]	x8		s2c	1		4. Aviation, marine and transport	x4		+			
Annuities stemming from non-life insurance contracts	x9		s2c	2		5. General liability	x5		+			
Annuities stemming from non-life insurance contracts and relati	x10		s2c	8		6. Credit and suretyship	x6		+			
Annuities stemming from non-life insurance contracts and relati	x11		s2c	8		7. Non-life other than accident and sickness, motor, fire and other c	x7		+			
Assistance [direct business and accepted proportional reinsuran	x12		s2c	8		Life	x60	=	+			
Branch	x13		s2c	1		I. The life insurance referred to in points [a][i], [ii] and [iii] of Articl	x48		+			
Casualty [accepted non-proportional reinsurance]	x14		s2c	8		II. Marriage assurance, birth assurance;	x49		+			
CDO [collateralised debt obligations]	x15		s2c	1		III. The insurance referred to in points [a][i] and [ii] of Article 2[3],	x50		+			
CDOp [credit default options]	x16		s2c	1		IV. Permanent health insurance, referred to in point [a] [iv] of Articl	x57		+			
CDS [credit default swaps]	x17		s2c	1		V. Tontines, referred to in point [b][i] of Article 2[3];	x121		+			
CLN [credit linked notes and deposits]	x18		s2c	1		VI. Capital redemption operations, referred to in point [b][ii] of Arti	x123		+			
CLO [collateralised loan obligations]	x19		s2c	1		VII. Management of group pension funds, referred to in point [b][iii	x124		+			
CMBS [commercial mortgage backed securities]	x20		s2c	1		VIII. The operations referred to in point [b][v] of Article 2[3];	x125		+			
CMO [collateralised mortgage obligations]	x21		s2c	1		IX. The operations referred to in Article 2[3][c]	x58		+			

Table, where the information is required

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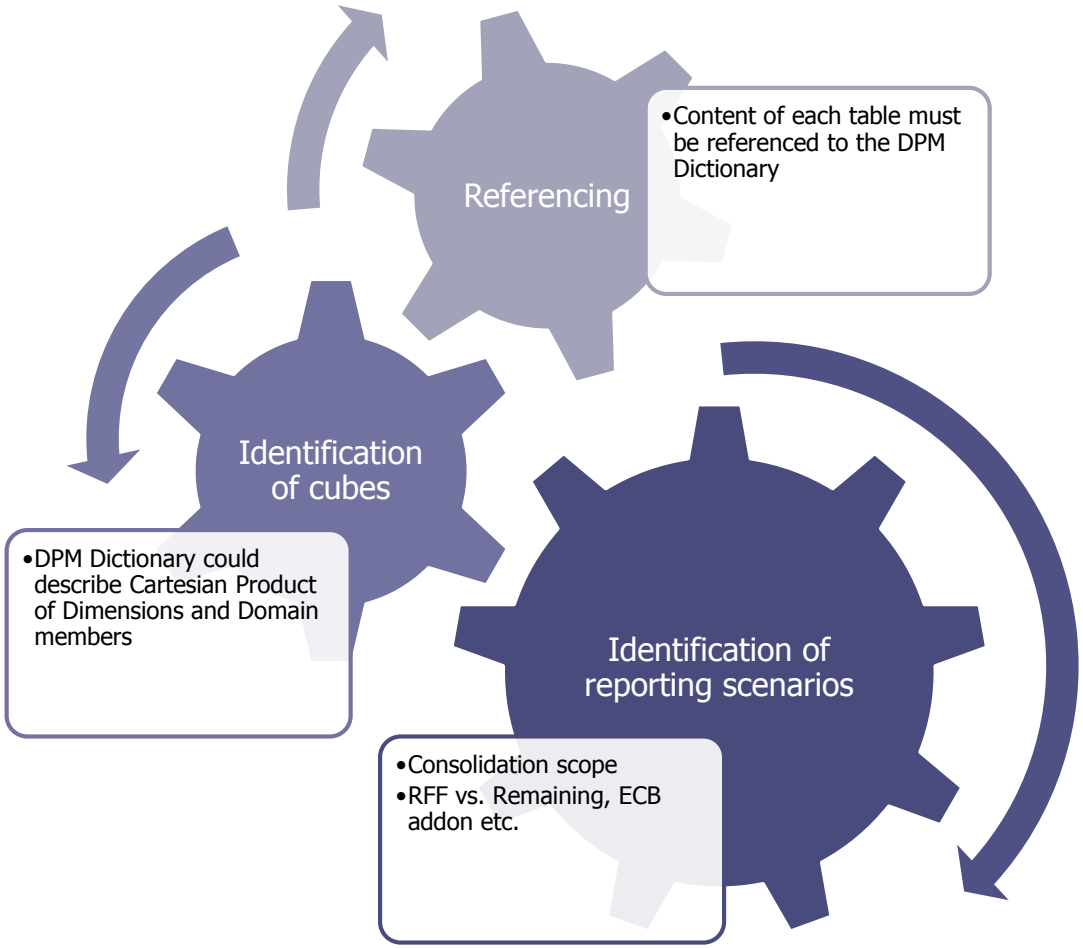
Purpose of annotated templates



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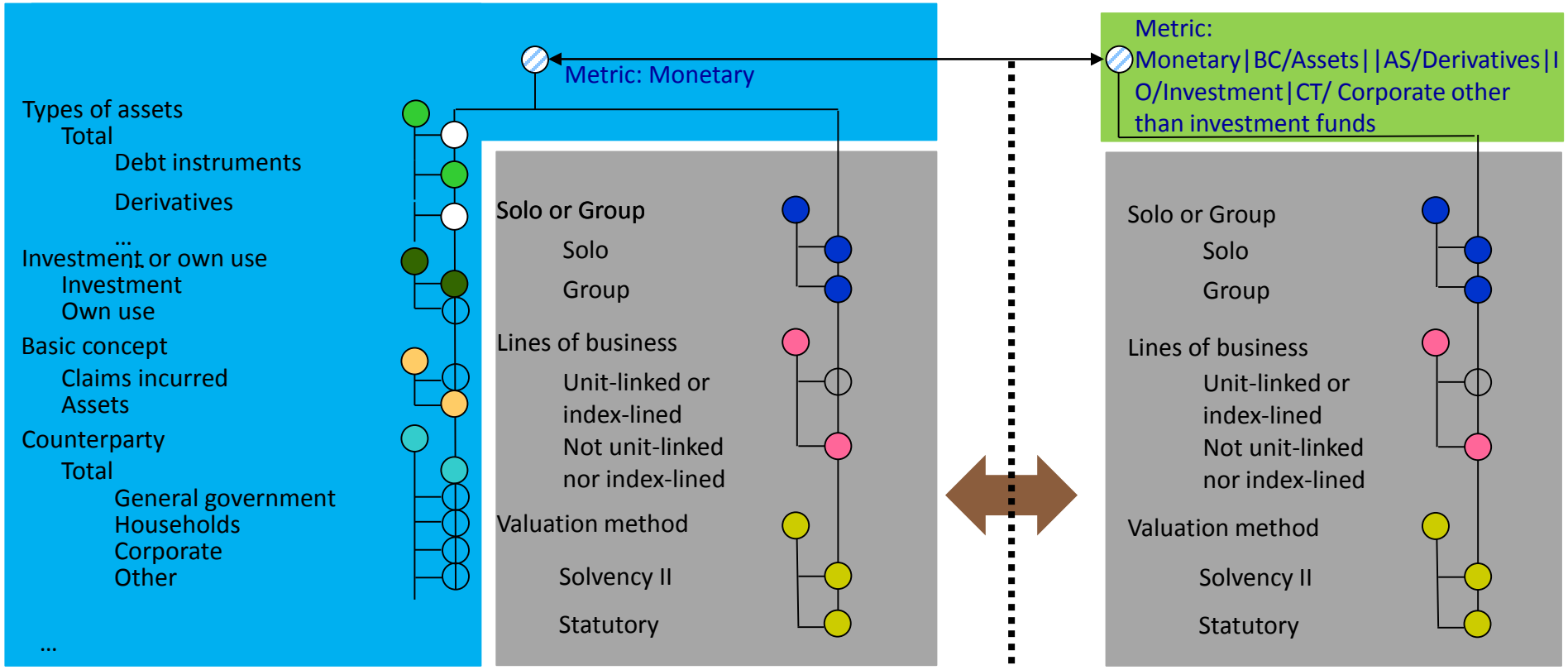
Organization into two layers

Highly dimensional approach (HD)

Moderate dimensional approach (MD)



Common part of Dictionary

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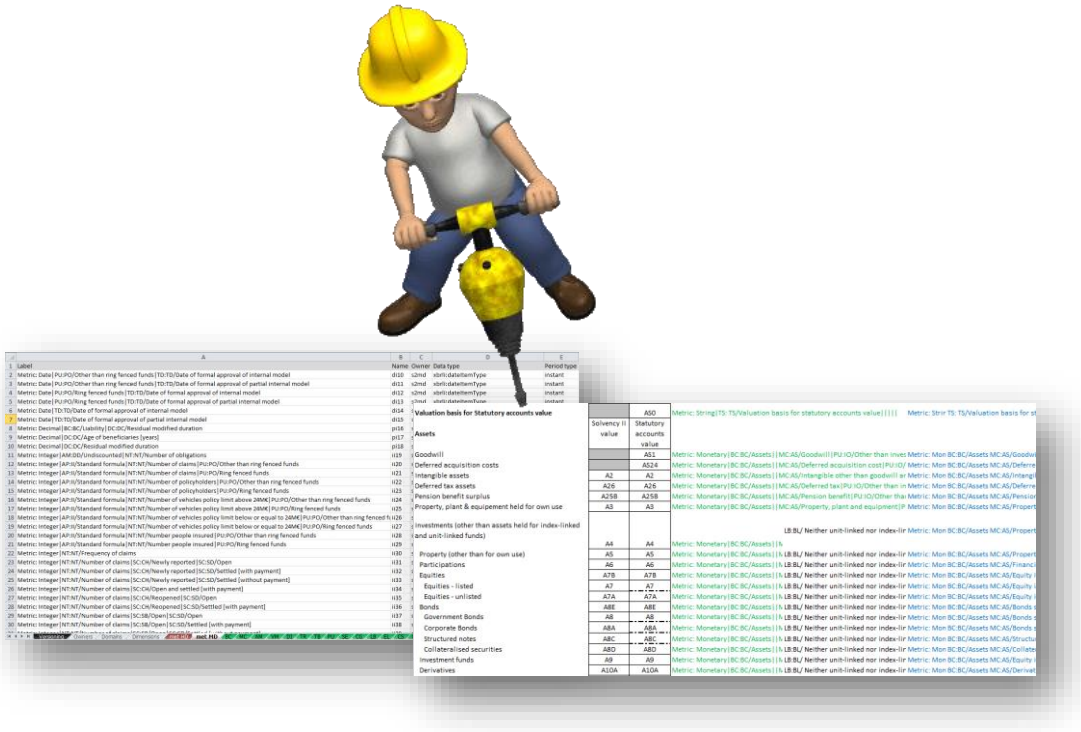
Let's analyze the Sol2 DPM



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Extending DPMs

DPM tutorial

Thinking Forward.

Extending EBA data model (BdE case)
Why?

- To avoid the risk of using multiple sector specific dictionaries

  To benefit from JEGR achievements

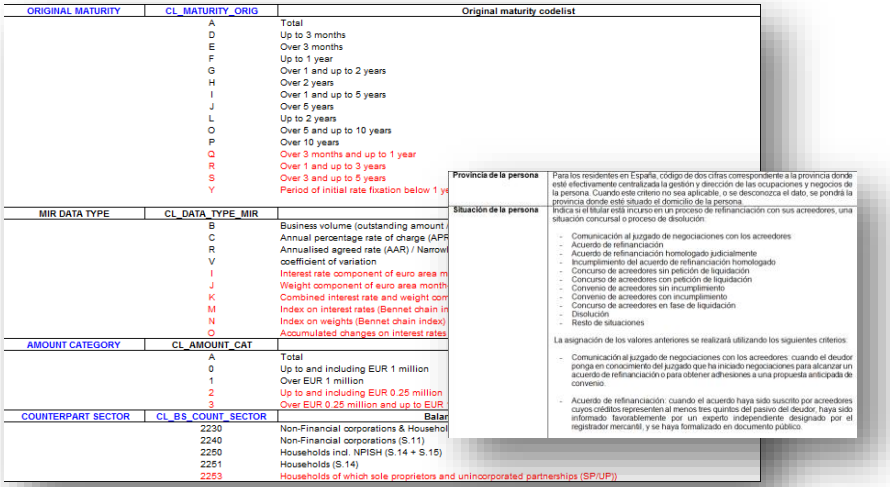
- To help banks to understand properly reporting requirements

  Positive feedback after defining ECB and national statistical reporting requirements using DPM approach in 2010

- To benefit from stable solutions

  Credit register dictionary

  ECB dictionary



ORIGINAL MATURITY	CL_MATURITY_ORIG	Original maturity codelist
	A	Total
	D	Up to 3 months
	E	Over 3 months
	F	Up to 1 year
	G	Over 1 and up to 2 years
	H	Over 2 years
	I	Over 1 and up to 5 years
	J	Over 5 years
	L	Up to 2 years
	O	Over 5 and up to 10 years
	P	Over 10 years
	Q	Over 3 months and up to 1 year
	R	Over 1 and up to 3 years
	S	Over 3 and up to 5 years
	Y	Period of initial rate fixation below 1 y
MIR DATA TYPE	CL_DATA_TYPE_MIR	
	B	Business volume (outstanding amount /
	C	Annual percentage rate of charge (APR
	R	Annualised agreed rate (AAR) / Narrow
	V	coefficient of variation
	I	Interest rate component of euro area m
	J	Weight component of euro area month
	K	Combined interest rate and weight com
	M	Index on interest rates (Bennet chain in
	N	Index on weights (Bennet chain index)
	O	Accumulated changes on interest rates
AMOUNT CATEGORY	CL_AMOUNT_CAT	
	A	Total
	0	Up to and including EUR 1 million
	1	Over EUR 1 million
	2	Up to and including EUR 0.25 million
	3	Over EUR 0.25 million and up to EUR
COUNTERPART SECTOR	CL_BS_COUNT_SECTOR	Balar
	2230	Non-Financial corporations & Household
	2240	Non-Financial corporations (S.11)
	2250	Households incl. NPISH (S.14 + S.15)
	2251	Households (S.14)
	2253	Households of which sole proprietors and unincorporated partnerships (SP/UP))

Provincia de la persona	Para los residentes en España, código de dos cifras correspondiente a la provincia donde esté efectivamente centralizada la gestión y dirección de las ocupaciones y negocios de la persona. Cuando este criterio no sea aplicable, o se desconozca el dato, se pondrá la provincia donde esté situado el domicilio de la persona.
Situación de la persona	Indica si el titular está incurso en un proceso de refinanciación con sus acreedores, una situación concursal o proceso de disolución. - Comunicación al juzgado de negociaciones con los acreedores - Acuerdo de refinanciación - Acuerdo de refinanciación homologado judicialmente - Incumplimiento del acuerdo de refinanciación homologado - Concurso de acreedores sin petición de liquidación - Concurso de acreedores con petición de liquidación - Convenio de acreedores sin incumplimiento - Convenio de acreedores con incumplimiento - Concurso de acreedores en fase de liquidación - Disolución - Resto de situaciones La asignación de los valores anteriores se realizará utilizando los siguientes criterios: - Comunicación al juzgado de negociaciones con los acreedores: cuando el deudor ponga en conocimiento del juzgado que ha iniciado negociaciones para alcanzar un acuerdo de refinanciación o para obtener adhesiones a una propuesta anticipada de convenio. - Acuerdo de refinanciación: cuando el acuerdo haya sido suscrito por acreedores cuyos créditos representen al menos tres quintos del pasivo del deudor, haya sido informado favorablemente por un experto independiente designado por el registrador mercantil, y se haya formalizado en documento público.

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Extending EBA data model (BdE case)
Who?

- Top level business experts responsible for definition of reporting requirements

  Familiar with data modeling, especially DPM approach

  Represented units:

  Supervisory reporting
  - Financial reporting
  - Capital adequacy reporting

  Credit register

  Statistical reporting (national extension of ECB requirements)

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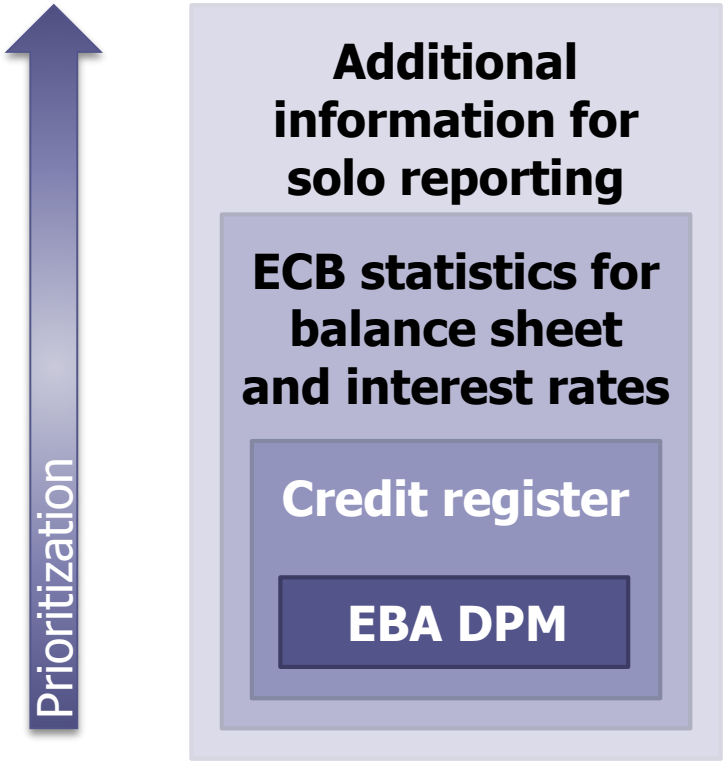
Extending EBA data model (BdE case)
How?



- New components added only when it is necessary
- Changes in data model possible on this level

- Dictionary reorganized to reflect EBA DPM architecture
- Reusing definitions of EBA when possible

- Dictionary reorganized to reflect EBA DPM architecture
- Reusing definitions of EBA when possible

- **Core of comprehensive dictionary**

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Extending EBA data model (BdE case) Challenges

- Stability of EBA deliverables
  - Official tables vs. DPM vs. XBRL taxonomy
  - Change management
- Differences in modelling between EBA and NSA
  - Is „held for sale" additional member of accounting portfolio or a new dimension?
  - Is EBA modeling the only option or two different modeling approaches are possible (with some mapping option)?
- Application of DPM/XBRL to large open tables
  - DPM is technology neutral description of metadata so technologies other than XBRL are possible (if necessary)

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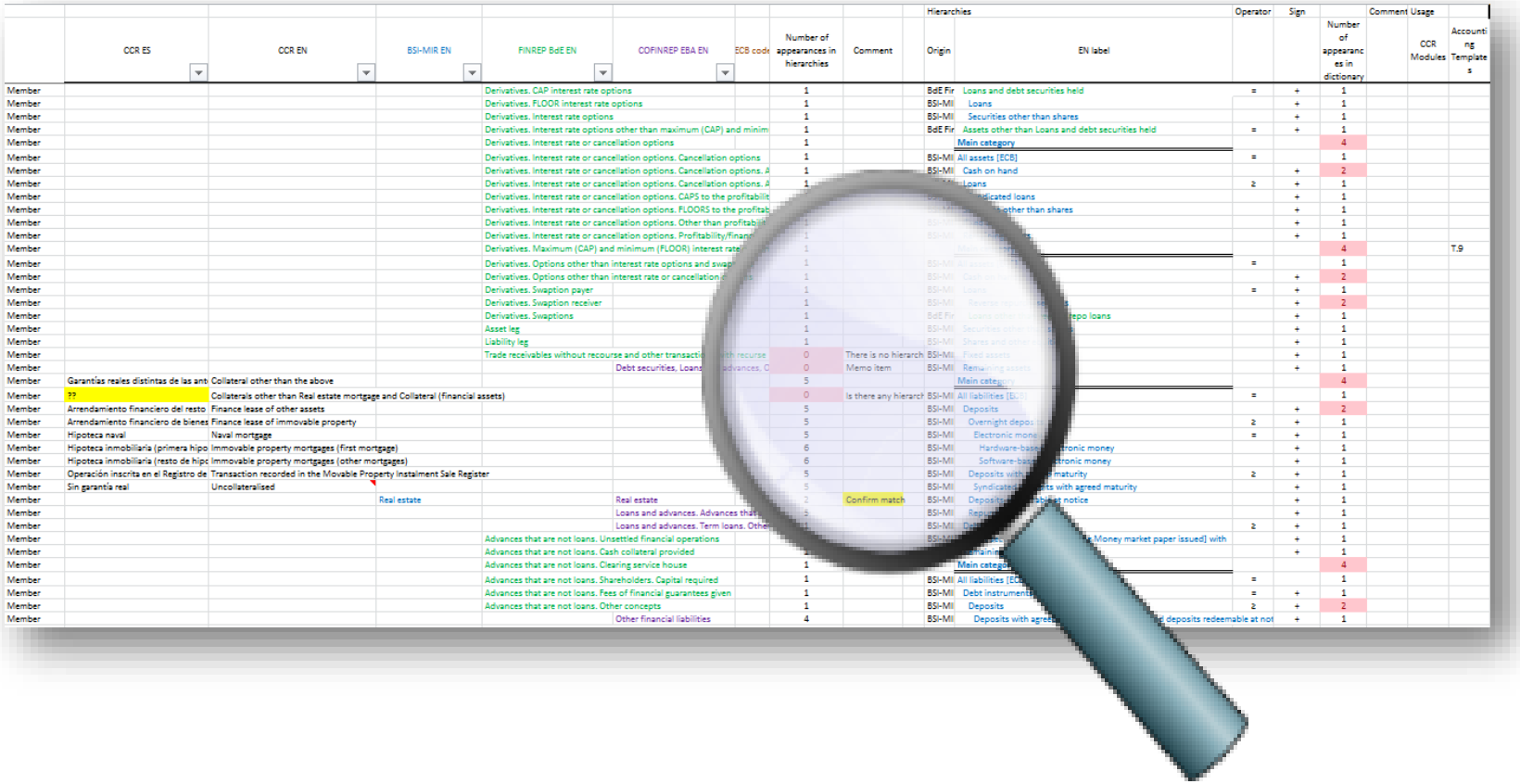
Let's see how extending EBA DPM looks in practice



	CCR ES	CCR EN	BSI-MIR EN	FINREP BdE EN	COFINREP EBA EN	ECB code	Number of appearances in hierarchies	Comment	Hierarchies	Operator	Sign	Number of appearances in dictionary	Comment Usage	CCR Modules	Accounting Templates
Member				Derivatives. CAP interest rate options			1		BdE Fir Loans and debt securities held	=	+	1			
Member				Derivatives. FLOOR interest rate options			1		BSI-MI Loans		+	1			
Member				Derivatives. Interest rate options			1		BSI-MI Securities other than shares		+	1			
Member				Derivatives. Interest rate options other than maximum (CAP) and minim			1		BdE Fir Assets other than Loans and debt securities held	=	+	1			
Member				Derivatives. Interest rate or cancellation options			1		Main category			4			
Member				Derivatives. Interest rate or cancellation options. Cancellation options			1		BSI-MI All assets [ECB]	=		1			
Member				Derivatives. Interest rate or cancellation options. Cancellation options. A			1		BSI-MI Cash on hand		+	2			
Member				Derivatives. Interest rate or cancellation options. Cancellation options. A			1		Loans	≥	+	1			
Member				Derivatives. Interest rate or cancellation options. CAPS to the profitabilit			1		dicated loans		+	1			
Member				Derivatives. Interest rate or cancellation options. FLOORS to the profitab			1		other than shares		+	1			
Member				Derivatives. Interest rate or cancellation options. Other than profitabil			1				+	1			
Member				Derivatives. Interest rate or cancellation options. Profitability/financ			1				+	1			
Member				Derivatives. Maximum (CAP) and minimum (FLOOR) interest rate			1					4			T.9
Member				Derivatives. Options other than interest rate options and swap			1			=		1			
Member				Derivatives. Options other than interest rate or cancellation			1				+	2			
Member				Derivatives. Swaption payer			1			=	+	1			
Member				Derivatives. Swaption receiver			1				+	2			
Member				Derivatives. Swaptions			1		epo loans		+	1			
Member				Asset leg			1				+	1			
Member				Liability leg			1				+	1			
Member				Trade receivables without recourse and other transacti	th recurse		0	There is no hierarch			+	1			
Member					Debt securities, Loans	advances, C	0	Memo item							
Member	Garantías reales distintas de las ant	Collateral other than the above					5		Main categ			4			
Member	??	Collaterals other than Real estate mortgage and Collateral (financial assets)					0	Is there any hierarch	BSI-MI All liabilities [E	=		1			
Member	Arrendamiento financiero del resto	Finance lease of other assets					5		BSI-MI Deposits		+	2			
Member	Arrendamiento financiero de bienes	Finance lease of immovable property					5		BSI-MI Overnight depos	≥	+	1			
Member	Hipoteca naval	Naval mortgage					5		BSI-MI Electronic mon	=	+	1			
Member	Hipoteca inmobiliaria (primera hipo	Immovable property mortgages (first mortgage)					6		BSI-MI Hardware-bas tronic money		+	1			
Member	Hipoteca inmobiliaria (resto de hipo	Immovable property mortgages (other mortgages)					6		BSI-MI Software-bas tronic money		+	1			
Member	Operación inscrita en el Registro de	Transaction recorded in the Movable Property Instalment Sale Register					5		BSI-MI Deposits wit maturity	≥	+	1			
Member	Sin garantía real	Uncollateralised					5		BSI-MI Syndicat its with agreed maturity		+	1			
Member			Real estate		Real estate		2	Confirm match	BSI-MI Depos bable at notice		+	1			
Member					Loans and advances. Advances that		5		BSI-MI Re		+	1			
Member					Loans and advances. Term loans. Other		5		BSI-MI	≥	+	1			
Member				Advances that are not loans. Unsettled financial operations			1		Money market paper issued] with		+	1			
Member				Advances that are not loans. Cash collateral provided			1				+	1			
Member				Advances that are not loans. Clearing service house			1		Main categ			4			
Member				Advances that are not loans. Shareholders. Capital required			1		BSI-MI All liabilities [EC	=		1			
Member				Advances that are not loans. Fees of financial guarantees given			1		BSI-MI Debt instrument	=	+	1			
Member				Advances that are not loans. Other concepts			1		BSI-MI Deposits	≥	+	2			
Member					Other financial liabilities		4		BSI-MI Deposits with agre deposits redeemable at not		+	1			

- Work in progress

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Thank you

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Thinking Forward.