Structure of the COREP taxonomies

COREP project team

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Agenda

COREP business model

- How is it structured?
- What are its main characteristics?
- How are these characteristics mapped to XBRL?

Part I

COREP business model

- How is it structured?
- What are its main characteristics?
- How are these characteristics mapped to XBRL?

Structure of the COREP business model

- COREP business model for solvency reporting consists of 18 templates today. From business point of view they are grouped in:
  - Credit Risk
  - Group Solvency Details
  - Market Risk
  - Operational Risk
- These 18 templates are mapped to the XBRL format.
- XBRL mapping of the COREP business model is henceforth called the **COREP taxonomies**.
- So, before understanding the structure of the taxonomies, understanding of the business model is important.

What is a COREP template?

- A template is a form to collect certain data as part of the solvency reporting.
- Example: MKR SA EQU
  - MKR is Market Risk
  - SA is Standardised Approach
  - EQU is Equity

COREP template in detail

A measure element is a fact for which a value can be reported

Measure

- **All Positions**
  - **Long**
  - **Short**
- **Reduction Effect For Underwriting...**
- **Net Positions**
- **...**

- elements are labelled
- elements are structured
- elements can be calculated

Open List

Dimension III (National Market)

(Non explicit members)

A dimension element characterises a reported fact

MKR SA EQU — MARKET RISK: STANDARDISED APPROACH FOR POSITION RISK IN EQUITIES

National market:

	POSITIONS							
	ALL POSITIONS		REDUCTION EFFECT FOR UNDERWRITING POSITIONS	NET POSITIONS		NET POSITIONS SUBJECT TO CAPITAL CHARGE	RISK CAPITAL CHARGE (%)	CAPITAL REQUIREMENTS
	LONG	SHORT		LONG	SHORT			
	[1]	[2]	[3]	[4]	[5]	[6]		[7]
EQUITIES IN TRADING BOOK								Link to CA template
1 General risk							8,00	
1.1 Exchange traded stock-index								
1.2 Other equities than								
2 Specific risk								
2.1 High quality, liquid and divers							2,00	
2.2 Other equities than high qua							4,00	
3 Particular approach for position								
4 Margin-based approach for exch								
5 Margin-based approach for OTC								
6 Other non-delta risks for options								

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Dimension I (Equities In Trading Book)

- **Equities In Trading Book**
  1. **General Risk**
  2. **Specific Risk**
  3. **...**

Dimension II (Equity Exposures)

- **1.1 Zone 1**
- **1.2 Zone 2**
- **...**

What is a COREP template?

A template combines one measure with an arbitrary number of dimensions and defines which combinations are allowed and which are invalid.

How is this done?

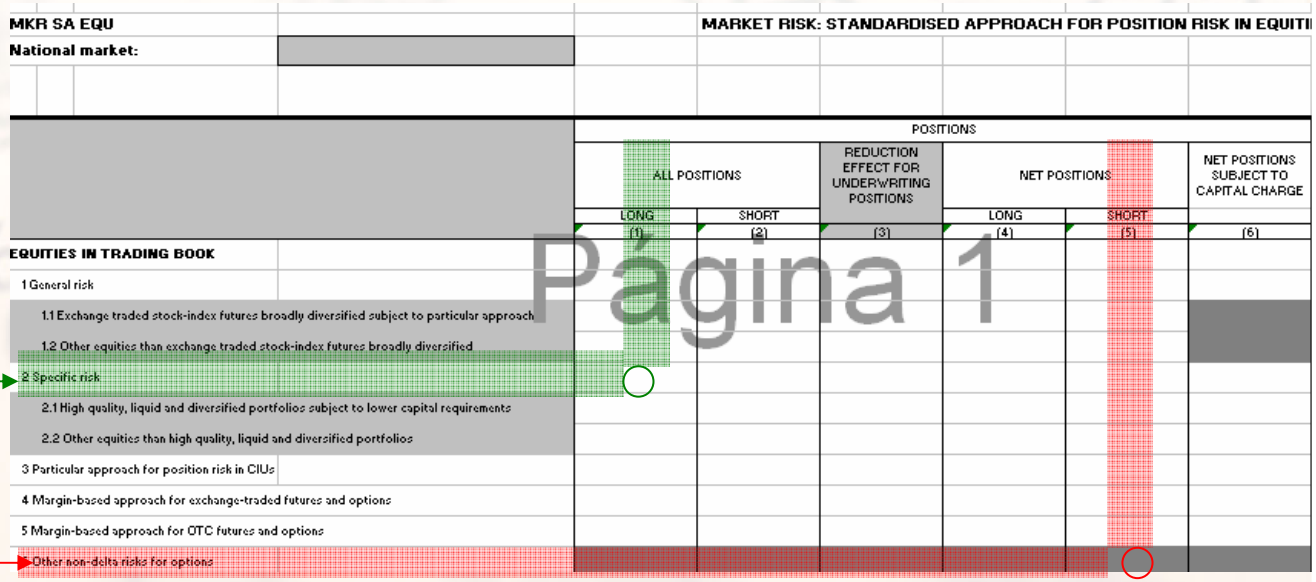
Allowed and invalid combinations

Allowed combination:

All Positions - Long (measure) and

2. Specific Risk (dimension)

=> white cell



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	LONG	SHORT		LONG	SHORT	
	(1)	(2)	(3)	(4)	(5)	(6)
EQUITIES IN TRADING BOOK						
1 General risk						
1.1 Exchange traded stock-index futures broadly diversified subject to particular approach						
1.2 Other equities than exchange traded stock-index futures broadly diversified						
2 Specific risk						
2.1 High quality, liquid and diversified portfolios subject to lower capital requirements						
2.2 Other equities than high quality, liquid and diversified portfolios						
3 Particular approach for position risk in CIUs						
4 Margin-based approach for exchange-traded futures and options						
5 Margin-based approach for OTC futures and options						
6 Other non-delta risks for options						

Página 1

Invalid combination:

Net Positions - Short (measure) and

6 Other non-delta risks for options (dimension)

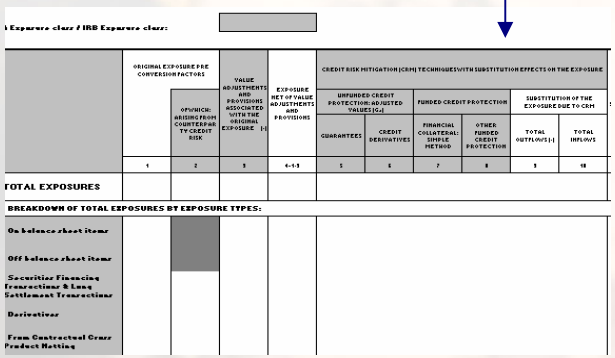
=> grey cell

Reuse of dimensions

Important characteristic: Dimensions are reusable across different templates

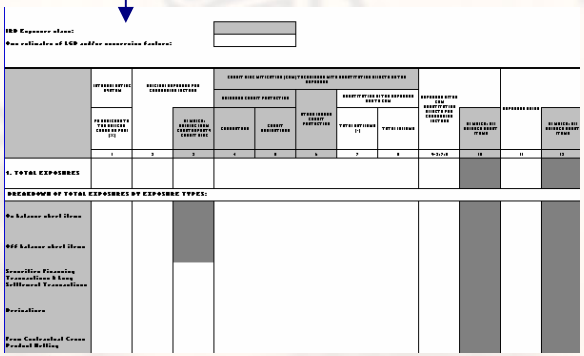
different measures

CR SA



subset

CR IRB



subset

Dimension (Exposure Types)

- On balance sheet items
- Off balance sheet items
- Securities Financing Transactions ...
- Derivatives
- ...

uses only a certain subset

uses only a certain subset

exposure types defines a superset of elements

Structure of the COREP business model

- The business model is split into measures and dimensions.
- A template combines measures and dimensions and defines allowed and invalid combinations.
- Invalid combinations include:
  - A combination of one measure element and one dimension element (shown as „grey cell“).

The Data Matrix

- **The Data Matrix defines the relation between templates and dimensions.**
- **It clarifies the reuse of dimensions.**
- **It tells which dimension is used in which template, but <u>not</u> which elements of this dimension.**

dimensions

Templates				Dimensions						
	Template name	Template prefix	Primary dimension prefix	No.	SA Exposure Class	IRB Exposure Class	Exposure	Exposure type	Risk Weight	Own estimates of LGD /Conversion factors
					d-sc	d-ic	d-ex	d-et	d-rw	d-oe
1	CA	t-ca	p-ca	0						
2	GROUP Solvency Details	t-gd	p-gd	0						
3	CR SA	t-cs	p-cs	5	x	x	x	x	x	
4	CR IRB	t-ci	p-ci	6		x	x	x	x	x
5	CR EQU IRB	t-ce	p-ce	3					x	
6	CR SEC SA	t-ss	p-ss	4			x	x		
7	CR SEC IRB	t-si	p-si	4			x	x		
8	CR SEC Details	t-sd	p-sd	0						
9	CR TB SETT	t-ct	p-ct	1						
10	MKR SA TDI	t-mt	p-mt	3						
11	MKR SA EQU	t-me	p-me	3						
12	MKR SA FX	t-mf	p-mf	1						
13	MKR SA COM	t-mc	p-mc	2						
14	MKR IM	t-mi	p-mi	1						
15	MKR IM Details	t-md	p-md	2						
16	OPR	t-op	p-op	2						
17	OPR Details	t-od	p-od	3						
18	OPR LOSS Details	t-ol	p-ol	0						

templates

dimension is used

dimension is not used

Part II

COREP business model

- How is it structured?
- What are its main characteristics?
- **How are these characteristics mapped to XBRL?**

What are the COREP taxonomies?

- COREP taxonomies are the XBRL-format of the COREP business model.
- Different „languages“ to express this model:
  - Describe it on paper.
  - Describe it in Excel spreadsheets.
  - Describe it in XBRL!
- Most difficult task: Keep the model complete, correct and consistent in each „language“.
- That means: Maintaining the COREP characteristics cross each language.
- Let‘s summarise the main characteristics.

Main characteristics of the COREP model

- Primary and dimension elements do have a certain structure.
  - Parent-child relations, calculations.
- Measures and dimensions are combined into templates.
- Dimensions are reused in more than one template, but with different elements.
- Allowed and invalid combinations of dimensions are defined in each template.
- The model is flexible and extensible.

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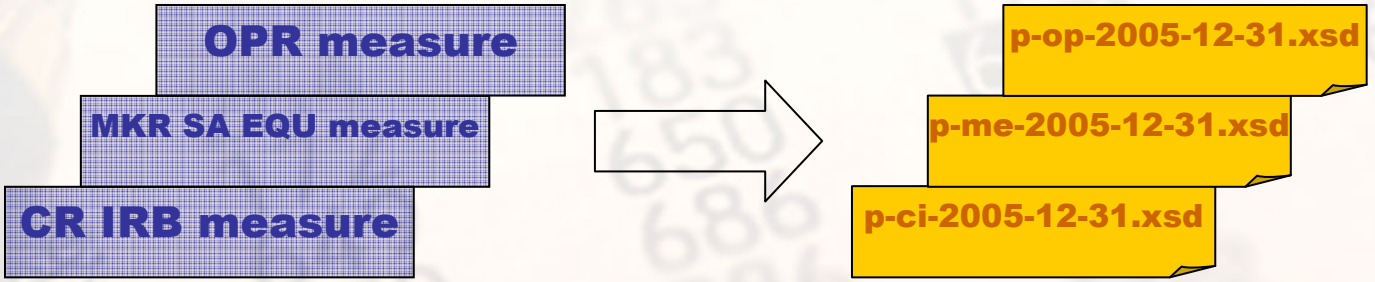
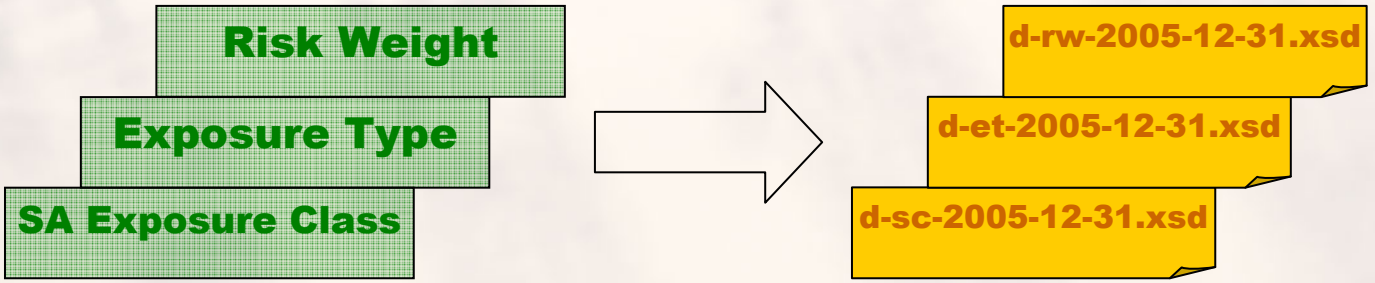
Keep the structure of measures and dimensions

COREP Project

- Three types of taxonomies: Primary, dimensional and template taxonomies
- Each measure gets its own primary taxonomy:



- Each dimension gets its own taxonomy:



XBRL eXtensible Business Reporting Language

CEBS

Keep the structure of measures and dimensions

What do we get?

- **labelling?**
  - Yes, XBRL can do it
- **defining parent-child relations?**
  - Yes, XBRL can do it

INTERNAL RATING SYSTEM	ORIGINAL EXPOSURE PRE CONVERSION FACTORS		CREDIT RISK MITIGATION (CRM) T	
			UNFUNDED CREDIT PROTECTION	
PD ASSIGNED TO THE OBLIGOR GRADE OR POOL (%)		OF WHICH: ARISING FROM COUNTERPARTY CREDIT RISK	GUARANTEES	CREDIT DERIVATIVES

- **defining calculations?**
  - Yes, XBRL can do it

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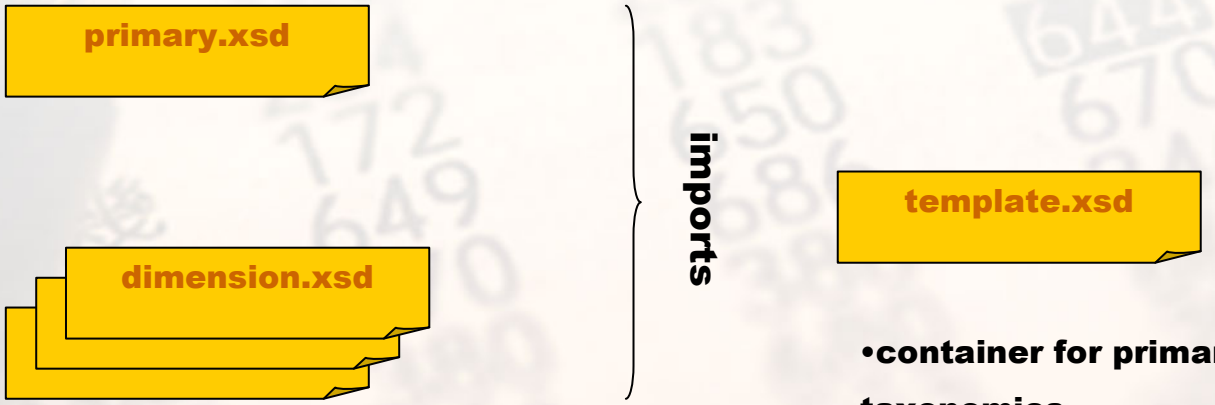
Template taxonomy

- The third kind of taxonomy is a template taxonomy.
- „Business language“: A template is a combination of a measure and dimensions.
- „XBRL language“: A template taxonomy imports a primary and dimensional taxonomies.



all the content like:
- labels
- relations
- calculations

are part of primary and dimensional taxonomies

- container for primary and dimension taxonomies
- is able to allow and restrict certain combinations
- this is the exact mapping of the COREP business model into XBRL

➡ Completeness, correctness and consistency can be kept.

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Reuse of dimensions

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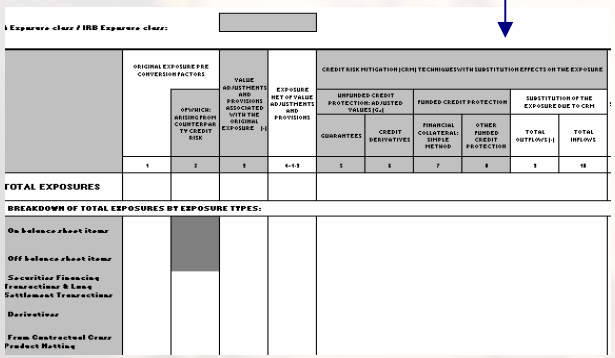
CR SA



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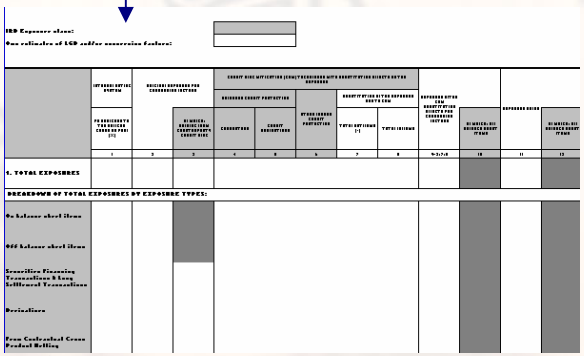

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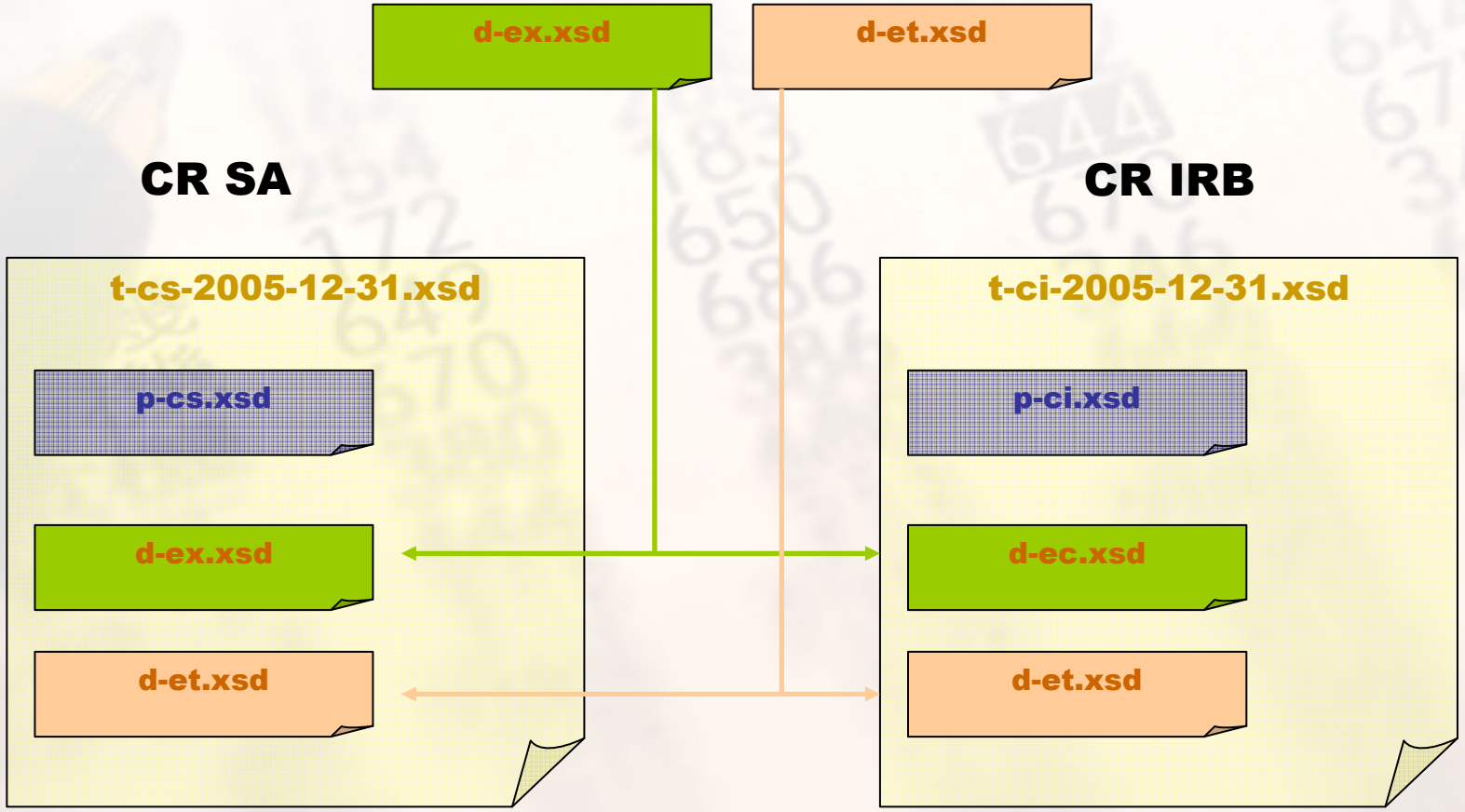
Reuse of dimensions

- **So, how to reuse dimensions in XBRL?**



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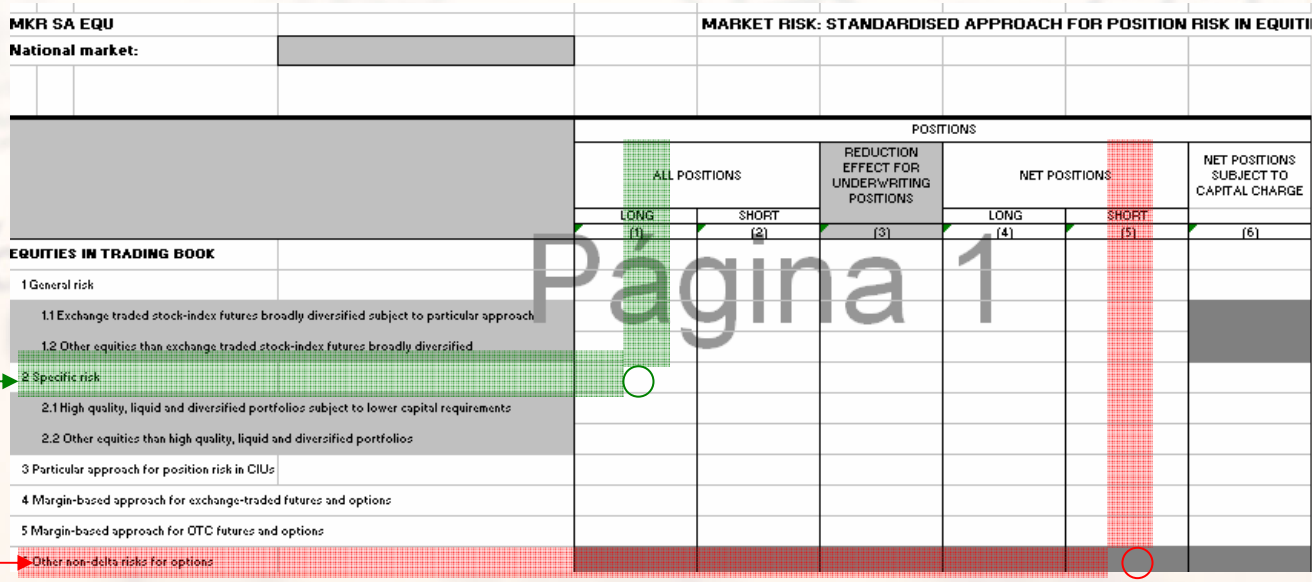

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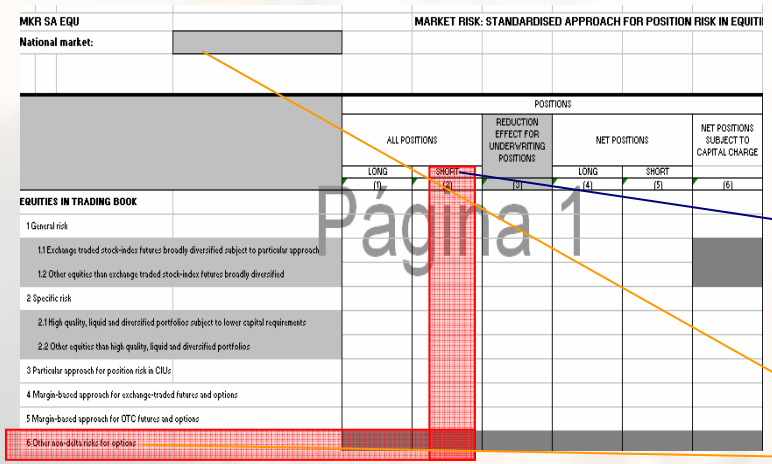
How to allow and restrict combinations

- The template taxonomy offers the possibility to express invalid combinations in „XBRL language“



MKR SA EQU

t-me-2005-12-31.xsd

p-me-2005-12-31.xsd
- p-me_AllPositionsShort

d-ri-2005-12-31.xsd
- d-ri_OtherNonDeltaRisksOptions

National Market Dim.

Invalid combination

The relationship „is not allowed“ can be expressed and validated

Main characteristics of the COREP model

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  - Parent-child relations, calculations.

  Fulfilled.
- Measures and dimensions are combined into templates.

  Fulfilled.
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  Fulfilled.
- The model is flexible and extensible.

  To be explained …

Thank you!

COREP Project

Thank you for your attention

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Questions?

XBRL eXtensible Business Reporting Language

CEBS