24th XBRL International Conference

"Transparency: with Available, Reliable, Comparable and Re-usable Data"

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Abu Dhabi, UAE

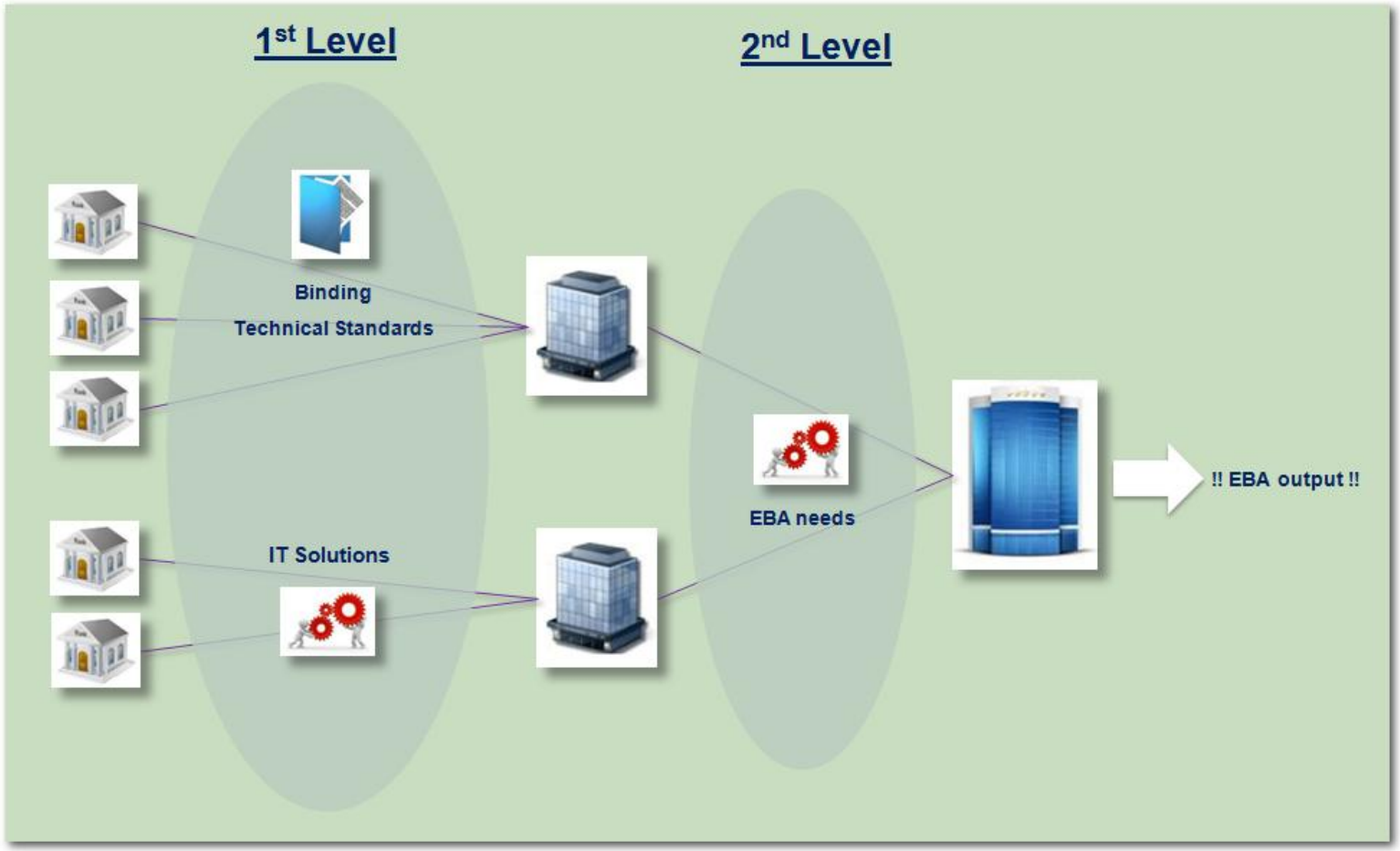
Taxonomy Summit, Modeling taxonomies using DPM, Andreas Weller/EBA and 3/22/2012

XBRL eXtensible Business Reporting Language

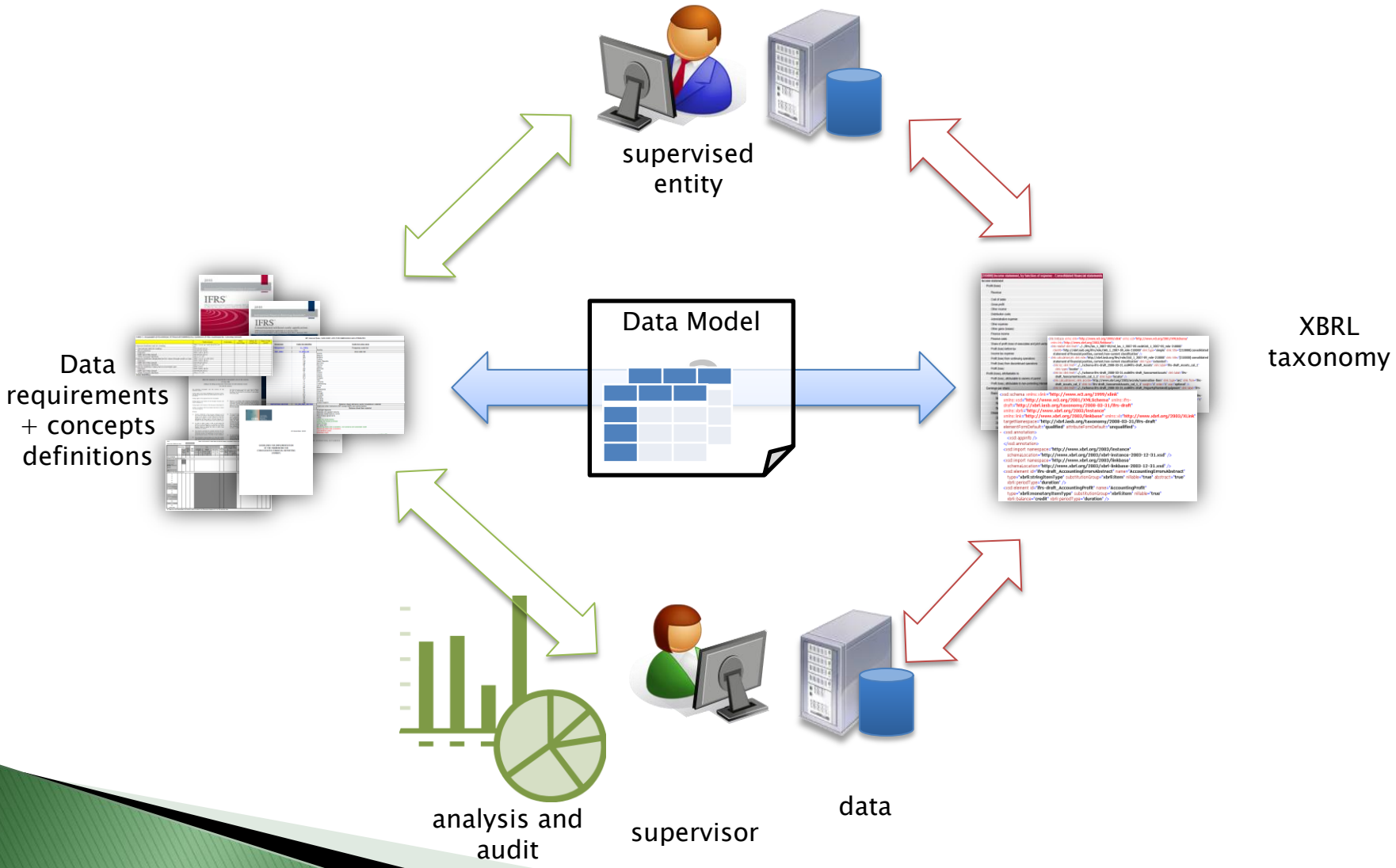
Agenda

- Recap
- The process of building the DPM
- The optimisation in the DPM
- The end-user, DPM and XBRL
- What's next for FINREP and COREP?

Supervising reporting



Role of Datapoint Model DPM

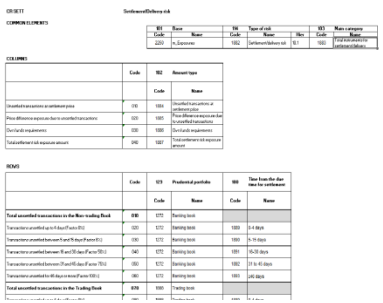


Data Exchange FINREP COREP

TAXONOMY
Catalogue of concepts, definition of exchanged information

INSTANCE DOCUMENT
Report containing facts (business data)

DPM
Catalogue of concepts, definition of meta and business related information



Data Exchange FINREP COREP

- **data centric** format: consistent and explicit identification of every piece of reportable information that can be interpreted by its own (e.g. without the context of how it is presented in templates)

- each concept in taxonomy is described using **XBRL syntax** which results in a set of **semantics** about a concept (data type, period type, applicable breakdowns, …)

- semantics comes from a **data model** that describes the meta data with the business context

Challenges and issues in analysis of regulatory reporting

- Different scope and purpose of the data
  - Capital Adequacy
  - Market risk
  - Balance Sheet Statement
  - Financial liabilities by product and by counterparty
  - Loans
  - Fair value hierarchy
  - Gains and losses from hedge accounting
  - .....
  - Defined benefit plans and employee benefits

A simple template

CR SETT **SETTLEMENT/DELIVERY RISK**

		UNSETTLED TRANSACTIONS AT SETTLEMENT PRICE	PRICE DIFFERENCE EXPOSURE DUE TO UNSETTLED TRANSACTIONS	OWN FUNDS REQUIREMENTS	TOTAL SETTLEMENT RISK EXPOSURE AMOUNT
		010	020	030	040
010	**Total unsettled transactions in the Non-trading Book**	1000			Cell linked to CA
020	Transactions unsettled up to 4 days (Factor 0%)				
030	Transactions unsettled between 5 and 15 days (Factor 8%)				
040	Transactions unsettled between 16 and 30 days (Factor 50%)				
050	Transactions unsettled between 31 and 45 days (Factor 75%)				
060	Transactions unsettled for 46 days or more (Factor 100%)				
070	**Total unsettled transactions in the Trading Book**				Cell linked to CA
080	Transactions unsettled up to 4 days (Factor 0%)				
090	Transactions unsettled between 5 and 15 days (Factor 8%)				
100	Transactions unsettled between 16 and 30 days (Factor 50%)				
110	Transactions unsettled between 31 and 45 days (Factor 75%)				
120	Transactions unsettled for 46 days or more (Factor 100%)				

The steps to the DPM

- **divide and conquer** process (analysis of underlying financial standards/regulations):
  - purpose of a framework (what is this data used for?)
  - purpose of a table (usually expressed by its title, thus describing in general the type and character of information required by the content of a table),
  - intersection of a header of a row and a header of a column which names the required information in context of a table,
  - location in a hierarchy in headers of rows and headers of column (inheritance),
  - recursive: supporting documentation and content of other tables allowing identify implicit information that is not explicitly expressed in an analysed table
- **characteristics of dimensions (breakdowns)**:
  - coherent (a set of items that have something in common – share a common semantic nature)
  - minimizing redundancy
- result: **consistent and explicit model**

A simple DPM

CR SETT **Settlement/Delivery risk**

COMMON ELEMENTS

101	Base	114	Type of risk		103	Main category
Code	Name	Code	Name	Hier	Code	Name
2250	m_Exposures	1882	Settlement/delivery risk	10.1	1883	Total instruments for settlement/delivery

COLUMNS

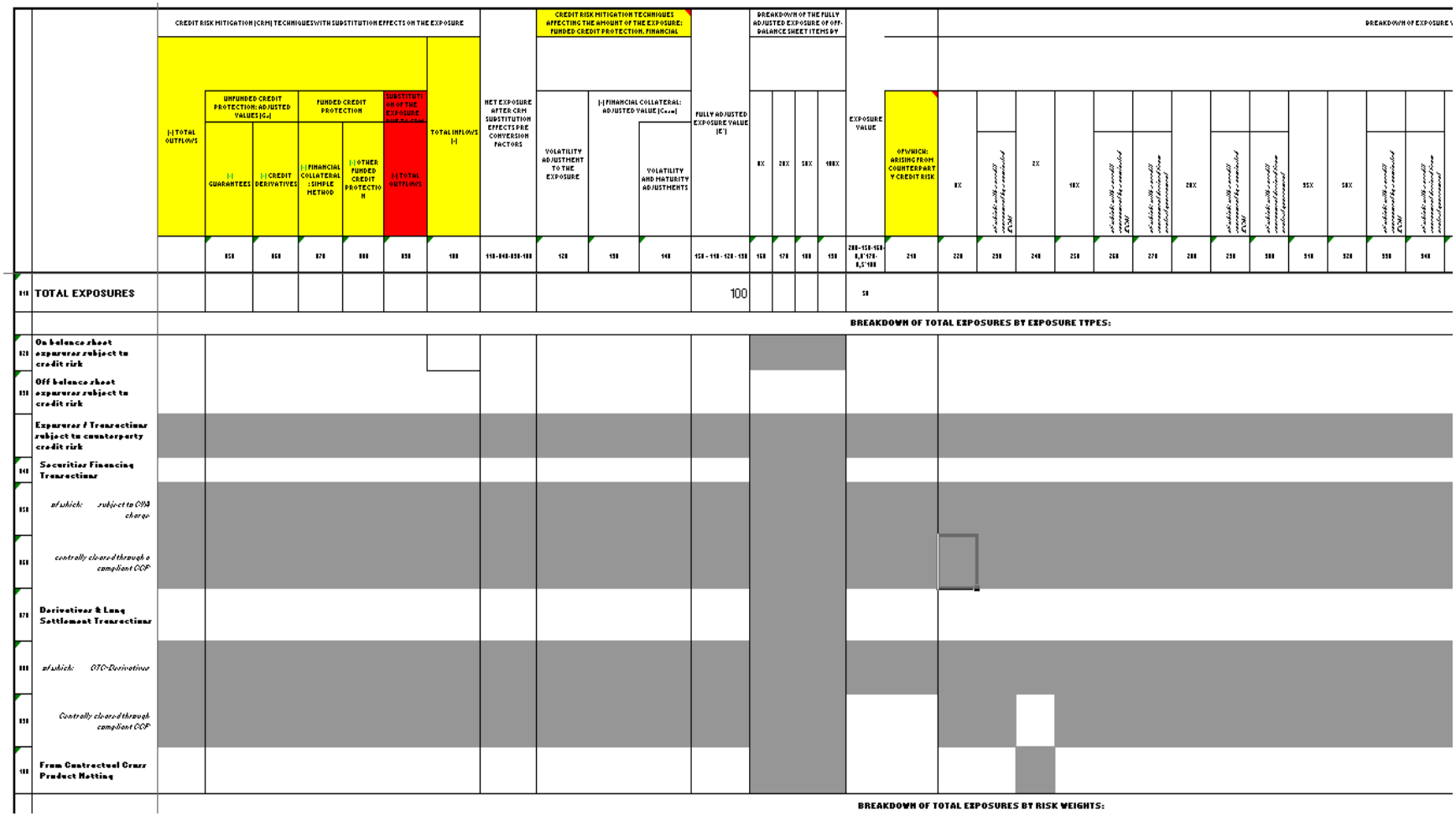
	Code	102	Amount type
		Code	Name
Unsettled transactions at settlement price	010	1884	Unsettled transactions at settlement price
Price difference exposure due to unsettled transactions	020	1885	Price difference exposure due to unsettled transactions
Own funds requirements	030	1886	Own funds requirements
Total settlement risk exposure amount	040	1887	Total settlement risk exposure amount

A simple DPM

ROWS

	Code	129	Prudential portfolio	180	Time from the due time for settlement
		Code	Name	Code	Name
Total unsettled transactions in the Non-trading Book	**010**	1272	Banking book		
Transactions unsettled up to 4 days (Factor 0%)	020	1272	Banking book	1889	0-4 days
Transactions unsettled between 5 and 15 days (Factor 8%)	030	1272	Banking book	1890	5-15 days
Transactions unsettled between 16 and 30 days (Factor 50%)	040	1272	Banking book	1891	16-30 days
Transactions unsettled between 31 and 45 days (Factor 75%)	050	1272	Banking book	1892	31 to 45 days
Transactions unsettled for 46 days or more (Factor 100%)	060	1272	Banking book	1893	≥46 days
Total unsettled transactions in the Trading Book	**070**	1888	Trading book		
Transactions unsettled up to 4 days (Factor 0%)	080	1888	Trading book	1889	0-4 days
Transactions unsettled between 5 and 15 days (Factor 8%)	090	1888	Trading book	1890	5-15 days
Transactions unsettled between 16 and 30 days (Factor 50%)	100	1888	Trading book	1891	16-30 days
Transactions unsettled between 31 and 45 days (Factor 75%)	110	1888	Trading book	1892	31 to 45 days
Transactions unsettled for 46 days or more (Factor 100%)	120	1888	Trading book	1893	≥46 days

A complex template



A complex DPM

CR SA Total a — **Credit and counterparty credit risks and free deliveries: Standardised Approachto capital requirements - TOTAL**

COMMON ELEMENTS

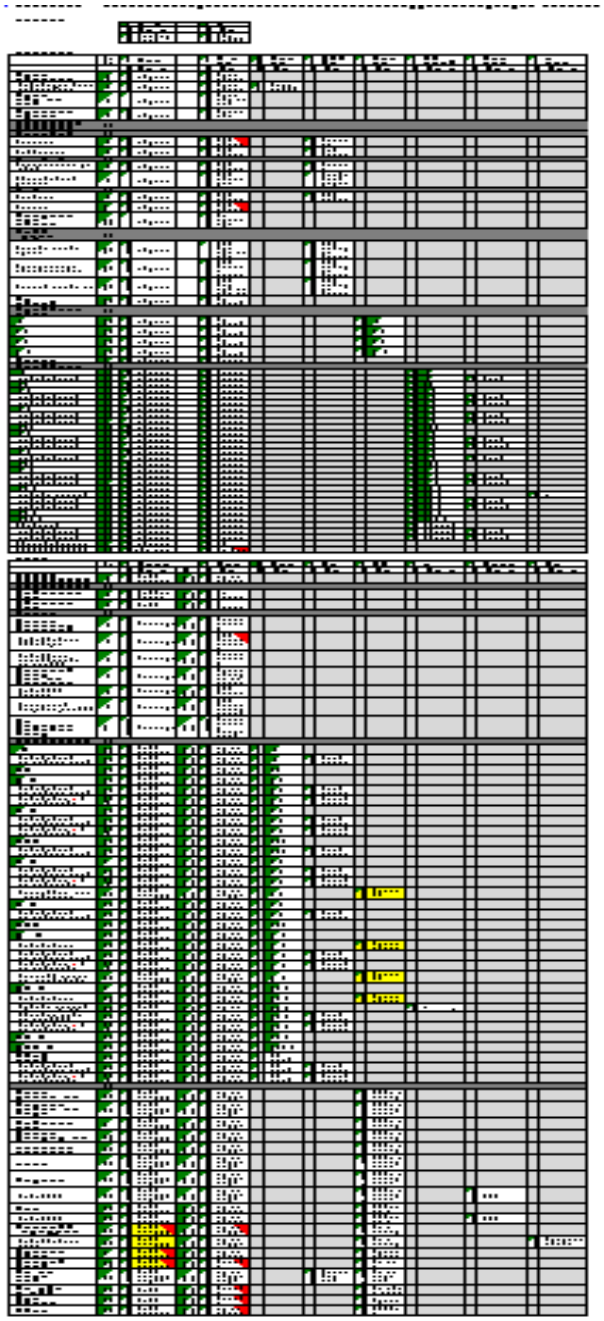
129 Prudential portfolio			159 Approach	
Code	Name		Code	Name
1272	Banking book		1742	SA for Credit Risk - Exposures other than securitisations

COLUMNS

	Code	101 Base			102 Amount type		118 Counterparty		166 CRM Effects/Collateral		167 Conversion factors for off-balance sheet items		168 Risk weights	
		Code	Name		Code	Name	Code	Name	Code	Name	Code	Name	Code	Name
Original exposure pre conversion factors	010	2250	m_Exposures		1744	Original exposure pre conversion factors [CR SA]								
Of which: arising from default fund contributions	020	2250	m_Exposures		1744	Original exposure pre conversion factors [CR SA]	1756	Default funds [CR SA]						
(-) Value adjustments and provision associated with the original exposure	030	2250	m_Exposures		1745	Value adjustments and provision associated with the original exposure [CR SA]								
Exposure net of value adjustments and provisions	040	2250	m_Exposures		1746	Exposure net of value adjustments and provisions [CR SA]								
CREDIT RISK MITIGATION (CRM) TECHNIQUES WITH SUBSTITUTION EFFECTS ON THE EXPOSURE	NA													
Unfunded credit protection: adjusted values (Ga)	NA													
Guarantees	050	2250	m_Exposures		1747	CRM substitution effects Outflows [CR SA]			1757	Guarantees - Subsitution effect				
Credit derivatives	060	2250	m_Exposures		1747	CRM substitution effects Outflows [CR			175	Credit derivatives -				

A complex DPM

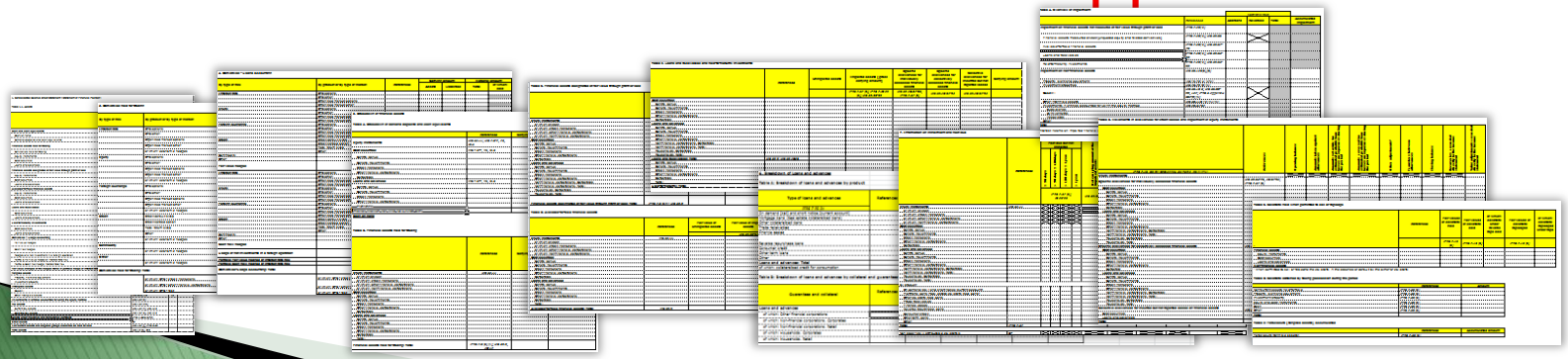
Table name	Table Code	Data Cells	Grey Cells	Dimensions
Credit and counterparty credit risks and free deliveries: Standardised approach to capital requirements – TOTAL	CR SA Total	1515	2250	15



The background for FINREP and COREP

- Significant higher amount of data and tables
  - Direct relations between tables
  - Aggregated relations between tables
  - Counterpart relations between tables
  - Merger relations between tables
  - Referencing relations between tables
  - Referencing to aggregates
  - Movements

Solution is to use a data centric approach



Approach for FINREP and COREP

A. Data Point Modelling

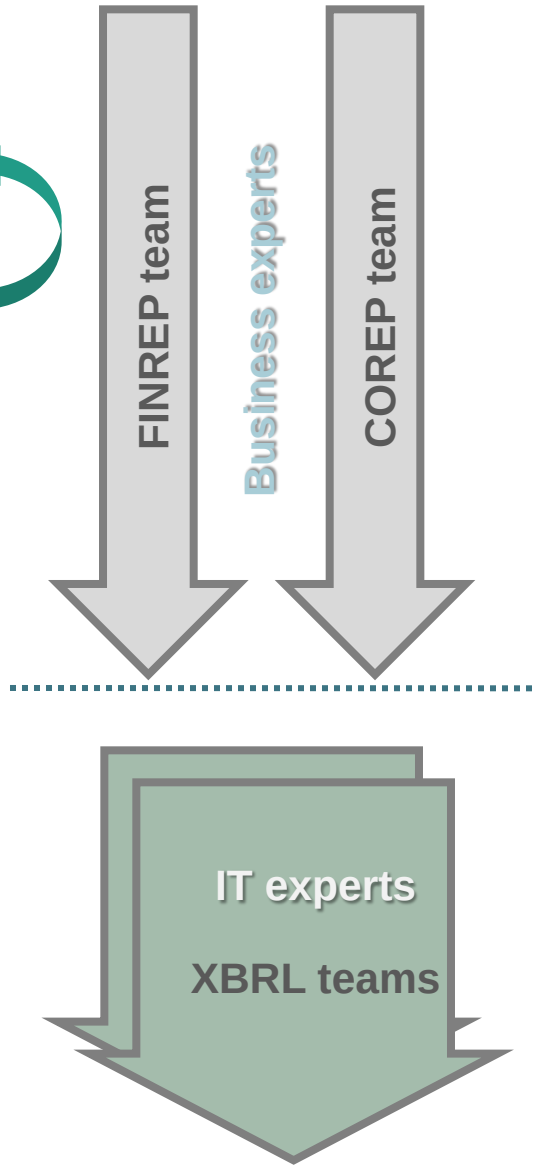
1. DPM concepts and method overview
2. Business templates analysis
3. DPM specification
4. DPM consistency checks
5. DPM structure checks
6. DPM documentation

B. Data Validations Specification

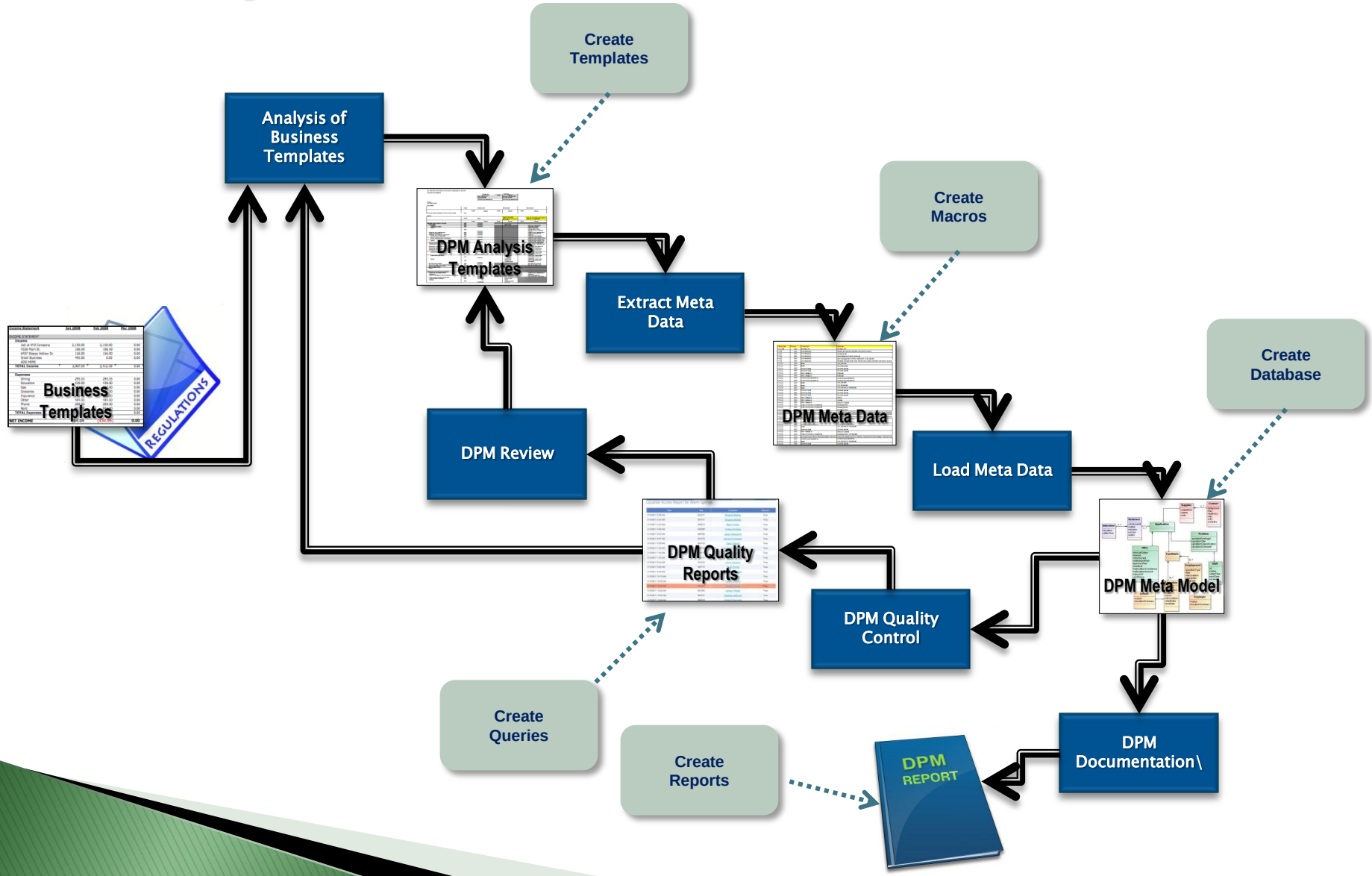
1. Template based formulas
2. DPM based formulas

C. XBRL Development

1. DPM translation into XBRL syntax
2. XBRL taxonomies tuning
3. XBRL validation formulas
4. XBRL independent review
5. XBRL taxonomies finalisation



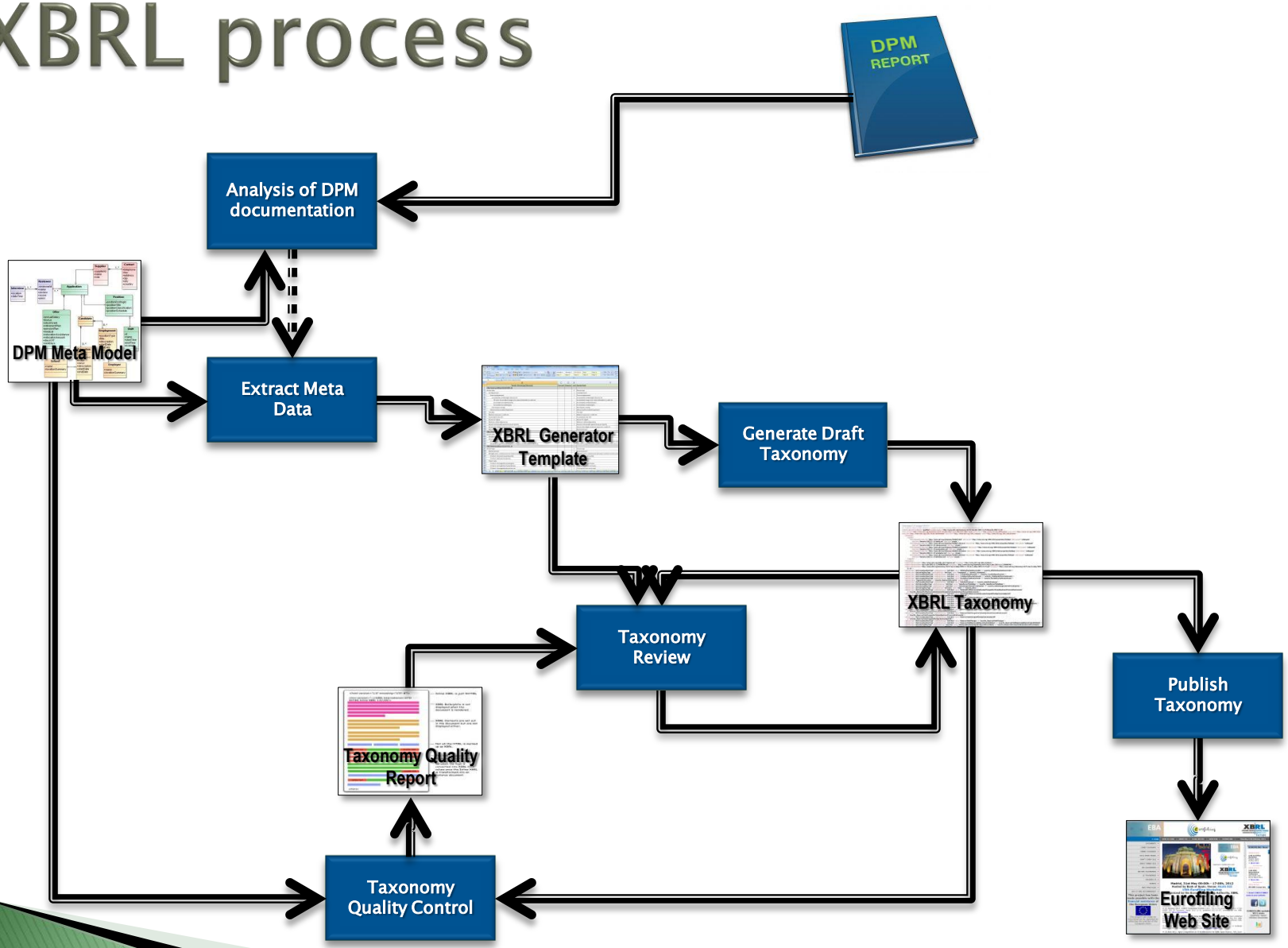
DPM process


Create Templates
Analysis of Business Templates
DPM Analysis Templates
Extract Meta Data
Create Macros
DPM Meta Data
Create Database
Business Templates
REGULATIONS
DPM Review
Load Meta Data
DPM Quality Reports
DPM Meta Model
DPM Quality Control
Create Queries
Create Reports
DPM REPORT
DPM Documentation\

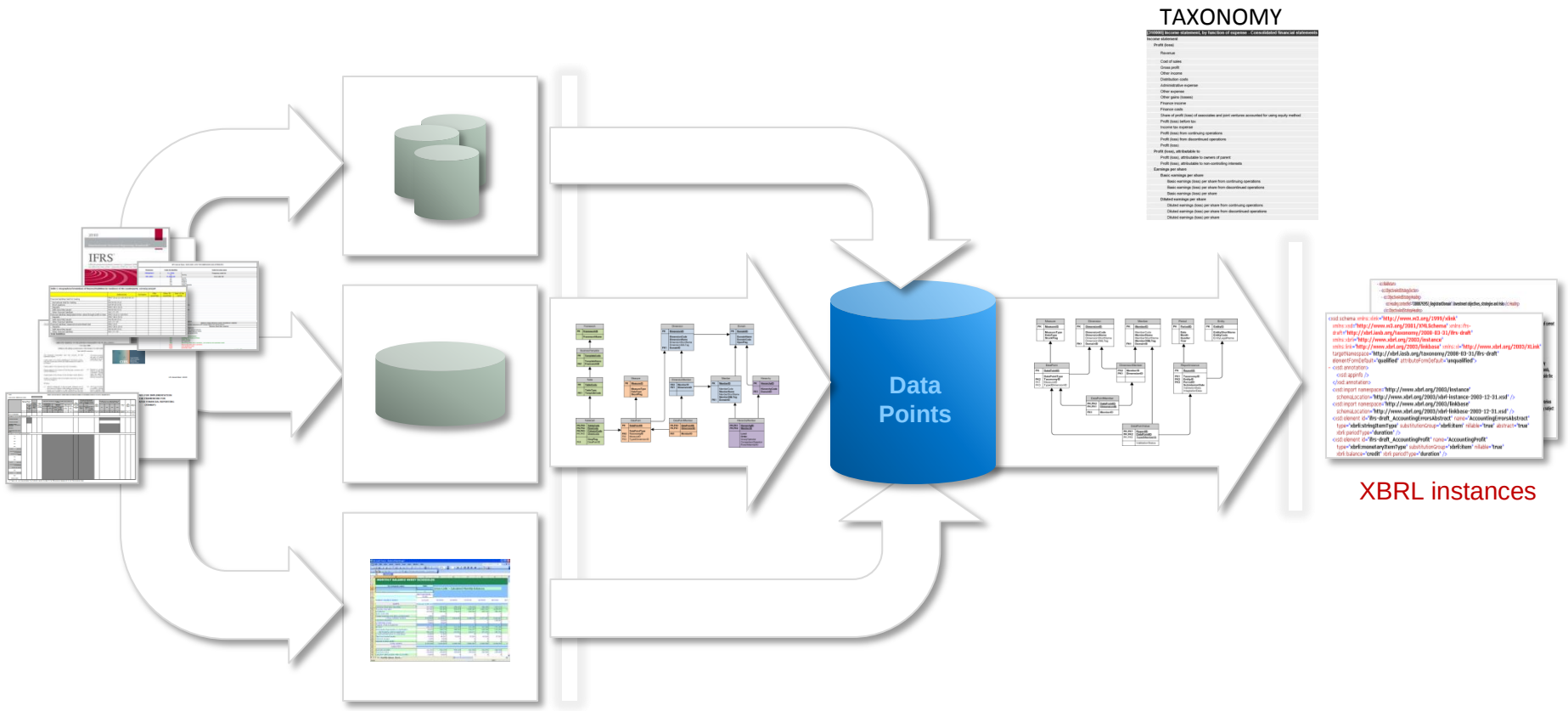
DPM quality checks

- Consistency checks
  - ✓ Tables column.row matrix (structure including 'grey' cells, for visual control)
  - ✓ Table cells missing mandatory dimensions
  - ✓ Table cells with the same categorisation (detect same data point, or error)
  - ✓ Same data point defined differently in different table cells
  - ✓ Table cells with a repeated dimension
  - ✓ Members associated with more than one domain
- Structure checks
  - ✓ Statistics on number of cells
  - ✓ Statistics on categorisation (for DPM enhancement):
    - Unique combinations of dimensions and count of data points (aggregated matrix schema)
    - Frequency of dimensions in unique combinations
    - Count of dimensions per combination
    - Count of data points per dimension
  - ✓ Count of dimension members /domain members /hierarchy members
  - ✓ Dimensions interdependency
  - ✓ …

XBRL process



The end user and *report instance creation*



Some statistics from COREP and FINREP V2

	Defined Template Cells	Potencial data elements per instance, considering the open dimensions	
		from	*to*
COREP	17,500	21,000	115,000
FINREP	4,500	4,600	25,000
Total	22,000	25,600	140,000

Type of Table	COREP	FINREP	
Single Matrix (fixed number of columns and rows)	35	78	113
Multi Matrix (fixed number of sheets)	4		4
Multi Matrix Open (indeterminate number of sheets - typed)	3	4	7
Single Table (indeterminate number of rows - typed)	4	3	7
Multi Table (fixed number of sheets with indeterminate number of rows - typed)	2		2
	48	85	133

What's next?

- Summer 2012
  - Public Consultation on FINREP and COREP V2
  - EC should endorse CP50
- 1 Jan 2013
  - Credit institutions will deliver harmonised in EEA according to COREP and FINREP V2
- April 2013
  - EBA will collect data from National Supervising authorities in XBRL COREP and FINREP V2
- .....

QUESTIONS?

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EBA

European
Banking
Authority

European System of Financial Supervision