Thinking Forward.

Development and application of COREP and FINREP XBRL Taxonomies

COREP Project

FINREP Project

BR AG

Introduction to the training

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Business Reporting – Advisory Group

BRAG

Course objectives

The goal of this two-day introduction is to:

- present development process of the COREP/FINREP taxonomies at the European level (CEBS & Project Team),

- explain important aspects and issues regarding COREP/FINREP taxonomies design principles and architecture,

- prepare participants for discussion on COREP/FINREP domain and XBRL related important decision points,

- help to conduct smooth and successful COREP/FINREP implementation.

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Focus

FINREP

Taxonomy

Framework

Architecture

Schema

Design

Versioning

Linkbase

IFRS

Eurofiling

Fromula

Data model

Tables

COREP

Modeling

Dimensions

Templates

Matrix schema

Modularization

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Who are you?

?

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Time agenda

Day 1

Time	Topic
11:00 – 13:00	Session
13:00 – 14:00	Lunch
14:00 – 15:30	Session
15:30 – 16:00	Coffee break
16:00 – 17:30	Session

Day 2

Time	Topic
08:30 – 10:30	Session
10:30 – 11:00	Coffee break
11:00 – 13:00	Session
13:00 – 14:00	Lunch
14:00 – 15:30	Session
15:30 – 16:00	Coffee break
16:00 – 17:30	Session

Topics:

o Eurofiling Project

o Introduction to XBRL

o Data model

o Matrix Schema

o Architecture design issues

o Formula linkbase

Issues:

• what can be reported?

• how to model and design it?

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Eurofiling project

Background and history

Banking supervision

Legislation

Level 1: **The Commission**
European Parliament
Council

Policy and implementation measures

Level 2: **European**
Banking
Committee

Convergence and supervisory cooperation

Level 3: **Committee of**
European
Banking
Supervisors

27 Countries (FSAs and/or central banks)

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COREP and FINREP - Background

"While national supervisory authorities are free to decide on the technical transmission specifications to implement the reporting framework, **CEBS considers that XBRL can be a helpful tool in constructing a harmonised European reporting mechanism**.

CEBS will therefore develop an XBRL platform and make it available free of charge to national authorities and supervised institutions. XBRL taxonomies will be developed for both the COREP (*COmmon REPorting - Basel II-*) and FINREP (*FINancial REPorting -IFRS-*) frameworks."

- Point 4, Cover Note to the Framework for Common Reporting of the New Solvency Ratio

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COFINREP - Business Requirements

Id	Principle	Stated as
P1	Flexibility/ Extensibility	P1.a: Each supervisor is allowed to choose the **scope**, as well as P1.b: the **level of aggregation of information** required; P1.c: The framework will also allow for flexibility to accommodate **differences in the exercise of the national options** provided for in the CRD, for instance with reference to the treatment of small institutions.
P2	Consistency	Linking each element to its **definition** or the **description** of its use in the applicable European Directive
P3	Standardisation	Achieving **uniformity** through a common approach to **calculating** and reporting key data elements.

+ stability
+ ease of implementation

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Eurofiling Project

- Eurofiling project is a joint venture of CEBS and its assigned national central banks, XBRL specification team as well as industry and commercial banks
- Current tasks:
  - Reviewing the existing FINREP and COREP taxonomies in order to take in production a new version in 2012.
  - Gathering the reporting requirements and standards of as many European countries as possible.
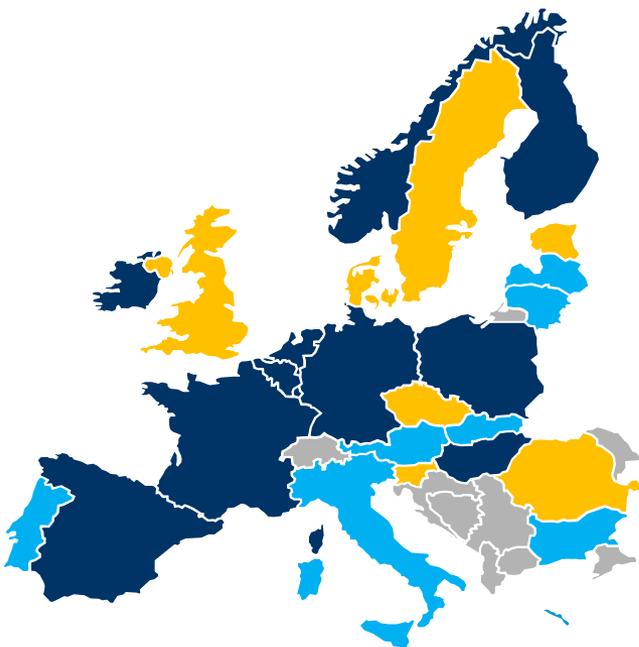 - Making a potential switch to new FINREP and COREP as easy as possible.

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www.eurofiling.info

- underlying regulations and technical documentation

- taxonomies (historical versions, documentations, links national extensions, …)

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Distribution in Europe

■ XBRL
■ Interested in XBRL
■ No information/Other format

Country	COREP	FINREP
Austria		Planned
Belgium	**Mandatory**	**Mandatory**
Bulgaria	Planned	Planned
Cyprus	Optional	Optional
Czech Republic	Discarded	Discarded
Denmark		
Estonia	Discarded	Discarded
Finland	Mandatory	
France	**Mandatory**	**Mandatory**
Germany	Optional	
Greece	**Mandatory**	**Mandatory**
Hungary	Mandatory	Not yet decided
Iceland	Not yet decided	Not yet decided
Ireland	Optional	Optional
Italy	Not yet decided	Not yet decided
Latvia	Not yet decided	Not yet decided
Liechtenstein		
Lithuania	**Mandatory**	**Mandatory**
Luxembourg	**Mandatory**	**Mandatory**
Malta	Discarded	Discarded
Netherlands	Optional	Optional
Norway	Optional	
Poland	**Mandatory**	**Mandatory**
Portugal	Not yet decided	Not yet decided
Romania	Not yet decided	Not yet decided
Slovak Republic	Not yet decided	Not yet decided
Slovenia	Discarded	Discarded
Spain	**Mandatory**	**Mandatory**
Sweden		
United Kingdom	Discarded	Discarded

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History (versions)

- COREP C-EBS:
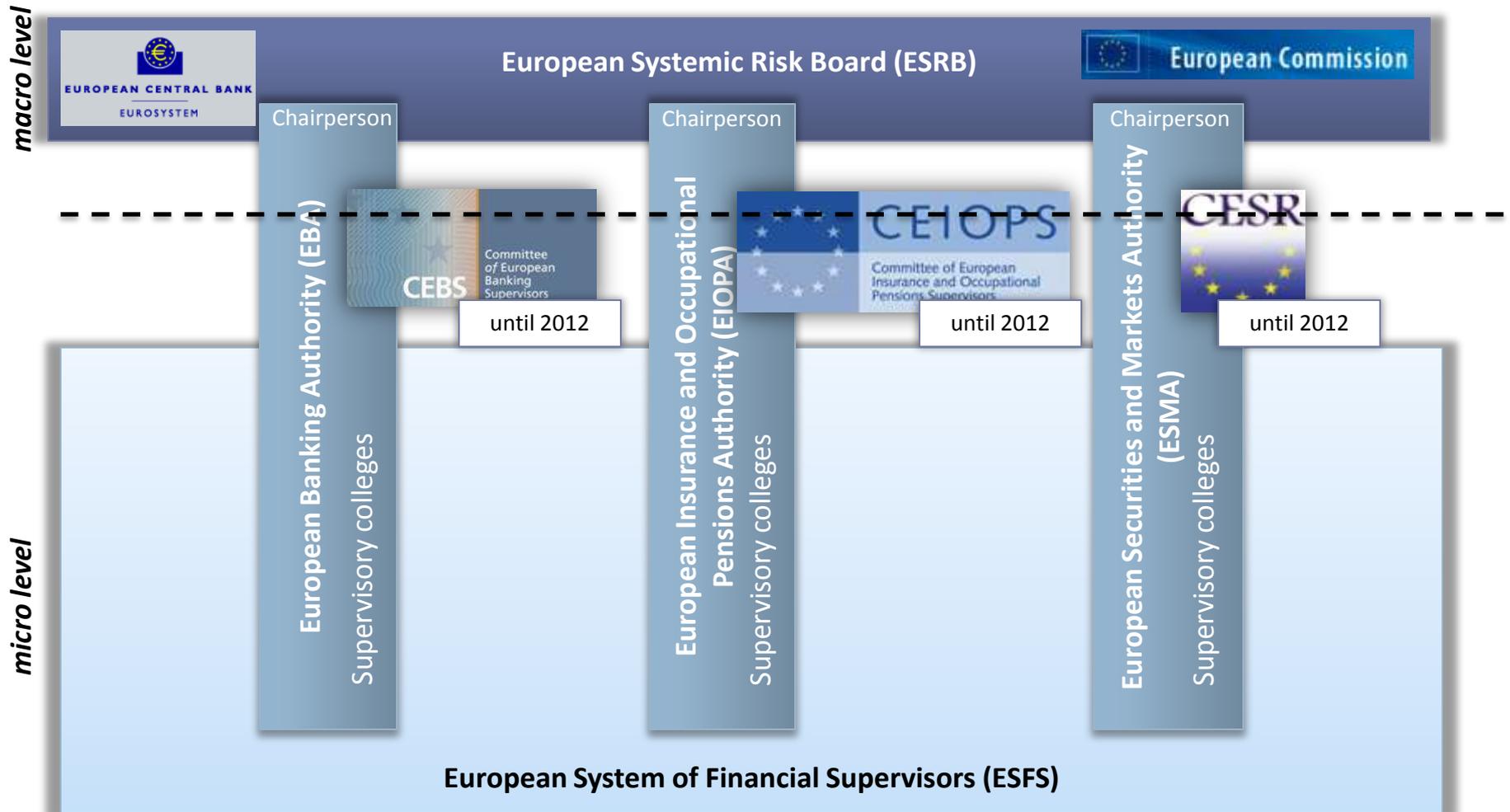- 1.2.0
  - 2006-09-08
- 1.2.1
  - 2006-10-06
- 1.2.2
  - 2006-12-21
- 1.2.3
  - 2007-02-02
- 1.2.4
  - 2007-04-20
- (?) - 2.0.0
  - 2009-2011
  - formulas

FINREP C-EBS:
- 1.0.0
  - 2006-09-30
  - monolithic/modular
- 1.2.(1)
  - 2006-12-21
  - monolithic/modular
- 1.3.0
  - 2008-01-01
  - modular
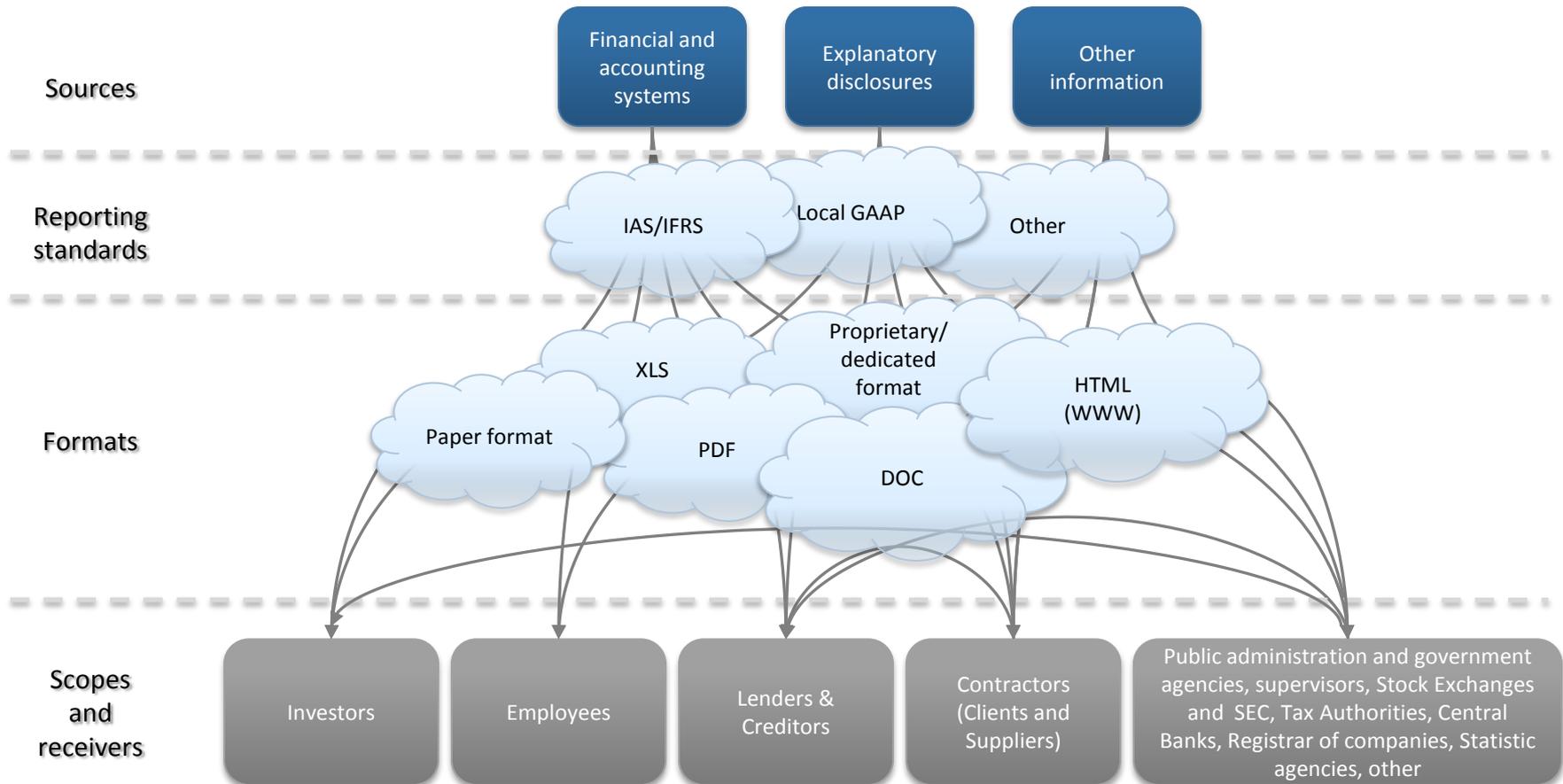- (?) - 2.0.0
  - 2009-2011
  - formulas
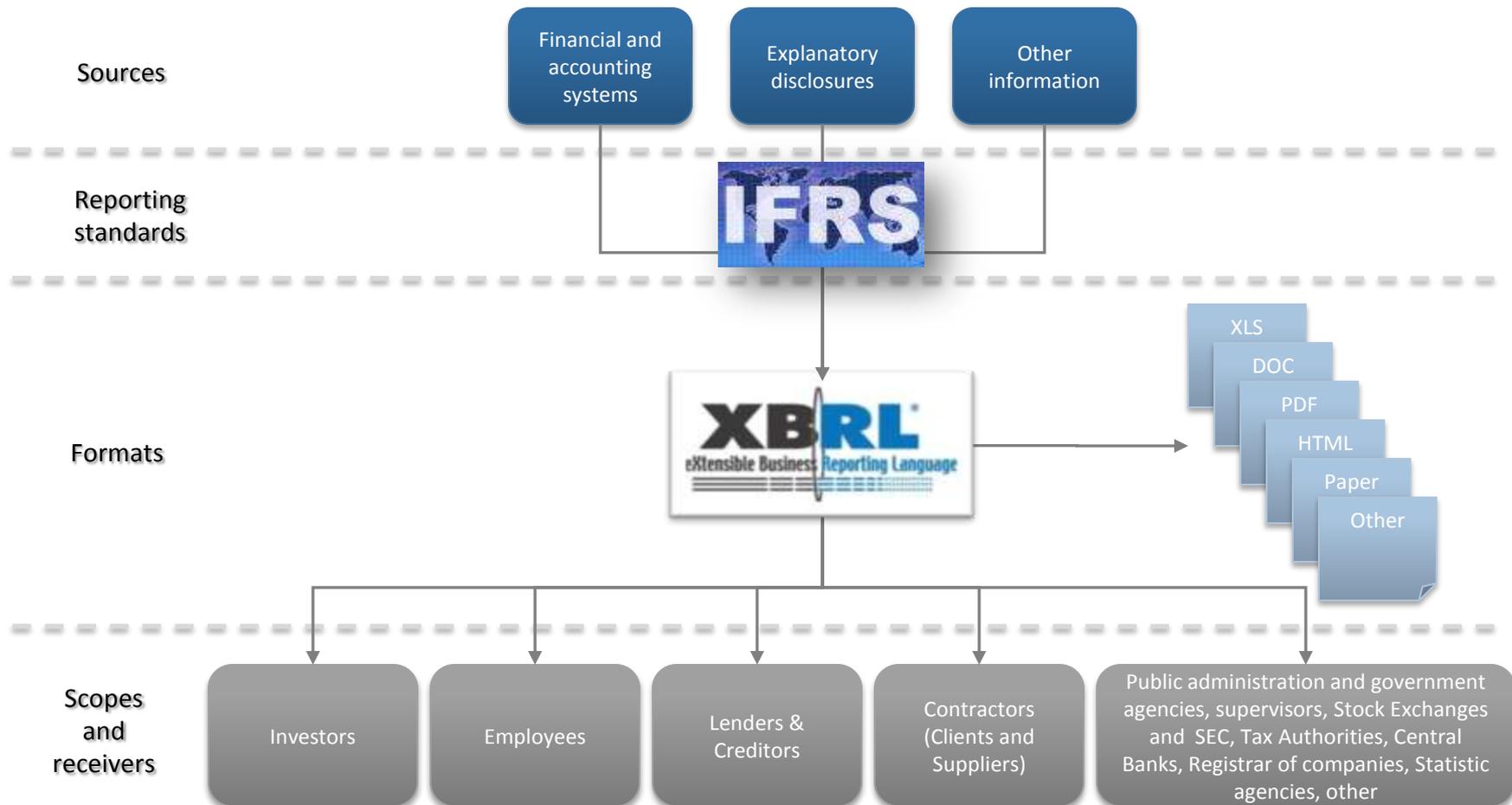 - IFRS 2009

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European Supervision – the new architecture

macro level

European Systemic Risk Board (ESRB)

EUROPEAN CENTRAL BANK
EUROSYSTEM

European Commission

Chairperson   Chairperson   Chairperson

CEBS — Committee of European Banking Supervisors

CEIOPS — Committee of European Insurance and Occupational Pensions Supervisors

CESR

until 2012   until 2012   until 2012

European Banking Authority (EBA)
Supervisory colleges

European Insurance and Occupational Pensions Authority (EIOPA)
Supervisory colleges

European Securities and Markets Authority (ESMA)
Supervisory colleges

micro level

European System of Financial Supervisors (ESFS)

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Business/Supervisory Reporting Challenges

Sources

- Financial and accounting systems
- Explanatory disclosures
- Other information

Reporting standards

- IAS/IFRS
- Local GAAP
- Other

Formats

- XLS
- Paper format
- PDF
- Proprietary/dedicated format
- DOC
- HTML (WWW)

Scopes and receivers

- Investors
- Employees
- Lenders & Creditors
- Contractors (Clients and Suppliers)
- Public administration and government agencies, supervisors, Stock Exchanges and SEC, Tax Authorities, Central Banks, Registrar of companies, Statistic agencies, other

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Business/Supervisory Reporting Solutions

Sources

- Financial and accounting systems
- Explanatory disclosures
- Other information

Reporting standards

IFRS

Formats

XBRL eXtensible Business Reporting Language

- XLS
- DOC
- PDF
- HTML
- Paper
- Other

Scopes and receivers

- Investors
- Employees
- Lenders & Creditors
- Contractors (Clients and Suppliers)
- Public administration and government agencies, supervisors, Stock Exchanges and SEC, Tax Authorities, Central Banks, Registrar of companies, Statistic agencies, other

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New COREP and FINREP roadmap

	2009	2010	2011	2012	2013
COREP					
FINREP					

Legend:
- Design phase
- Consultation phase
- Decision phase
- Transposition phase
- Application phase

Note: Possible changes to the Capital Requirements Directive are in discussion!
Updates to IFRSs!

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Unique opportunity to develop a common reporting framework

Implementation of the Capital Requirements Directive (CRD)

Basel II

Adoption of International Financial Reporting Standards (IFRS) in Europe

IFRS

Necessity for supervisors to introduce updated reporting requirements to the banking industry

COREP/FINREP XBRL Project

CEBS   COREP Project

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FINREP – General remarks

- According to the European Parliament and Council Regulation (EC) 1606/2002 of 19 July 2002 all listed EU credit institutions are required from January 1, 2005 to submit consolidated reports according to IAS / IFRS
- The FINREP-Taxonomy provides an XBRL representation of the Committee of European Banking Supervisors (CEBS) Financial Reporting Framework. FINancial REPorting is designed for credit institutions that use IAS/IFRS for their published financial statements

- CEBS (*Committee of European Banking Supervisors*) decided to use the opportunity to introduce a new reporting standard (FINREP – **FIN**ancial **REP**orting) based on IAS/IFRS
  - but the consensus between national supervisors and supervised institution (especially cross-border) was hard to find.

- FINREP Taxonomy is an extension of the IFRS 2006 Taxsonomy (developed by IASCF -*International Accounting Standards Committee Foundation*)
  - To make it easier for supervised institutions
  - For the efficiency of data transfering

- FINREP is not mandatory. However, once an authority decides to apply the framework it should, as a minimum, require the core information.

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COREP – General remarks

1988
- Bank for International Settlements issues so-called Basle Capital Accord, which sets down the agreement among the G-10 central banks to apply common minimum capital standards to their banking industries, to be achieved by end-year 1992.

1996
- For 8 years standards were almost entirely addressed to credit risk, the main risk incurred by banks.
- In 1996 standards for market risk are issued (for example due to sucuritisation that was used to minimalize capital requirement)

2004
- BIS issues a comprehensive version of Basel II Framework in 2006 but the initial version was issued in 2004. It was revised in 2005.
- It changed the methodology methodology of credit risk requirement calculation and introduced capital reqirement due to operatonal risk

2006
- European Parliament and the Council issue two directives:
  - relating to the taking up and pursuit of the business of credit institutions (2006/48/EC)
  - on the capital adequacy of investment firms and credit institutions and (2006/49/EC) (CRD – Capital Adequacy Directive)

2006
- CEBS approved the Guidelines on Common Reporting (COREP) in order to create a harmonized reporting framework for the regulatory reporting of the capital ratio

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COREP taxonomies in structure of Basel II

Overview of XBRL

Introduction to XBRL

BR AG

What is **XBRL** ?

eXtensible Business Reporting Language

eXtensible	Business	Reporting	Language
allows for customization of semantics and catalogues of concepts (taxonomies)	identifies business concepts	description and exchange of aggregated data	encoding and decoding information

- open standard, publicly available, free from licence fees
- build on XML (developed and supported by W3C)
- flexible and extensible (legislation independent, customizable)

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How does XBRL work?

TAXONOMY
Catalogue of concepts,
definition of exchanged
information

INSTANCE DOCUMENT
Report containing facts (business data)

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What is XBRL used for?

1. standard of describing business concepts in order to…
2. …transfer information between different systems

new requirements:
3. advanced validation (mathematical and logical rules)
4. „drill-down" of information (XBRL GL)
5. visualization/rendering of reports (e.g. tax forms, annual reports, …)
6. versioning of concepts' definitions (dictionaries) in time and space

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Where is XBRL going?

Timeline events:

- Charles Hoffman researches XML use possibilities in financial reporting
- First prototype FRXML
- XII cooperates with W3C; start of XBRL GL development
- Implementations of FINREP and COREP
- Specifications: Formulas, inlineXBRL
- Specification XBRL 1.0
- First XBRL Jurisdictions: Australia, Canada, Germany, Japan, Netherlands, UK, IASB
- IFRS 2008 Taxonomy
- Establishment of XBRL International Steering Committee (AICPA, Arthur Andersen, Deloitte & Touche, Ernst & Young, KPMG, Microsoft, PwC and others)
- 1st XBRL Conference (London); IFRS-GP taxonomy
- Specification XBRL 2.0
- Specification XBRL 2.1
- Specification XBRL Dimensions 1.0
- US SEC Project UGT release
- IFRS 2009 Taxonomy
- Versioning, Rendering linkbase, …

Timeline dates (top): August 1999 · January 2001 · December 2001 · December 2003 · September 2006 · April 2008 · April 2009 · 2010 (?)

Timeline dates (bottom): 1998 · December 1998 · June 2000 · June 2001 · September 2001 · January 2007 · June 2008 · June 2009

Legend:
- (orange) Development of jurisdictions, implementation projects (public authorities - SBR, capital market supervisors)
- (green) Development of technologies: versioning, business rules (formula and functions), rendering; more implementations

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Chain of dependence

XML specification and other derived from it		XBRL specification		XBRL taxonomy		XBRL Instance
• World Wide Web Consortium (W3C)	→	• XBRL International (XII)	→	• XBRL jurisdiction • Regulators • Reporting entities	→	• Reporting entities
• General syntax		• Syntax and semantics specific for business reporting		• Catalogues of business concepts		• Reports containing business facts

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Markup as a base for Markup Languages

- markup: <markup>, </markup>, <markup/>

- examples:

<markup attribute="some value">some data</markup>

<markup attribute="some value">

   <markup>some data</markup>

   <markup attribute="some value"> some data</markup>

</markup>

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Markup languages

- most popular/base: HTML, XML, XHTML
- HTML
  - used for formatting – presentation of some content in browsers
  - predefined (standard) tags and attributes:
    - structure of the document: <head>, <body style="background-color:yellow">, <table>, …
    - formatting of text: <b>, <i>, <p style="style="font-family:Times">, …
    - linking: <a href="about.html">, …
    - embedding images:
- XML
  - used to <u>describe</u> the content not and not for formatting
  - tags defined by users
  - general purpose base for other development of other specifications
- XHTML
  - HTML + XML (formatting and data)

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XML syntax

<car>White Audi R8</car>

<car colour="white" producer="Audi" model="R8"/>

<car colour="white">Audi R8</car>

<car colour="white">
    <producer>Audi</producer>
    <model>R8</model>
</car>

<car>
    <colour>white</colour>
    <producer>Audi</producer>
    <model>R8</model>
</car>

Standardisation needs rules $\Longrightarrow$ **XML Schema**

<auto>White Audi R8</auto>

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XML Schema and XML Instance Document

XML Schema (metadata)

- Where are the markups and what are their names and allowed values?
- Do they have any attributes and what are their names and allowed values?
- What is the structure of markup – is there any nesting?

Name	Surname	Sex
Bartosz	Ochocki	Male
Michal	Skopowski	Male

XML Instance Document (data)

Information for each person (facts):
- Bartosz Ochocki, male
- Michal Skopowski, male
- …

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XML Schema
Definition of rules and constrains

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns:pd="http://www.br-ag.eu/xml/personalData"
      targetNamespace="http://www.br-ag.eu/xml/personalData"
      elementFormDefault="qualified" attributeFormDefault="unqualified">
      <xsd:element name=" personalData">
        <xsd:complexType>
              <xsd:sequence>
                  <xsd:element name="person" maxOccurs="unbounded">
                        <xsd:complexType>
                              <xsd:sequence>
                                  <xsd:element name="name" type="xsd:string"/>
                                  <xsd:element name="surname" type="xsd:string"/>
                              </xsd:sequence>
                              <xsd:attribute name="sex">
                                  <xsd:simpleType>
                                        <xsd:restriction base="xsd:string">
                                              <xsd:enumeration value="male"/>
                                              <xsd:enumeration value="female"/>
                                        </xsd:restriction>
                                  </xsd:simpleType>
                              </xsd:attribute>
                        </xsd:complexType>
                  </xsd:element>
              </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
</xsd:schema>
```

namespace declaration

simple elements definitions

attribute with enumerated values definition

complex element definition

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XML Instance Document
Facts valid for rules and constrains from XML Schema

> root element indicating XML Schema file location (containing definitions of elements and attributes)

```xml
<?xml version="1.0" encoding="UTF-8"?>

<pd:personalData
    xmlns:pd="http://www.br-ag.eu/xml/personalData"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:schemaLocation="http://www.br-ag.eu/xml/personalData personalData.xsd">

    <pd:person sex="male">
        <pd:name>Bartosz</pd:name>
        <pd:surname>Ochocki</pd:surname>
    </pd:person>

    <pd:person sex="male">
        <pd:name>Michal</pd:name>
        <pd:surname>Skopowski</pd:surname>
    </pd:person>

</pd:personalData>
```

> sequentially used complex element

> attribute

> simple element carrying value

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XML and XML Schema

- XML is just syntax
- XML Schema allows to set rules on content of XML documents
  - names of markups and attributes
  - values of markups and attributes
  - <u>structure of nesting</u>

XML Schema

XML Instance document

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Problems with XML Schema - Structures

- structures can be very complex
- structures present a single view (difficult to define different classifications)
- structures cannot be modified without loosing of comparability
- there in no semantics behind structures

solution:
- separate structures from definition of markup
- allow for flexible creation of relations between markup
- add semantic meaning to relations

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Solution: XLink (XML Linking Language)

- creation of links in XML documents (e.g. between markups)
- counterpart of <a> tag used in HTML but far more complex and useful
- uses XPointer to locate markups in XML documents

  <car xlink:ref="colours.xsd#white">Audi R8</car>

- types of links:
  - simple (single link)
  - extended (collection of simple links)

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XBRL as a markup language - Components

XBRL =   **XML** (syntax)**, XML Schema** (e.g. data types)

+ **Namespace** (versions)

+ **XLink, XPointer** (relations)

+ **some more rules** (e.g. prohibiting relations)

syntax

+ **semantics** (types of relations: presentation guidance, labels, references, dimensions, formulae, …)

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Overview of XBRL

Development of taxonomy

XBRL Architecture

XBRL
taxonomy

XBRL instance
document

Definition of
concepts
(business terms)

Facts
(values for concepts,
reported by an entity, for
a period, in a currently,
…)

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XBRL Taxonomy and Instance document

taxonomy → concept | value context unit ← report

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Taxonomy and Instance Document Case 1

Thinking Forward.

Taxonomy and Instance Document
Case 2

Thinking Forward.

Taxonomy and Instance Document Case 3

Thinking
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Taxonomy development
Different forms of metadata

Business Users

IT

XBRL-ready metadata
e.g. Schema Matrix

data model
(maximum) report
e.g. FINREP Tables

regulations

XBRL taxonomy

=

(?)

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XBRL metadata and data

- ## metadata:
  - definition of a concept in XBRL taxonomy (allowing for validation of XBRL Instance Document with regard to this taxonomy)
  - e.g. declaration of <Assets> markup in taxonomy (name, data type, credit/debit, stock/flow, place in financial statement, aggregations, human readable labels and references, ….)

- ## data:
  - a fact reported in XBRL Instance document
  - e.g. content of <Assets> markup in XBRL instance document (value, reporting entity, currency, precision, …) representing a fact, for example „Assets of ACME Company amounted to 1 mln USD as of 31 December 2009"

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Metadata development approaches

data centric

- IFRS 1
  - ✓ ...
  - ✓ ...
- IFRS 2
  - ✓ ...
  - ✓ ...
- IAS 1
  - ✓ ...
  - ✓ ...
- ...

document/form centric

Statement of financial position, current non-current classification

Assets	
Non-current assets	
Property, plant and equipment	X
Investment property	X
Goodwill	X
Intangible assets other than goodwill	X
Investment accounted for using equity method	X
Biological assets	X
Deferred tax assets	X
Other non-current financial assets	X
Other non-current non-financial assets	X
Total non-current assets	X
Current assets	
Inventories	X
Trade and other receivables	X
Current tax assets	X
Other current financial assets	X
Other current non-financial assets	X
Cash and cash equivalents	X
Total current assets other than assets or disposal groups classified as held for sale	X
Non-current assets or disposal groups classified as held for sale	X
Total current assets	X
Total assets	X

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Data model

General

Development of data model

standards/regulations   data model
                                         (e.g. FINREP   best practices
                                         Templates)

- purpose: data required for
  - supervision (audit)
  - analysis and decision making
- source: financial systems (issue of availability)

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Regulations

FINREP

- IAS/IFRS
- Regulation (EC) No 1606/2002 of the European Parliamnent and of the Council of 19 July 2002 on the application of international accounting standards
- Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions
- Guidline ot the European Central Bank of 30 July 2002 concerning certain statistical reporting requirements of the European Central Bank and the procedures for reporting by the national central banks of statistical information in the field of money and banking statistics (ECB/2002/5) (2002/656/EC)
- Guidelines on Financial Reporting

COREP

- International Convergence of Capital Measurement and Capital Standards. A Revised Framework. Comprehensive Version (BIS)
- Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions
- Directive 2006/49/EC of the European Parliamnent and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions
- Guidelines on Common Reporting
- Compendium of supplementary guidelines on implementation issues of operational risk
- Etc.

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Regulations and data model

Basel II, IFRS/IAS …

Global best practices

EC 2006/48 & 49 …

European Law
9X,XX% best practices + EU requirements
OBLIGATORY!

| Country 1 | Country 2 | Country 3 | • • • | Country 27 |

Transition into national legislation
(national options)

| NBP 1 | NCB 2 | FSA 3 | • • • | NBB 27 |

National implementation

Report 1	Report 2	Report 3		Report 27
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-----------		-----------------------		----------------
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Challenge!
Relations between information models

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Differences in data models

- national discretions:
  - banking sectors differ across the EU member states…
- scope of data collected on obligatory basis?
  - minimum vs… maximum data model approach
- comparability of data on the EU level
  - cross-border financial group problem
  - home vs… host country control (i.e. data exchange)

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Relation between data models

- Commission President José Manuel Barroso
  - "Better supervision of cross-border financial markets is crucial for ethical and economic reasons"…
- The de Larosière Group, Recommendation 10
  - In order to tackle the current absence of a truly harmonised set of core rules in the EU, the Group recommends that Member States and the European Parliament should avoid in the future legislation that permits inconsistent transposition and application;

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Data model

COREP

Two layers of COREP

CA

CR

MKR

OPR

First layer – the most essential/core information for supervisors (almost full convergence was expected, in fact 80% of cells)

Second layer - additional information that will be useful in interpreting the core data (not full convergence was expected - in fact 60% of cells)

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Capital adequacy ratio

$$\frac{\text{Total own funds}}{12,5 * \text{Credit risk} + 12,5 * \text{Market risk} + 12,5 * \text{Operational risk}} \geq 8\%$$

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Own funds

ID	Label	Amount (a)	Legal References & Comments
1	**TOTAL OWN FUNDS FOR SOLVENCY PURPOSES**		=1.1+1.2+1.3+1.6+1.7 =1.4+1.5+1.6+1.7
1.1	***ORIGINAL OWN FUNDS***		Eligible Tier 1 capital 1.1.1+1.1.2+1.1.3+1.1.4+1.1.5
1.1.1	**Eligible Capital**		1.1.1.1+1.1.1.2+1.1.1.3+1.1.1.4
1.1.1*	Of which: Non-innovative instruments subject to limit		See item 1.1.5.2
1.1.1**	Of which: Innovative instruments subject to limit		Corresponds to the type of instruments referred to in the Basel Committee on Banking Supervision' s press release (Sydney, October 1998). See item 1.1.5.3
1.1.1.1	***Paid up capital***		*Article 57, sentence 1 lit.(a) of Directive 2006/48/EC.* ≈ **FINREP: Paid in capital**

Banks with not significant trading book activity →

Tier I Capital	Tier II Capital	Tier III capital

Tier III capital:
- Short term subordinated loan capital
- Net trading book profits

Max 100% of Tier I capital

Max 250% of Tier I capital

Banks with significant trading book activity →

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Credit risk assessment methods under CRD

Standardised Approach	Internal Ratings Based Approach (IRB)		
	Exposure classes other than retail **Foundation Approach**	*Retail exposure class*	*Exposure classes other than retail* **Advanced Approach**
• External ratings of eligible External Credit Assessment Institutions (ECAIs) • Only Financial Collateral Simple Method	• Own estimates for PD • LGD, CF indicators delivered by Supervisor • Financial Collateral Comprehensive Method	• No distinction between a Foundation and an Advanced approach	• Own estimates not only for PD, but also LGD, CF or even Maturity • Financial Collateral Comprehensive Method

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Forward.

Credit risk: Standardise Approach

	ORIGINAL EXPOSURE PRE CONVERSION FACTORS		(-) VALUE ADJUSTMENTS AND PROVISIONS ASSOCIATED WITH THE ORIGINAL EXPOSURE	EXPOSURE NET OF VALUE ADJUSTMENTS AND PROVISIONS	CREDIT RISK MITIGATION (CRM) TECHNIQUES WITH SUBSTITUTION EFFECTS ON THE EXPOSURE						NET EXPOSURE AFTER CRM SUBSTITUTION EFFECTS PRE CONVERSION FACTORS	CREDIT RISK MITIGATION TECHNIQUES AFFECTING THE AMOUNT OF THE EXPOSURE: FUNDED CREDIT PROTECTION. FINANCIAL COLLATERAL COMPREHENSIVE METHOD			FULLY ADJUSTED EXPOSURE VALUE (E*)
		OF WHICH: ARISING FROM COUNTERPARTY CREDIT RISK			UNFUNDED CREDIT PROTECTION: ADJUSTED VALUES (Ga)		FUNDED CREDIT PROTECTION		SUBSTITUTION OF THE EXPOSURE DUE TO CRM			VOLATILITY ADJUSTMENT TO THE EXPOSURE	(-) FINANCIAL COLLATERAL: ADJUSTED VALUE (Cvam)	(-) VOLATILITY AND MATURITY ADJUSTMENTS	
					GUARANTEES	CREDIT DERIVATIVES	FINANCIAL COLLATERAL: SIMPLE METHOD	OTHER FUNDED CREDIT PROTECTION	(-) TOTAL OUTFLOWS	TOTAL INFLOWS (+)					
	1	2	3	4=1+3	5	6	7	8	9	10	11=4+9+10	12	13	14	15=11+12+13
TOTAL EXPOSURES															

BREAKDOWN OF TOTAL EXPOSURES BY EXPOSURE TYPES:

- On balance sheet items
- Off balance sheet items
- Securities Financing Transactions & Long Settlement Transactions
- Derivatives
- From Contractual Cross Product Netting

BREAKDOWN OF TOTAL EXPOSURES BY RISK WEIGHTS:

- 0%
- 10%
- 20%
- 35%
- 50%
- of which: past due (a)
- without credit assessment by a nominated ECAI (a)
- secured by commercial real estate(a)
- 75%
- 100%
- of which: past due (a)

Thinking Forward.

Internal Ratings Based Approach

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			
				UNFUNDED CREDIT PROTECTION		SUBSTITUTION OF THE EXPOSURE DUE TO CRM	
	PD ASSIGNED TO THE OBLIGOR GRADE OR POOL (%)		OF WHICH: ARISING COUNTE... CREDIT		OTHER FUNDED CREDIT		
	1	2	3				
1. TOTAL EXPOSURES							
BREAKDOWN OF TOTAL EXPOSURES BY EXPOSURE TYPES:							
On balance sheet items							

Thinking Forward.

Operational Risk details

MAPPING OF LOSSES TO BUSINESS LINES		EVENT TYPES							TOTAL EVENT TYPES	MEMORANDUM ITEM: THRESHOLD APPLIED IN DATA	
		INTERNAL FRAUD	EXTERNAL FRAUD	EMPLOYMENT PRACTICES AND WORKPLACE SAFETY	CLIENTS, PRODUCTS & BUSINESS PRACTICES	DAMAGE TO PHYSICAL ASSETS	BUSINESS DISRUPTION AND SYSTEM FAILURES	EXECUTION, DELIVERY & PROCESS MANAGEMENT		LOWEST	HIGHEST
		1	2	3	4	5	6	7	8	9	10
CORPORATE FINANCE [CF]	Number of events										
	Total loss amount										
	Maximum single loss										
TRADING AND SALES [TS]	Number of events										
	Total loss amount										
	Maximum single loss										
RETAIL BROKERAGE [RBr]	Number of events										
	Total loss amount										
	Maximum single loss										
COMMERCIAL BANKING [CB]	Number of events										
	Total loss amount										
	Maximum single loss										
RETAIL BANKING [RB]	Number of events										
	Total loss amount										
	Maximum single loss										

- operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk

Thinking
Forward.

Operational risk assessment methods under CRD

BANKING ACTIVITIES	GROSS INCOME			LOANS AND ADVANCES (IN CASE OF ASA APPLICATION)			CAPITAL REQUIREMENTS	OF WHICH: DUE TO AN ALLOCATION MECHANISM	AMA MEMORANDUM ITEMS TO BE REPORTED IF APPLICABLE				
	YEAR-3	YEAR-2	LAST YEAR	YEAR-3	YEAR-2	LAST YEAR			CAPITAL REQUIREMENTS BEFORE ALLEVIATION DUE TO EXPECTED LOSS AND RISK TRANSFER MECHANISMS	(-) ALLEVIATION OF CAPITAL REQUIREMENTS DUE TO THE EXPECTED LOSS CAPTURED IN BUSINESS PRACTICES	(-) ALLEVIATION OF CAPITAL REQUIREMENTS DUE TO RISK TRANSFER MECHANISMS		EXCESS ON LIMIT FOR CAPITAL ALLEVIATION OF RISK TRANSFER MECHANISMS
												OF WHICH: DUE TO INSURANCE	
	1	2	3	4	5	6	7	8	9 = 7+10+11	10	11	12	13
1. TOTAL BANKING ACTIVITIES SUBJECT TO BASIC INDICATOR APPROACH (BIA)							Cell linked to the CA template						
2. TOTAL BANKING ACTIVITIES SUBJECT TO STANDARDISED (STA) / ALTERNATIVE STANDARDISED (ASA) APPROACHES							Cell linked to the CA template						
SUBJECT TO STA:													
CORPORATE FINANCE (CF)													
TRADING AND SALES (TS)													
RETAIL BROKERAGE (RBr)													
COMMERCIAL BANKING (CB)													
RETAIL BANKING (RB)													
PAYMENT AND SETTLEMENT (PS)													
AGENCY SERVICES (AS)													
ASSET MANAGEMENT (AM)													
SUBJECT TO ASA:													
COMMERCIAL BANKING (CB)													
RETAIL BANKING (RB)													
3. TOTAL BANKING ACTIVITIES SUBJECT TO ADVANCED MEASUREMENT APPROACHES AMA (a)							Cell linked to the CA template						

- *Basic Indicator Approach*
  - operational risk is a certain percentage of a relevant indicator
- *Standardised Approach*
  - the institutions shall divide their activities into a number of business lines (8) and shall apply a certain percentage of a relevant indicator for each of these business lines
- *Advanced Measurement Approaches*
  - It is based on the institutions' own internal risk measurement systems. Institutions must satisfy their competent authorities that they meet the qualifying criteria

Thinking Forward.

Market risk (equities)

	POSITIONS						RISK CAPITAL CHARGE (%)
	ALL POSITIONS		(-) REDUCTION EFFECT FOR UNDERWRITING POSITIONS	NET POSITIONS		NET POSITIONS SUBJECT TO CAPITAL CHARGE	
	LONG	SHORT		LONG	SHORT		
	(1)	(2)	(3)	(4)	(5)	(6)	
EQUITIES IN TRADING BOOK							
1 General risk							8,00
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							2,00
2.2 Other equities than high quality, liquid and diversified portfolios							4,00
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							

- Capital requirement also due to:
  - Traded Debt Instruments (TDI)
  - Commodities (COM)
  - Foreign Exchanges (FX)

Thinking
Forward.

Childhood issues (1)

- Lack of detailed information, when hybrid instruments should be considered as tier 1 capital
  - It was part of Recommendation 2 which indicate the necessity of introduction of common in EU definition of regulatory capital that should be confirmed by the Basel Committee.

THE HIGH-LEVEL GROUP
ON FINANCIAL SUPERVISION
IN THE EU

Chaired by
Jacques de Larosière

REPORT

Brussels, 25 February 2009

Thinking
Forward.

Childhood issues (2)

- Initial lack of additional/detailed information related to reporting process:
  - AMA methodology
    - CRD provides little guidance on how to distinguish operational risk from the range of other risks arising within business and support areas (for example failures in properly executing a stop loss)
    - Compendium of supplementary guidelines on implementation issues of operational risk
  - etc.

CEBS — Committee of European Banking Supervisors

Electronic Guidebook

Thinking Forward.

Childhood issues (3)

- **Limits for national discretion...**
  - This lack of comparability between reports do not affect the information model

- **Trade date versus settlement date**
  - The choice of the accounting date may result in timing differences in the recognition of purchases and sales in the income statement and the balance sheet

- **Accrued interest and interest rate margin (clean price or the dirty price convention)**
  - In the income statement, interest income and interest expenses from financial instruments held for trading and financial instruments designated at fair value through profit or loss may be reported either as part of interest income/expense ('clean pricing') or under net gains (losses) from these categories of instruments ('dirty pricing').
  - In the Balance sheet (core and non-core templates – „dirty prices")

CEBS
Committee of European Banking Supervisors

Electronic Guidebook

Thinking
Forward.

Childhood issues (4)

- last but not least: not comprehensive IT systems
  - problems to report data required by information model:
    - credit risk mitigation techniques (CRMT)
    - application of credit conversion factors (CCF)
  - necessity to reduce the number of reporting cells from 70,000 to 18,000 cells (as maximum).

Thinking Forward.

The need of harmonization

CEBS standardises COREP reporting dates

print page 🖨

< back to news index

11 July 2008

CEBS today publishes an amendment to the Guidelines on Common Reporting (COREP) on the standardisation of remittance dates and reporting frequencies for COREP reporting in the European Union. The Guidelines on COREP were developed by CEBS during 2004-2005 in order to harmonize reporting of the capital ratio in accordance with the Capital Requirements Directive.

Related documents

Feedback statement
Revised Guidance for Implementation

The amendment to the Guidelines (valid from 2012 onwards) contains the following features:

- The frequency of reporting is to be quarterly as a maximum, with certain exceptions for allowing monthly reporting.
- There is a distinction between consolidated and solo data. Consolidated and solo reports must be delivered as a maximum within 40 business days and 20 business days respectively.
- National authorities may provide additional time for reporting by institutions which only operate domestically in order to provide proportionate application of the agreement for these firms.

Solo – 20 days
Consolidated – 40 days

CEBS emphasizes that the decision on the standardisation on COREP reporting dates is only the first step in a more ambitious project to deliver EU-wide reporting formats in 2012 for all credit institutions and investment firms located in the European Union. In this context, CEBS wants to stress its commitment to moving forward on the harmonisation of supervisory reporting (Guidelines on Common Reporting and on Financial Reporting) order to reduce the administrative burden on the firms, while taking into account the benefits and the costs of the proposals for the industry.

Work in progress

Furthermore, CEBS wants to emphasize the relationship between this agreement and other projects in the roadmap on reporting. Therefore, CEBS may revisit this amendment before 2012 when more experience on COREP reports has been gained by national authorities and the industry.

Finally, CEBS acknowledges the relevance of the contributions received from industry participants and wants to encourage wider debate among national authorities and industry experts as part of the future projects on supervisory reporting.

Thinking
Forward.

Core vs….. Non-core information

Core information: Balance
Sheet + Income Statement

Non-core information: Detailed
information regarding Core information
Tables: 3 - 40

Thinking
Forward.

Core vs... Non-Core information
Where to find details?

1.1 Assets	References	Breakdown in table	Carrying amount
Cash and cash balances with central banks	CP		
Financial assets held for trading	IFRS 7.8 (a)(ii); IAS 39.9		
Derivatives held for trading	IAS 39.9	3	
Equity instruments	IAS 32.11		
Debt instruments	39.9		
Loans and advances	39.9		
Financial assets designated at fair value through profit or loss	IFRS 7.8 (a) (i); IAS 39.9	4	
Equity instruments	IAS 32.11		
Debt instruments	39.9		
Loans and advances	39.9		
Available-for-sale financial assets	IFRS 7.8.(d); IAS 39.9	5	
Equity instruments	IAS 32.11		
Debt instruments	39.9		
Loans and advances	39.9		
Loans and receivables (including finance leases)	IFRS 7.8.(c); IAS 39.9	6	
Debt instruments	IAS 39 AG 26		
Loans and advances	IAS 39.9		
Held-to-maturity investments	IFRS 7.8 (b); 39.9	6	
Debt instruments	IAS 39 AG26		
Loans and advances	IAS 39 AG26		

The number of non-core information template, where the information is placed in detail
Sometimes the information is detailed in more than one non-core table

Core information

Thinking
Forward.

References in FINREP

Thinking
Forward.

Changes in Core/Non-core information (example)

Comment : Checking Templates (except 35 and 38)			
X = impact Template wording			
R = impact Reference linkbase			
C = impact Calculation			

AMENDMENTS TO THE CORE TEMPLATES

	Template	Name	Amendment
X	1,2	Liabilities	Drop the words "held for trading" in the item "Other financial liabilities held for trading"
X	1,2	Liabilities	Drop the words "designated at fair value through profit or loss" in the item "Other financial liabilities designated at fair value through profit or loss"
X	1,2	Liabilities	Drop the words "measured at amortised cost" in the item "Other financial liabilities measured at amortised cost"
X	1,2	Liabilities	Change the name of the item "Credit commitments and guarantees" to "Loan commitments and guarantees" (align it with other templates)
X	1,3	Equity	Align the terminology of valuation adjustment of "Non-current assets and disposal groups held for sale" to the term used in table 1.1
X	2	Income statement	Including subsidiaries in the item "Share of profit or loss of associates and joint ventures accounted for using the equity method"

AMENDMENTS TO THE NON-CORE TEMPLATES

C	8	Derivatives: hedge accounting	Including a new row "Hedge of net investment in a foreign operation"
C - X	11B	Intangible assets: cost model	Delete the row "Increases or decreases resulting from revaluations and impairment losses recognised or reversed directly in equity"
C	13	Non-current assets and disposal groups held for sale	Delete the item "investments in associates"
C	13	Non-current assets and disposal groups held for sale	Delete the item "investments in joint ventures"
C	13	Non-current assets and disposal groups held for sale	Include a new item "Investments in subsidiaries, joint ventures and associates"

- every change in the FINREP tables has to by identified and documented
  - simplicity for business users
- because the number of the core-information templates is lower, there is less problems with keeping it up-to date
  - influence of those changes (core) on different tables (non-core) and relations between them has to be investigated
  - sometimes it creates issues (problems to be solved)

Thinking Forward.

Some information defined only in documentation

5. Available-for-sale financial assets

	References	Fair value of unimpaired assets CP	Fair value of impaired assets IAS 39.58-70	Total net carrying amount	(Impairment) IAS 39.67-70
Equity instruments	IAS 32.11	343	87	430	21
Debt instruments	IAS 39.9	270	15	285	21
Loans and advances	IAS 39.9	270	15	285	23
Total		883	117	1000	65

Defined in supporting documentation not in data model (FINREP tables)

Equity instruments	IAS 32.11	343	87	430		21
I-2006-12-EquityInstrumentsAtCost		200	15	215	0	4,2
I-2006-12-EquityInstrumentsQuoted		43	43	86	0	8,4
I-2006-12-EquityInstrumentsUnquotedButF		100	29	129	0	8,4
		0	0	0		0
Debt instruments	IAS 39.9	270	15	285		21
I-2006-12-CentralGovernments		69	2,25	71,25	0	4,2
I-2006-12-CreditInstitutions		80	5,5	85,5	0	4,2
I-2006-12-NonCreditInstitutions		26	2,5	28,5	0	4,2
I-2006-12-Corporates		55	2	57	0	4,2
I-2006-12-Retail		40	2,75	42,75	0	4,2
		0	0	0		0
Loans and advances	IAS 39.9	270	15	285		23
I-2006-12-CentralGovernments		69	2,25	71,25	0	4,6
I-2006-12-CreditInstitutions		80	5,5	85,5	0	4,6
I-2006-12-NonCreditInstitutions		26	2,5	28,5	0	4,6
I-2006-12-Corporates		55	2	57	0	4,6
I-2006-12-Retail		40	2,75	42,75	0	4,6
		0	0	0		0

Thinking Forward.

Data model

Revised FINREP

Revised FINREP data model

decision to implement "Maximum Data Model"

Thinking Forward.

FINREP is still not mandatory

If implemented

- Member States must rely exclusively on financial information defined in the FINREP framework
  - they may neither modify the templates based on national need, nor require additional information that exceeds the fixed maximum
- FINREP will represent the only source of periodic consolidated supervisory financial reporting based on IAS/IFRS
- at a minimum all „core information"
- XBRL is not mandatory but recommended

If not implemented

- national authorities that do not implement FINREP should avoid requiring credit institutions to provide IFRS financial reporting data with different breakdowns
- national authorities that decide not to apply FINREP framework shall inform CEBS Secretariat and explain the reasons

Thinking
Forward.

Scope of consolidation

- Capital Requirements Directive scope (CRD)

  - default

  - excludes insurance and non-financial subsidiaries

  - creates a need of introducing a concept „Investments in entities accounted for using the equity method", which includes related goodwill

- core and some non-core tables can be collected using the IFRS scope of consolidation

  - when IFRS scope of consolidation is applied subsidiaries (insurance and non-financial subsidiaries) shall not be accounted for using the equity method - they are consolidated in accordance with IAS 27

Thinking
Forward.

Scope of consolidation – temporary solution

This option will be reviewed in 2010 based on a cost-benefit analysis

IFRS instead or in addition to CRD scope

• Core templates (1, 2)

Only the CDR scope

• All other templates

IFRS in addition to CRD scope

• Core templates (1, 2)
• Non-core templates (3, 8, 9, 15, 20, 21)

- • 3. Derivatives held for trading,
- • 8. Derivatives - Hedge accounting,
- • 9. Tangible and intangible assets,
- • 15. Breakdown of selected items of income statement,
- • 20. Statement of comprehensive income,
- • 21. Statement of changes in equity

Thinking Forward.

Core Information – main changes

FINREP 1.3 vs.. Revised FINREP

Thinking
Forward.

Statement of financial position (Assets)

- information needed is the same, differences result from the usage of new dimension (–by instruments)
  - having dimensional breakdown (–by counterparty) usage of „balances with central banks" is not needed
  - term "Cash" means holdings of national and foreign banknotes and coins in circulation that are commonly used to make payments
- „Investments in entities accounted for using the equity method" is still used due to the CRD scope of consolidation (Not in IFRS)
  - new concepts were added: Assets and Liabilities under insurance and reinsurance contracts

Thinking
Forward.

Statement of financial position (Liabilities)

- (–by hedge type) dimension is also used in case of Derivatives – Hedge accounting
  - Having dimensional breakdown (–by counterparty) usage of „Deposits from central banks" or „Deposits from credit institutions" is not needed

Thinking
Forward.

Statement of financial position (Liabilities)

- Information about subordinated liabilities are in 10B table in detail now

Thinking
Forward.

Statement of financial position (Equities)

- Reserves are divided showing „Reserves (Accumulated losses) of investments in entities accounted for using the equity method" separately

Thinking
Forward.

Consolidated income statement

- information reported is almost the same
  - concept cash & cash balances with central banks is not needed
  - new concepts: „Revenue from insurance and reinsurance contracts issued",
    „revenue from insurance and reinsurance contracts issued"

Thinking
Forward.

Non-Core Information – main changes

FINREP 1.3 vs.. Revised FINREP

Thinking
Forward.

Table 5 (old 5&6)

6.   Loans and receivables (including finance leases) and held-to-maturity investments

	References	Unimpaired assets CP	Impaired assets (total gross carrying amount) IFRS 7.37; IFRS 7 IG 29 (a)	(Allowances for individually assessed financial assets) IAS 39 AG 84-86; IFRS 7.37 (b)	(Allowances for collectively assessed financial assets) (*) IAS 39 AG 84-90	Total net carrying amount
Loans and receivables						
Debt instruments	IAS 39 AG26	620	175	57	10	728
Loans and advances	IAS 39.9	220	100	40	8	272
Total		840	275	97	18	1000
Held-to-maturity investments						
Debt instruments	IAS 39AG26	456	159	97	18	500
Loans and advances	IAS 39.AG26	472	143	97	18	500
Total		928	302	194	36	1000

(*) includes allowances for incurred but not reported losses

- „Collective allowances for incurred but not reported losses" is reported separately
- different counterparty breakdown is used
- new concept „Amount of cumulative change in the fair values attributable to changes in the credit risk"

5. Breakdown of financial assets

Table A. Loans and receivables and held-to-maturity investments

	References	Unimpaired assets IFRS 7.36 (c)	Impaired assets [gross carrying amount] IFRS 7.37; IFRS 7.IG 29 (a)	Specific allowances for individually assessed financial assets IAS 39 AG.84-86; IFRS 7.37 (b)	Specific allowances for collectively assessed financial assets IAS 39.AG 84-92	Collective allowances for incurred but not reported losses IAS 39.AG 84-92	Carrying amount
Debt securities	IAS 39.9						
Central banks							
General governments							
Credit institutions							
Other financial corporations							
Corporates							
Retail							
Loans and advances	IAS 39.9						
Central banks							
General governments							
Credit institutions							
Other financial corporations							
Non-financial corporations. Corporates							
Non-financial corporations. Retail							
Households. Corporates							
Households. Retail							
Loans and receivables	IAS 39.9; IAS 39.AG26						
Central banks							

Thinking Forward.

New Table 6

- Detailed information about collateral
- Different breakdown of „loans and advances"
- New concept: „collateralized credit for consumption"

6. Breakdown of Loans and advances by product and collateral/guarantees

Table A: Breakdown of loans and advances by product: carrying amount

Type of loans and advances	References	Central banks	General governments
On demand [call] and short notice [current account]	IFRS 7.IG 21		
Mortgage loans (Real estate collateralized loans)	IFRS 7.IG 21		
Other collateralized loans	IFRS 7.IG 21		
~~Factoring~~Trade receivables	IFRS 7.IG 21		
Finance leases	IFRS 7.IG 21		
Reverse repurchase loans	IFRS 7.IG 21; IAS 39.AG 51 (a)		
Consumer credit	IFRS 7.IG 21		
Other term loans	IFRS 7.IG 21		
Other	CP		
Total loans and advances	CP		
of which: collateralized credit for consumption			

Table B: Loans and advances - maximum collateral/guarantee that can be considered

Guarantees and collateral	Mortgage loans (Real estate collateralized loans)		Other collateralized loans		Financial guarantees
	Residential ~~mortgages~~	Commercial	Cash	Rest~~Other collateral~~	
Loans and advances					
of which: Other financial corporations					
of which: Non-financial corporations. Corporates					
of which: Non-financial corporations. Retail					
of which: Households. Corporates					
of which: Households. Retail					

Thinking Forward.

Table 8

8. Derivatives - Hedge accounting

By type of risk	By product or by type of market	Carrying		Notional amount	
		Assets	Liabilities	Total	of which: sold
Interest rate	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
Equity	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
Currency (FX)	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
Credit	Credit default swap				
	Credit spread option				
	Total return swap				
	Other				
Commodity					
Other					
Fair value hedges					
Interest rate	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
Equity	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
Currency (FX)	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
Credit	Credit default swap				
	Credit spread option				
	Total return swap				
	Other				
Commodity					
Other					
Cash flow hedges					
Hedge of net investments in a foreign operation					
Portfolio Fair value hedges of interest rate risk (IAS 39.89A)					
Portfolio Cash flow hedges of interest rate risk (IAS 39 IG F.6 1-3)					
Total					

- new concepts:
  - „Portfolio Fair value hedges of interest rate risk (IAS 39.89A)"
  - „Portfolio Fair value hedges of interest rate risk (IAS 39.89A)"
- does it mean that all other than portfolio hedges should be considered „Non-portfolio"?

Thinking Forward.

New Table 9

9. Tangible and intangible assets

Table A. Tangible and intangible assets: carrying amount

	References	Carrying amount
Property plant and equipment		
revaluation model	IAS 16.73 (a), (d)	
cost model	IAS 16.73 (a), (d)	
Investment property		
fair value model	IAS 40.76	
cost model	IAS 40.79 (c)	
Intangible assets other than goodwill		
revaluation model	IAS 38.118 (e); IAS 38.124 (a) (ii)	
cost model	IAS 38.118 (e)	

Table B. Tangible and intangible assets: assets subject to operating lease

	References	Carrying amount
Property plant and equipment		
revaluation model	IAS 17.49; IAS 17.57	
cost model	IAS 17.49; IAS 17.57	
Investment property		
fair value model	IAS 17.49: IAS 17.57; IAS 40.76	
cost model	IAS 17.49; IAS 17.57; IAS 40.79 (c)	
Intangible assets other than goodwill		
revaluation model	IAS 17.49; IAS 17.57	
cost model	IAS 17.49; IAS 17.57	

- include valuation models for tangible and intangible assets
- separately analyses assets that are subject to operating lease

Thinking
Forward.

Table 11 (old Table 17)

- in old FINREP columns could be duplicated to make the distinction between the transfers (entirely and partially recognized) – in Revised FINREP it is obligatory
- in revised FINREP also information about securitization and repo agreements is needed
- separately collateral pledged is reported

Statement of changes in equity

21. Statement of changes in equity

- information is not
  so detailed as it was in
  previous version of FINREP

Thinking
Forward.

Fair value hierarchy

24. Information on fair value

Table A. Information on fair value of financial instruments

	Fair value	Fair value hierarchy IFRS 7.27B.(a)		Unrealised gains and losses for the period IFRS 7.27B.(d)		Gross [before taxes] unrealised gains and losses [accumulated]		
	IFRS 7.25-26	Level 2 IFRS 7.27A.(b)	Level 3 IFRS 7.27A.(c)	Level 2	Level 3	Level 1	Level 2	Level 3
ASSETS								
Financial assets held for trading								
Derivatives held for trading								
Equity instruments								
Debt securities								
Loans and advances						✕		
Financial assets designated at fair value through profit or loss								
Equity instruments								
Debt securities								
Loans and advances						✕		
Available-for-sale financial assets				✕	✕	✕		
Equity instruments				✕	✕	✕		
Debt securities				✕	✕	✕		
Loans and advances				✕	✕	✕		
Held-to-maturity investments				✕	✕	✕	✕	✕
Derivatives – Hedge accounting								

- information about all three levels of fair value is needed
  - Level 1 – values from active market
  - Level 2 – valuation determined by price quotation in active market
  - Level 3 – valuation technique based on assumptions not supported by observable market prices

Thinking Forward.

Example of totally new templates

23. Asset management, custody and other service functions

	Assets involved in the services provided by the entity ~~Gross carrying amount~~	Of which: Instruments issued by the entity	Of which: ~~Other~~ Duplicated investments
Asset management [by type of structure]			
Collective investment			
Pension funds			
Customer portfolios managed on a discretionary basis			
Other investment vehicles			
Custody assets [by type of customer]			
Collective investment			
Other institutional customers			
Other			
Of which: entrusted to other entities			
Central administration services for institutional customers			
~~Other~~ Fiduciary transactions			
Payment services			
Customer resources distributed but not managed			
Collective investment			
Insurance products			
Other			

- especially investigated in „asset management" are instruments issued by the entity

Thinking
Forward.

Example of templates that will be no longer required

37. Cash flow statement

OPERATING ACTIVITIES	References
Net profit (loss)	IAS 7.18 (b)
Adjustments to reconcile net profit or loss to net cash provided by operating activities:	IAS 7.20
(Current and deferred tax income, recognised in income statement)	IAS 7.20 (b); IAS 7.35
Current and deferred tax expenses, recognised in income statement	IAS 7.20 (b); IAS 7.35
Minority interests included in group profit or loss	IAS 7.20 (b)
Unrealised foreign currency gains and losses	IAS 7.20 (b)
INVESTING AND FINANCING	IAS 7.20
Depreciation / amortisation	IAS 7.20 (b)
Impairment	IAS 7.20 (b)
Provisions, net	IAS 7.20 (b)
Unrealised fair value (gains) losses through P & L, i.e. for investment property, PPE, intangible assets,...	IAS 7.20 (c)
(Gains) losses on sale of investments, net (i.e. HTM, associates, subsidiaries, tangible assets...)	IAS 7.20 (c)
OPERATING	IAS 7.20
Unrealised (gains) losses from cash flow hedges, net	IAS 7.20 (b)
Unrealised (gains) losses from available-for-sale investments, net	IAS 7.20 (b)
Other adjustments	IAS 7.20
Cash flows from operating profits before changes in operating assets and liabilities:	IAS 7.20
Increase (Decrease) in working capital (excl. cash & cash equivalents):	IAS 7.20 (a)
Increase (Decrease) in operating assets (excl. cash & cash equivalents):	IAS 7.20 (a)
Increase (Decrease) in balances with central banks	IAS 7.20 (a)
Increase (Decrease) in loans and receivables (**including finance lease**)	IAS 7.20 (a)
Increase (Decrease) in available-for-sale assets	IAS 7.20 (a)
Increase (Decrease) in financial assets held for trading	IAS 7.20 (a)
Increase (Decrease) in financial assets designated at fair value through profit or loss	IAS 7.20 (a)
Increase (Decrease) in derivatives - hedge accouting	IAS 7.20 (a)
Increase (Decrease) in non-current assets held for sale	IAS 7.20 (a)
Increase (Decrease) in other assets (definition balance sheet)	IAS 7.20 (a)

Thinking
Forward.

FINREP and COREP Data Model - Similarities

- both are based on „core" vs... „non-core" approach
  - two cores in FINREP
  - two layers in COREP
- in both cases mainly CRD scope of consolidation will be used (not in old FINREP)

Thinking
Forward.

Why COREP and FINREP differ so much?

COREP

- supervisory reporting
- (i.e. „Cooperative shares" as own funds)

FINREP

- financial reporting
- (i.e. „Cooperative shares" as debt)

- number of common elements in COREP and FINREP is very limited

- e.g.:

ID	Label	Amount (a)	Legal References & Comments
1	TOTAL OWN FUNDS FOR SOLVENCY PURPOSES		=1.1+1.2+1.3+1.6+1.7 =1.4+1.5+1.6+1.7
1.1	ORIGINAL OWN FUNDS		Eligible Tier 1 capital 1.1.1+1.1.2+1.1.3+1.1.4+1.1.5
1.1.1	Eligible Capital		1.1.1.1+1.1.1.2+1.1.1.3+1.1.1.4
1.1.1*	Of which: Non-innovative instruments subject to limit		See item 1.1.5.2
1.1.1**	Of which: Innovative instruments subject to limit		Corresponds to the type of instruments referred to in the Basel Committee on Banking Supervision' s press release (Sydney, October 1998). See item 1.1.5.3.
1.1.1.1	Paid up capital		Article 57, sentence 1 lit.(a) of Directive 2006/48/EC. ≈ FINREP: Paid in capital
1.1.1.2	(–) Own shares		Article 57, sentence 2 lit. (i) of Directive 2006/48/EC ≈ FINREP: Treasury shares
1.1.1.3	Share premium		Article 57, sentence 1 lit. (a) of Directive 2006/48/EC ≈ FINREP: Share premium
1.1.1.4	Other instruments eligible as capital		Article 57, sentence 1 lit.(a) of Directive 2006/48/EC See also Guidelines on Prudential Filters for Regulatory Capital (CEBS, 21.12.2004) due to the application of IAS-type accounting rules. This item includes the instruments eligible as original own funds but classified as debt under the IAS-type accounting rules ≈ FINREP: Includes amongst others the item "Other equity:other" and "share capital repayable on demand (e.g. cooperative shares)"
1.1.2	Eligible Reserves		1.1.2.1+1.1.2.2+1.1.2.3+1.1.2.4a+1.1.2.4b+1.1.2.5+1.1.2.6
1.1.2.1	Reserves		Article 57 sentence 1 lit.(b) of Directive 2006/48/EC, including profit and losses brought forward as a result of the application of the final profit or

Thinking Forward.

Data Model
Summary

- defined by business users
  - split in tables
  - view is important
- from IT perspective:
  - identification of data points (reportable information)
    - same information in different tables = single data point
    - explicit description (no assumed default)
  - preserving structures (e.g. maximizing to the largest extend „view orientation")

Thinking
Forward.

XBRL-ready data model development steps

- relations and dependencies between templates
- unique identification of concepts and dimensional items
- exact labeling (reflecting the actual meaning regardless of table context)
- reflecting business rules
- indicating references
- relation to IFRSs or other standards/guidelines/regulations

Need to understand **XBRL architecture** (what is important from XBRL data modeling point of view) in order to define XBRL-ready data model!

Thinking
Forward.

Matrix schema

Identification of data points

XBRL Architecture

Thinking Forward.

Taxonomy in XBRL

XBRL Schema

Linkbases

Concepts and their characteristics

Additional information on concepts (e.g. labels, references, …)

Different kinds of relations between concepts

Additional information on business rules, rendering, etc

Thinking Forward.

Example of taxonomy metadata

Definition of concepts
(in schema)

Issued capital is reported **as of a particular day** as a **monetary amount** (a number referring to a currency).

Accounting balance nature of inventories is **credit**.

Additional information and relations
(in linkbases)

Issued capital is translated into Polish as „Kapitał podstawowy"

Disclosure reference of Issued capital is described by IAS 1, paragraph 54r

Issued capital is reported in Statement of financial position

Issued capital together with Share premium, Treasury shares, etc aggregates to Total equity

...

Thinking
Forward.

Reasons for different taxonomies

- is *Issued capital* always *Issued capital?*

- usually a taxonomy defines the financial terms and relationships between them for only one legal regulation (due to differences in legislation); therefore there is a number of taxonomies worldwide

- taxonomies based on the same legal regulations/standards can import already defined taxonomies and extend (or narrow) their content, e.g. FINREP as extension of IFRS but also modified by CRD

National GAAP

COREP

FINREP

IFRS

FINREP Taxonomy

Credit institutions

IFRS Taxonomy

- why? - comparability benefits

- but - technical consequences and dependency issues

Thinking Forward.

XBRL Architecture – Taxonomy
Taxonomy schema

schema
taxonomy name
definitions of concepts
custom characteristics of concepts
components of dimensional information
customizing sets and types of relations and resources
references to (or embedded) linkbases
references to reused taxonomies

- file with extension *.xsd*
- definitions of concepts (business terms) and dimensional information in a form of <u>unstructured list</u>
- taxonomy may consist of many schema files importing each other (modularization)
- proposal for Eurofiling – single schema for:
  - common eurofiling concepts
  - FINREP concepts
  - COREP concepts
  - each of the dimensional breakdowns in COREP and FINREP (reuse of members across dimensions – TBD)
  - possibly – technical constructs

Thinking
Forward.

XBRL Architecture – Taxonomy
Concepts (primary items)

schema
taxonomy name
definitions of concepts
custom characteristics of concepts
components of dimensional information
customizing sets and types of relations and resources
references to (or embedded) linkbases
references to reused taxonomies

- concept is a business term, e.g. assets, liabilities, revenue, …
- defined in schema using specified syntax to represent concept's characteristics
  - predefined (set of data types, required: period type, …)
  - custom (special attributes, custom data types, …)
- concepts definitions must be independent from contextual information defined in in instance document (entity, period, …) or in taxonomy presentation:
  - Assets of *Microsoft*
  - Interest income *for 2009*
  - Equity, *Beginning balance*
  - Inventories, *Total*
- concept definitions may contain other dimensional information or it can be defined separately, e.g.:
  - Marketing expenses *in the region South America*
  - Revenue *from credit cards*

Thinking
Forward.

XBRL Architecture – Taxonomy
Dimensional information

schema

taxonomy name

definitions of concepts

custom characteristics of concepts

components of dimensional information

customizing sets and types of relations and resources

references to (or embedded) linkbases

references to reused taxonomies

- introduced to XBRL in 2006 (consequence of COREP) – modular extension of XBRL 2.1 Specification
- modeling of databases in sales/production departments (e.g. by regions, by products, by clients, etc.)
- terminology:
  - **dimension:** each of different types of breakdowns for which a concept can broken down (e.g. By instruments breakdown, By counterparty breakdown, …)
  - **domain:** complete breakdown of a dimension (list of financial instruments, list of counterparties), may have subsets (sub domains)
  - **domain member:** each enumeration of a domain (Equity instruments, Debt securities, Loans and advances, Central banks, Governments, Other financial institutions, …)
  - **hypercube:** abstract concept allowing to create an ordered list of dimensions which Cartesian product of members is reportable or is prohibited for (e.g. By instruments and by counterparty breakdown)

Thinking
Forward.

Concepts and dimensional information

concept: **financial assets**

counterparty (dimension)

central banks

governments

other financial institutions

instruments (dimension)

loans and advances

debt securities

equity instruments

< 90 days

90 days to 1 year

over 1 year

past due (dimension)

by counterparty, instruments and past due (hypercube)

*contextual information: **entity, time***

Thinking Forward.

Explicit and typed dimensions

- typed dimension
  - dimension which breakdown structure and content is unknown/infinite or easier to express as a restriction of a base type (e.g. integer between 10 and 20)
  - taxonomy author creates restrictions on the content of a typed domain instead of enumerating all possibilities in form of XBRL elements
  - e.g.: Obligor grade (1-7, 1-20, …)

- explicit dimension
  - dimension which breakdown is know, finite and listed in the taxonomy
  - each member is named, can have labels and references
  - structure of members can be defined in relations (linkbases) and modified in extension taxonomies

Thinking
Forward.

Explicit dimension - Example

Table E. Geographical breakdown of financial assets by residence of the counterparty: carrying amount [IFRS 7.IG18.(c)]

	References	Domestic	EMU countries	Other EU countries	Rest of the world
Financial assets held for trading	IFRS 7.8 (a)(ii); IAS 39.9				
Derivatives held for trading	IAS 39.9				
Equity instruments	IAS 32.11				
Debt securities	IAS 39.9				
Loans and advances	IAS 39.9				
Financial assets designated at fair value through profit or loss	IFRS 7.8 (a) (i); IAS 39.9				
Equity instruments	IAS 32.11				
Debt securities	IAS 39.9				
Loans and advances	IAS 39.9				
Available-for-sale financial assets	IFRS 7.8.(d); IAS 39.9				
Equity instruments	IAS 32.11				
Debt securities	IAS 39.9				
Loans and advances	IAS 39.9				
Loans and receivables	IFRS 7.8.(c); IAS 39.9; IAS 39.AG26				
Debt securities	IAS 39.9				
Loans and advances	IAS 39.9				
Held-to-maturity investments	IFRS 7.8.(b); IAS 39.9; IAS 39.AG26				
Other assets					
Total assets	IAS 39.9				

Thinking Forward.

Typed dimension – Example

22. Scope of the group

Companies consolidated at the end of the reporting period

Entity Name	Entry date	Added or removed	Security Code [eg ISIN code]	Holding company	Share Capital	Equity of Investee	Total assets of Investee	Profit (loss) of Investee	Goodwill link to Investee	Jurisdiction of Incorporation	Accumulated equity interest (%)	Voting rights (%)	Group structure [relationship]	Accounting treatment [IFRS Group]	CRD Group	Activity	Carrying Amount	Acquisition cost	Fair value of investments for which there are published price quotations

Thinking
Forward.

Explicit or typed dimension?

- alternatives
- explicit dimensions recommended
  - higher comparability
  - XBRL functionality in use (labels, hierarchical structures, extending of taxonomies, …)
  - easier to further implement business rules, versioning, rendering, etc.
- typed dimensions where necessary
  - closed reporting of unknown/unlimited breakdowns
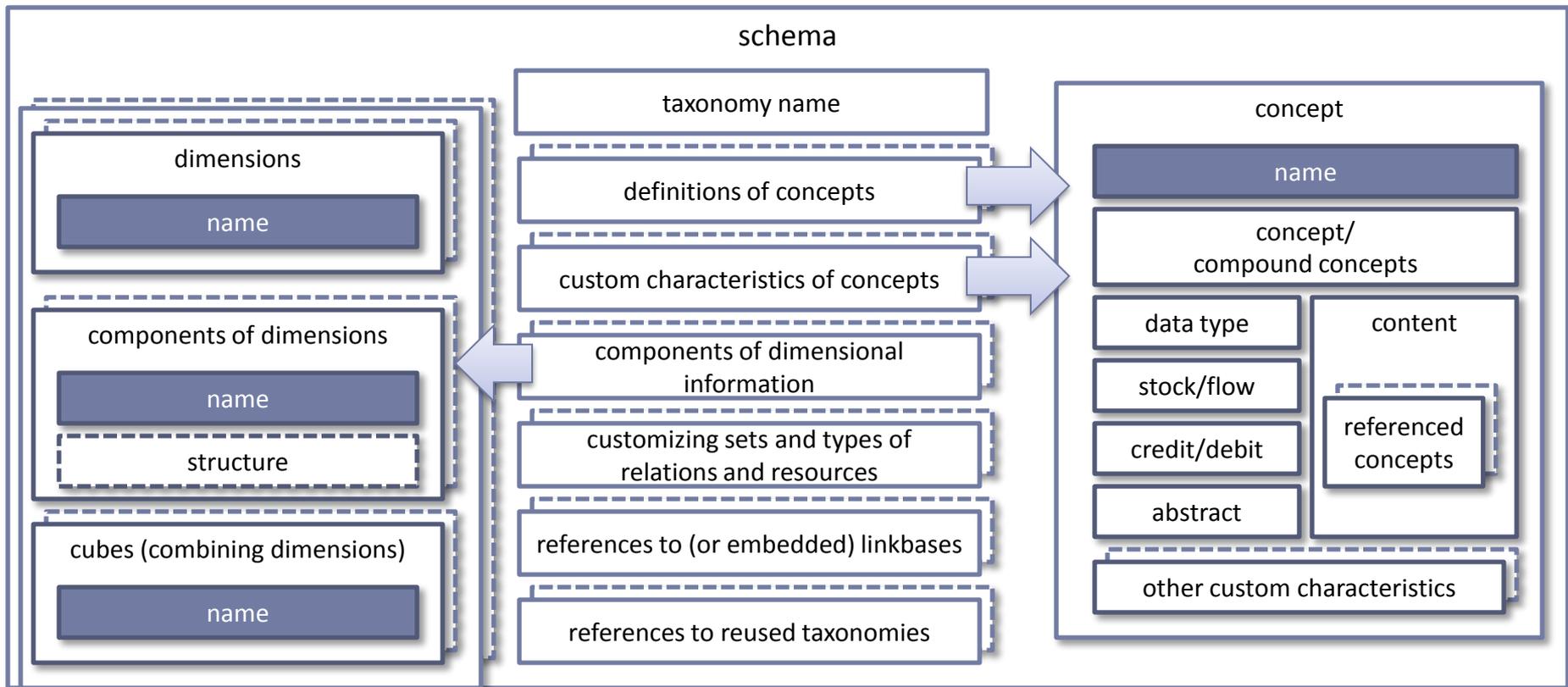 - custom formats (e.g. dates, codes, …)

Thinking
Forward.

Typed dimensions in COREP

Template	Dimension	Name	Value
T-MC	Commodity	Commodity	string
T-MD	BasicInformation	InstrumentCodeRegulatoryModel	{1,2,3,4,12,13,14,23,24,123,124,134,234,1234}
		SpecificRiskEquitiesCalculationCode	{1,2,3,4}
		SpecificRiskDebtInstrumentsCalculationCode	{1,2,3,4}
		PLCodeUsedForCalculationNumberOvershootings	{1,2}
		ConfidenceIntervalInternalVaR	decimal
		HoldingPeriodInternalVaR	decimal
	Day	Day	<1;92>
T-OL	InternalReferenceNumber	InternalReferenceNumber	string
T-GD	ConsolidatedSubgroupsAndRegulatedEntities	Name	string
		Code	string
T-CI	ObligorGradeOrPool	ObligorGradeOrPool	non negative integer
T-CE	ObligorGrade	ObligorGrade	non negative integer
T-SD	SecuritizationInternalCode	SecuritizationInternalCode	string
T-ME	SecuritizationInternalCode	SecuritizationInternalCode	string

Thinking
Forward.

XBRL Architecture – Taxonomy
Concepts and Dimensional information - **Name**

schema

taxonomy name

definitions of concepts

custom characteristics of concepts

components of dimensional information

customizing sets and types of relations and resources

references to (or embedded) linkbases

references to reused taxonomies

concept

name

concept/ compound concepts

data type

stock/flow

credit/debit

abstract

content

referenced concepts

other custom characteristics

dimensions

name

components of dimensions

name

structure

cubes (combining dimensions)

name

Thinking
Forward.

Name and id

- name and id must be **unique** in an XBRL Schema file
- there is a set of characters forbidden in element names and ids
- XML is case sensitive: <asset> ≠ <Asset> ≠ <ASSET>
- name
  - IT: as a qualified name (prefix:localName, e.g.: ifrs:Assets) used in XPath and XQuery (formula linkbase), mapping to data bases, etc
  - can be hidden from users (label is human readable)
- id
  - used to reference a concept definition from linkbases (relations)
  - FRTA rule: id = prefix_name
  - it is not an internal code!
- contradicting requirements:
  - short (for querying, referencing, processing (speed/size), readability, …)
  - meaningful (unique identification, understanding, …)
- applies to concepts and dimensional information (dimensions, breakdowns, hypercubes…)

Thinking
Forward.

Standard naming convention

- construction: **representation of actual human readable label** of a concept
- use of LC3 (Label Camel Case Concatenation)
  - standard label trimmed of spaces and special characters
  - diacritic characters replaces with standard characters
  - e.g. *MovementsInPropertyPlantAndEquipment*
- naming rules, e.g.: *NonCurrentAssets*, *Non-currentAssets*, *AssetsNoncurrent*, *NoncurrentAssets*, …
- pros: human readable and self explanatory (meaning of a concept can be guessed from a name)
- cons:
  - difficult to query and performance issues (larger files) e.g. *DescriptionOfAmountOfAnyGainOrLossRecognisedAsResultOfRemeasuringToFairValueEquityInterestInAcquireeHeldByAcquirerBeforeBusinessCombinationAnd…*
  - versioning issues (if a name is changed but meaning remains the same), e.g.: *DefinedBenefitLiabilityAsset* to *LiabilityAssetOfDefinedBenefitPlans* (change in IFRS Bound Volume but also bugs – inconsistent naming)

Thinking
Forward.

Concept Name Alternatives

- random set of characters (fixed length)
- meaningful code describing at least some of concept's characteristics
  - groups of concepts: assets, liabilities, assets and liabilities, equity, balance sheet items, off-balance sheet items, revenue, costs, profit, loss, profit (loss), income, expenses, income (expenses), gains, losses, gains (losses), cash inflows, cash outflows, cash flows, changes in assets, changes in liabilities, changes in equity, other…
  - dimensions: instruments, counterparty, past due, …
  - relation to version of standards/guidelines/regulations: date, e.g. 201003
  - relation to version of a taxonomy: publication date, e.g. 20101231 (simplifies versioning)
  - indication of specific characteristics of a concept: abstract, data type, period type, ... (simplifies querying by providing hints on expected values and contextual information)

- label expressing meaning is still required! (created according to consistently applied naming convention)

Thinking Forward.

Concept Name
Proposal for COREP/FINREP

- single character to represent concept's characters or data type:
    - A: abstract concepts used for grouping
    - M: monetary item type
    - P: pure item type
    - I: integer item type
    - D: date item type
    - S: string item type
- single character to represent the period type (doesn't apply to abstract items)
    - I: instant
    - D: duration
    - F: forever
- four digits for the year when the concept is first created, e.g. 2009, 2010
- sequential number of 4 digits (more digits could be included as required)

- issue: movement tables (solution with two representation for a single concept – instance and duration)

Thinking
Forward.

Dimensional Construct Name Proposal for COREP/FINREP

- first character:
  - X: for members
  - A: for abstract domain members (not usable, just for grouping)
- four digits for the year when the concept is first created, e.g. 2009, 2010
- sequential number of 3 digits (more digits could be included as required)

remarks:
- 000 - reserved for the default member of the domain
- „domain" – name of typed domain
- dimensions may share domain members
- hypercubes – abstract constructs; not included in the proposal

Thinking Forward.

Name
Proposal for COREP/FINREP - Examples

prefix:localName	Description
finrep:A20100001	abstract element defined in 2010 for the first time
finrep:MI20100002	monetary item, instant period type
finrep:MD2010002	monetary item, duration period type
finrep:II20100003	integer item, instant period type
finrep:DF2010004	date item, forever period type
instrument:X2010000	default member of instruments domain
pastdue:X2010003	member of past due domain
securitycode:domain	typed domain of security code dimension

Thinking
Forward.

Name
Proposal for COREP/FINREP - Consequences

- label needed to determine business meaning (impossible to read instance documents in code) – still need to develop and agree on labeling convention
- it is some kind of versioning solution
  - no need for remappings if only label is changed
  - indication of creation date and relation to version of standards
- more usable instances (smaller in size, faster to send and easier to process)
- ability to communicate error messages base on these codes (shorter, easier to find, XPath/XQuery operates on QNames)
- simpler queries (shorter, XPath/XQuery operates on QNames)
- more effective with combination of dimensional information (also defined using these codes)
- issues for extensions:
  - base taxonomies may use different naming convention (e.g. IFRS)
  - extension taxonomies are recommended to use this approach (national extensions)

Thinking
Forward.

XBRL Architecture – Taxonomy
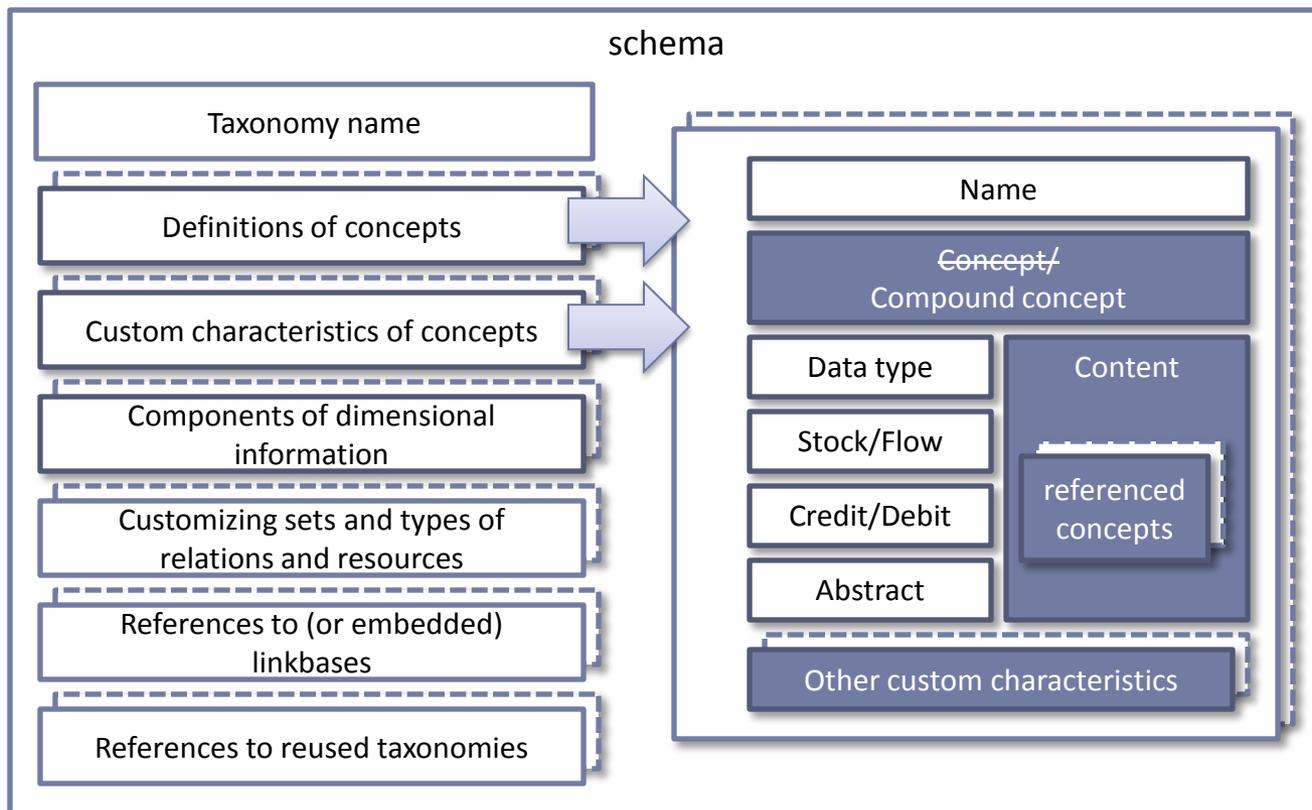## Concept/Compound concepts

Thinking
Forward.

Concept and compound concepts

- *substitutionGroup* attribute
- **concepts** representing financial terms carrying a value (e.g. Assets = 1000 USD) are assigned substitution group *item*
- **compound concepts** grouping other concepts have substitution group *tuple* (e.g. group of concepts: Director name, Director position, Director remuneration) – TBD later

Thinking
Forward.

XBRL Architecture – Taxonomy
Concept (Tuple)

schema

Taxonomy name

Definitions of concepts

Custom characteristics of concepts

Components of dimensional information

Customizing sets and types of relations and resources

References to (or embedded) linkbases

References to reused taxonomies

Name

~~Concept/~~
Compound concept

Data type

Stock/Flow

Credit/Debit

Abstract

Content

referenced concepts

Other custom characteristics

Thinking
Forward.

Compound concepts (Tuples) - Example

Example of a tuple:

Deposit

Description	CarryingValue	EffectiveRateOfReturn
…	…	…

```
<xsd:element id="Deposit" name="Deposit" substitutionGroup="xbrli:tuple">
 <xsd:complexType>
  <xsd:complexContent>
   <xsd:restriction base="anyType">
    <xsd:sequence>
     <xsd:element ref="Description" maxOccurs="unbounded"/>
     <xsd:element ref="CarryingValue"/>
     <xsd:element ref="EffectiveRateOfReturn" minOccurs="0"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="ID" use="optional"/>
   </xsd:restriction>
  </xsd:complexContent>
 </xsd:complexType>
</xsd:element>
```

sequence, choice, all

attributes minOccurs and maxOccurs determinate how many times an *item* element can appear within one *tuple* element in an instance document; default values (1;1) can be omitted;

Thinking Forward.

Compound concepts (Tuples)

- tuples are used to:
  - link concepts that make sense only when treated and analyzed jointly (e.g. director's name and **his** position and remunerations)
  - model tables with unknown number of columns/rows e.g. information about board members, information on subsidiaries, contractors etc.
- as grouping elements tuples don't have financial/accounting characteristics (balance nature, data type etc.)
- tuples don't refer to contextual information in instance documents (entity, period, etc) but elements that they gather may refer to one or many context multiple times across each iteration of a tuple
- tuples can be nested (tuple in a tuple in a tuple…)
- must not be used in dimensional constructions (but elements that they gather may)
- <u>tuples break the XBRL assumption of separating concepts definitions from relations </u>(as all XML complex content constructions tuples are not easily extensible)
- very likely not used in COREP and FINREP (hard to extend) similarly to US-GAAP and IFRS (replaced by dimensions) but still used in SVS (Chile), FINREP (National Bank of Poland), …

Thinking
Forward.

XBRL Architecture – Taxonomy
Concept (Item)

schema

taxonomy name

definitions of concepts

custom characteristics of concepts

components of dimensional information

customizing sets and types of relations and resources

references to (or embedded) linkbases

references to reused taxonomies

name

concept/
~~compound concepts~~

data type

stock/flow

credit/debit

abstract

content

referenced concepts

other custom characteristics

Thinking
Forward.

XBRL Single Concept Definition
Example

Concept

`<xsd:element`	name and id
`name="Assets"` `id="ifrs_Assets"`	data type
`type="xbrli:monetaryItemType"`	single/compound
`substitutionGroup="xbrli:item"`	abstract (non-reportable concept)
`abstract= "false"`	
`nillable="true"`	possibility to report „empty" elements
`xbrli:balance="debit"`	accounting balance nature
`xbrli:periodType="instant"` *(custom attributes)/>*	distinction between stocks and flows

Thinking
Forward.

Data type

Standard (predefined) data types

- each financial concept is characterized by a certain data type in which it can be expressed/ reported, e.g.:
  - monetary values expressed in a certain currency (e.g. Assets = $100,000)
  - numeric values (e.g. number of employees= 5)
  - percentages (e.g. ROE = 20%, yearly depreciation rate of a notebook = 33%)
  - textual values (e.g. "XYZ Ltd. issued 200,000 of shares in order to get founding for an investment in its factory")
  - number of shares
  - fractions (e.g. EPS = $112333/30 Shares instance document contains information on numerator and denominator)

Most popular XBRL data types:

monetaryItemType

decimalItemType
integerItemType

pureItemType with restrictions
(e.g. <0,100> or <0,1>)

stringItemType

sharesItemType

fractionItemType

Thinking
Forward.

Data type

Custom data type

- local (for a particular concept) or global (reused for many concepts)
- modifying predefined data types (restriction, extension)
- enumerated lists, patterns…

```
<xsd:complexType name="CountryItemType">
  <xsd:simpleContent>
    <xsd:restriction base="xbrli:tokenItemType">
      <xsd:enumeration value="Poland"/>
      <xsd:enumeration value="Germany"/>
      <xsd:enumeration value="Italy"/>
    </xsd:restriction>
```

```
<xsd:complexType name="PostCodeItemType">
  <xsd:simpleContent>
    <xsd:restriction base="xbrli:stringItemType">
      <xsd:pattern value="[A-Z]{2}-[0-9]{3}"/>
    </xsd:restriction>
  </xsd:simpleContent>
</xsd:complexType>
```

```
<xsd:complexType name="nonNegativeMonetaryItemType">
    <xsd:simpleContent>
      <xsd:restriction base="xbrli:monetaryItemType">
        <xsd:minInclusive value="0"/>
      </xsd:restriction>
    </xsd:simpleContent>
</xsd:complexType>
```

Thinking
Forward.

Data type

Dimensional Construct Name Proposal for COREP/FINREP

- only standard (base XBRL/predefined) data types:
  - monetaryItemType
  - stringItemType
  - pureItemType
  - dateItemType
  - integerItemType
  - possibly also: sharesItemType, decimalItemType, booleanItemType

- validation for values (non positive, non negative, enumerations) to be defined in value assertions (formula linkbase) - this information need to be delivered by business users (TBD later)

Thinking Forward.

Period type

Stock/Flow

	2008-12-31	2009-06-30	2009-12-31
Assets	110.000	125.000	119.500

Revenue: 255.000 | 80.000 | 335.000

Report 1

Report 2

Report 3

Issue with *revenue* if only one date describes the value

Thinking
Forward.

Stock/Flow

Period type

- attribute *periodType*
- distinguishes between:
  - flows (cash flows, revenue, costs, …), and
  - stocks (assets, liabilities, …)
- possible values
  - "instant" for stocks (reported „as of date")
  - "duration" for flows (reported „for period")
- impossible to define cross-period checks in calculation linkbase
- all possible calculations can be defined in formula linkbase

- proposal for COREP/FINREP
  - standard application of period type
  - some modeling techniques (e.g. movement table) require the same concept to have two representations (instant and duration)
  - currently discussed alternative: everything instant + period dimension (Q, H, Y, …)

Thinking
Forward.

Credit/Debit

Balance nature

Dt	PPE		Cr
Bs.	123.000		
	19.000	20.000	
	15.000		
T.	34.000	20.000	T.
		137.000	Es.
	157.000	**157.000**	

Dt	Liabilities		Cr
		20.000	Bs.
	14.000	12.000	
	2.000		
T.	16.000	12.000	T.
Es.	16.000		
	32.000	**32.000**	

Account	Bs. Dt	Bs. Cr	T. Dt	T. Cr	Es. Dt	Es. Cr
PPE	123.000		34.000	20.000	137.000	
Liabilities		20.000	16.000	12.000		16.000
...						

Thinking Forward.

Credit/Debit

Credit/Debit and required sign for value

	Natural balance:	Expected value:	Alternative:	Expected value:
Assets of increase in assets	debit	positive or zero	debit	positive or zero
Decrease in assets	credit	positive or zero	credit	negative or zero
Liabilities or increase in liabilities	credit	positive or zero	debit	negative or zero
Decrease in liabilities	debit	positive or zero	credit	positive or zero
Equity, increase in equity	credit	positive or zero	debit	negative or zero
Decrease in equity	debit	positive or zero	credit	positive or zero
Revenue	credit	positive or zero	credit	positive or zero
Costs	debit	positive or zero	credit	negative or zero
Profit	credit	positive or zero	credit	positive or zero
Loss	debit	positive or zero	credit	negative or zero

- balance attribute is required (SHOULD) only for *balance sheet* and *income statement* concepts (according to best practices) but may and is recommended to be used wherever applicable
- best practice: natural balance (positive values expected)

Thinking Forward.

Credit/Debit

Consequences for rules

Assets	1200	Dt
Equity	700	Cr
Liabilities	500	Cr

Rule: Assets = Equity + Liabilities

Revenue	2000	Dt
Cost	2200	Dt
Profit (Loss)	-200	Dt

Rule: Revenue - Costs = Profit (Loss)

Assets	1200	Dt
Equity	-700	Dt
Liabilities	-500	Dt

Rule: Assets = - Equity - Liabilities

Revenue	2000	Dt
Cost	-2200	Dt
Profit (Loss)	-200	Dt

Revenue + Costs = Profit (Loss)

- calculation linkbase checks allow for summation of concepts with the same balance nature and subtracting concepts with opposite balance nature
- issues in case of *cash flow statement*
- some taxonomies don't use it (e.g. COREP) and other consider to replace it with something else like labels, calculation rules, … (e.g. IFRS)

Thinking
Forward.

Credit/Debit

Balance nature
Proposal for COREP/FINREP

- use only for instant concepts (where applicable)
- formula linkbase perspective
  - indifferent when defining rules
  - allows for additional filtering (e.g. expected positive/negative values)

Thinking
Forward.

Abstract

Abstract

Statement of financial position, current/non-current classification

Assets

Non-current assets

Property, plant and equipment	X
Investment property	X
Goodwill	X
Intangible assets other than goodwill	X
Investment accounted for using equity method	X
Biological assets	X
Deferred tax assets	X
Other non-current financial assets	X
Other non-current non-financial assets	X
Total non-current assets	X

Current assets

Inventories	X
Trade and other receivables	X
Current tax assets	X
Other current financial assets	X
Other current non-financial assets	X
Cash and cash equivalents	X
Total current assets other than assets or disposal groups classified as held for sale	X
Non-current assets or disposal groups classified as held for sale	X
Total current assets	X

Thinking Forward.

Credit/Debit

Abstract

- *abstract* attribute on concept
- **determines if an element can appear in an instance document**
- elements with the value *"true"* of this attribute are used for **headers** in hierarchical ordering of taxonomy structure for the presentation purposes and must not be reported
- for abstracts all other characteristics (data and period type) are not important (no semantic meaning) although they should be defined consistently (based on some rules)

- note:
  - in standard naming convention in order not to occupy unique names for meaningful concepts all abstract have added words „Presentation" or „Abstract" to their names, e.g. *AssetsAbstract* vs.. *Assets*

Thinking
Forward.

Custom attributes

Customization of concept definition

- concepts may have other than standard (custom) attributes
- semantic meaning disregarded by unaware processors
- IFRS taxonomy example:

```
<xsd:element name="IssuedCapital" id="ifrs_IssuedCapital"
        type="xbrli:monetaryItemType"
        info:creationID="i200806241028412965"
        substitutionGroup="xbrli:item" nillable="true"
        xbrli:balance="credit" xbrli:periodType="instant"/>
```

Thinking
Forward.

Concepts and dimensional information (1)

only concepts

few concepts, many dimensions

- each data point defined with a concept
- high number of concepts
- easy to define, difficult to maintain
- significant consequences of little changes to data model

- each data point defined as a concept in a combination of dimensions
- lower number of elements in total (Cartesian product)
- distinguishing between concepts and dimensions not easy
- supports maintenance: relation concept-breakdown is stable but components of breakdowns tend to change

+ impact on modeling when trying to maximize „view orientation" (e.g. patterns)

Thinking Forward.

Concepts and dimensional information (2)

- which is a concept, what is a breakdown?

Balance sheet

Assets	
PPE	
Buildings	
Machinery	
Vehicles	
...	...

Movements analysis

	PPE	Buildings	Machinery	Vehicles	...
Beginning balance					
Changes					
Increases					
Decreases					
Ending balance					

- alignment with:
  - design of data bases
  - architecture of major taxonomies (especially IFRS)
- overlapping breakdowns and reuse of members in different breakdowns – TBD later

Thinking
Forward.

Modeling - Concept or dimension?

Table C. Geographical breakdown of financial liabilities by residence of the counterparty: carrying amount

	References	Domestic	EMU countries	Other EU countries	Rest of the world
Financial liabilities held for trading	IFRS 7.8 (e) (ii); IAS 39.9 AG 14-15				
Derivatives held for trading	IAS 39 AG 15 (a)				
Short positions	IAS 39 AG 15 (b)				
Deposits	IFRS 7.B12, IG 31				
Debt securities issued	IAS 39 AG 15 (c)				
Other financial liabilities	IAS 1.77; CP				
Financial liabilities designated at fair value through profit or loss	IFRS 7.8 (e) (i); IAS 39.9				
Deposits	IFRS 7.B12, IG 31				
Debt securities issued	IAS 39 AG 15 (c)				
Other financial liabilities	IAS 1.77; CP				
Financial liabilities measured at amortised cost	IFRS 7.8 (f)				
Deposits	IFRS 7.B12, IG 31				
Debt securities issued	IAS 39 AG 15 (c)				
Other financial liabilities	IAS 1.77; CP				
Total liabilities					

at least one concept is necessary

- 1 concept - 3 dimensions (# of members: 6, 4, 4)
- 4 concept - 2 dimensions (# of members: 6, 3)
- 6 concepts - 2 dimensions (# of members: 4, 3)
- 15 concepts - 1 dimensions (# of members: 4)
- 20 concept - 1 dimension (# of members: 4)
- ? concepts – ? dimensions (# of members: ?)
- hidden dimensions:
    - measurement - carrying amount, notional amount, fair values
    - consolidation scope (CRD/IFRS)
    - counterparty

Thinking Forward.

Resulting normalized table (one of alternatives)

Financial liabilities, *carrying amount*		domestic	EMU countries	other EU countries	rest of the world
total portfolio	total instruments				
	derivatives	▓	▓	▓	▓
	short positions	▓	▓	▓	▓
	deposits	▓	▓	▓	▓
	debt certificates	▓	▓	▓	▓
	other financial liabilities	▓	▓	▓	▓
held for trading	Total instruments				
	derivatives				
	short positions				
	deposits				
	debt certificates				
	other financial liabilities				
designated at fair value through profit or loss	Total instruments				
	derivatives		▓	▓	▓
	short positions		▓	▓	▓
	deposits				
	debt certificates				
	other financial liabilities				
measured at amortised cost	Total instruments				
	derivatives		▓	▓	▓
	short positions		▓	▓	▓
	deposits				
	debt certificates				
	other financial liabilities				

Thinking Forward.

Normalized tables
Initial Foundations

- keeping all the information (labels, structures, references, etc)
- unification of presentation
  - clear separation of measures from dimensions
  - applicable combinations only:
    - exclusions
    - initial division into XBRL logical ELRs (some tables split in many) - TBD
- additional columns for defining:
  - XBRL concepts characteristics for measures (unique and meaningful element name/code, period type, balance, data type, abstract)
  - alignment with IFRS taxonomy and bound volume concepts together with comments and suggestions to this alignment

Statement of financial position	Carrying amount		XBRL Element Name	Period type	Balance	Data type	Abstract	Suggested IFRS element	Comments to suggested IFRS element
Assets				instant	debit	monetary	true	AssetsAbstract	
Cash				instant	debit	monetary	false	Cash and cash equivalents	= "Cash on hand" + "Balances with banks" + pa
Financial assets held for trading				instant	debit	monetary	false	Financial assets at fair value through	What about "Financial assets at fair value throu
Financial assets designated at fair value through profit or				instant	debit	monetary	false	Financial assets at fair value through	What about "Financial assets at fair value throu
Available-for-sale financial assets				instant	debit	monetary	false	Financial assets available-for-sale	

Thinking
Forward.

Normalized tables – Example 1
Table 5D (base)

Thinking Forward.

Normalized tables – Example 2
Table 5D (modified)

XBRL characteristics of measures and possible IFRS counterparts (with comments)

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COREP
Concepts and Dimensions

- number of concepts: 384 (inc. 74 abstract)
- dimensions
  - 12 explicit
  - 9 typed – (1 file: d-ty)
- files: 233
- anticipated number of records:
  - max: 20.000
  - SA: 12.000 (max)
  - IRB: 15.000 (max)

Thinking
Forward.

COREP Data model
Concepts and Dimensions

Thinking Forward.

FINREP
Concepts and Dimensions

	Total	IFRS	FINREP
Measures	2089	379	1710
of which: reportable	1846	362	1484
Domain members	51		
Dimensions	12		
Hypercubes	20		
Templates	40		
Contexts	~ 110		
Records	~ 3000	~ 500	~ 2500
Files	320	4	316

Thinking
Forward.

FINREP 1.3 Dimensions

- Counterparties
- Equity Instruments
- Past-Due
- Valuation Model
- Consolidation Approach
- Investment Types

- Portfolio
- Financial Assets
- Related Parties
- Scope of Consolidation
- Entity Name
- Defined Benefit Plan

Thinking
Forward.

FINREP 1.3 - Concepts and Dimensions

5. **Available-for-sale financial assets**

		Fair value of unimpaired assets	Fair value of impaired assets	**Total net carrying amount**		(Impairment)
	References	CP	*IAS 39.58-70*			*IAS 39.67-70*
Equity instruments	*IAS 32.11*	343	87	430		21
Debt instruments	*IAS 39.9*	270	15	285		21
Loans and advances	*IAS 39.9*	270	15	285		23
Total		883	117	1000		65

Equity instruments	*IAS 32.11*	343	87	430		21
I-2006-12-EquityInstrumentsAtCost		200	15	215	0	4,2
I-2006-12-EquityInstrumentsQuoted		43	43	86	0	8,4
I-2006-12-EquityInstrumentsUnquotedButF		100	29	129	0	8,4
		0	0	0		0
Debt instruments	*IAS 39.9*	270	15	285		21
I-2006-12-CentralGovernments		69	2,25	71,25	0	4,2
I-2006-12-CreditInstitutions		80	5,5	85,5	0	4,2
I-2006-12-NonCreditInstitutions		26	2,5	28,5	0	4,2
I-2006-12-Corporates		55	2	57	0	4,2
I-2006-12-Retail		40	2,75	42,75	0	4,2
		0	0	0		0
Loans and advances	*IAS 39.9*	270	15	285		23
I-2006-12-CentralGovernments		69	2,25	71,25	0	4,6
I-2006-12-CreditInstitutions		80	5,5	85,5	0	4,6
I-2006-12-NonCreditInstitutions		26	2,5	28,5	0	4,6
I-2006-12-Corporates		55	2	57	0	4,6
I-2006-12-Retail		40	2,75	42,75	0	4,6
		0	0	0		0

Measures on intersections of rows and columns

Dimensions

Dimension defaults (Totals)

Calculation checks (MS Excel only)

Calculation checks (taxonomy level)

Thinking
Forward.

Matrix schema terminology

- **primary item:** a concept (basic accounting term that can be reported with a value, e.g.: Financial assets, Financial liabilities, Equity, …)
- **dimension:** each of different types of breakdowns for which a concept can broken down (e.g. By instruments breakdown, By counterparty breakdown, …)
- **domain:** complete breakdown of a dimension (list of financial instruments, list of counterparties), may have subsets (sub-domains) – it is a superset of subsets
- **domain member:** each enumeration of a domain (Equity instruments, Debt securities, Loans and advances; Central banks, Governments, Other financial institutions, …)
- **sub-domain:** subset of a domain containing a number of its members applicable in a specific table or its sections to a primary item (e.g. Equity instruments, Debt securities)

- **table**, **section** – TBD later

Thinking Forward.

Matrix schema - Development

1. analyze the entire data model (e.g.. FINREP Tables)
   1. look for basic terms (concepts)
   2. initially distinguish possible breakdowns (repetitive structures, sub-structures in hierarchies, etc), name them and list all their components from all tables (domains)
2. analyze data model table by table
   1. name and list all concepts maintaining the hierarchy in each table
   2. for each concept or set of concepts that share the same dimensional information in a table
      1. identify each of applied dimensions
      2. for each dimension select applicable members (subdomain), if a member is missing expand a domain by this member (mind consistency and overlapping issues)
      3. assign subdomains to concepts for each dimension (there must be no exclusions)
* currently discussed:
   ▫ names (codes) for concepts (primary items) and their other XBRL characteristics
   ▫ names (codes) for members of dimensions
   ▫ tables and sections - TBD

Thinking
Forward.

Normalized table
as a graphical representation of Matrix schema

- matrix schema in a tabular view
- link between data model and matrix schema
  - easier to understand by business users
  - ultimate aim: replace currently used data model
- issues:
  - what in rows and what in columns (and in what order)?
  - exclusions?
  - should combine/split current tables?

Thinking
Forward.

Matrix Schema

- COREP
- FINREP 1.3
- Revised FINREP
- Let's try it!

Thinking
Forward.

Summary of XBRL schema from data model perspective

XBRL schema is an unstructured list of:

- concepts
    - uniquely identify and name financial terms that are exchanged (**can** be reported)
    - defining certain characteristics of concepts (e.g. data type, period)
- dimensional components
    - identification of possible breakdowns (dimensions) and their components (members)

Semantic needed:

- documentation of concepts in a form of human readable description (label) and reference to standards/guidance/regulations
- relations between concepts (e.g. hierarchical allowing for easier browsing of a taxonomy)
- assigning concepts with dimensional information (linking concept with applicable dimensions)

Thinking
Forward.

Thinking Forward.

Architecture design

Representing required data

BRAG

XBRL Architecture – Taxonomy
Linkbases

linkbase (relations)

schema

taxonomy name

definitions of concepts

custom characteristics of concepts

components of dimensional information

customizing sets and types of relations and resources

references to (or embedded) linkbases

references to reused taxonomies

identification and naming of sets of relations

custom types of relations

custom types of resources

references to custom sets and types of relations and resources

set of relations

relations between concepts (different types of relations)

relations between concepts and resources

relations between resources

Thinking
Forward.

Linkbases – *General information*

- provide additional information (metadata) about defined concepts
- when building taxonomies, apart from creating elements and defining their characteristics, it is necessary to define:
  - **labels** in one or more languages and depending on the place in which elements appear in the taxonomy (label linkbase)
    - EN: Inventories, PL: Zapasy
  - **references** to external resources, which ensure consistency with accounting standards and contain information explaining an element as well as examples of a certain disclosure in financial statement
    - Inventories measurement: IAS 2, paragraph 9
  - **relationships** between elements according to various criteria (hierarchy, dependency rules, …)
    - Inventories appear in Statement of financial position and disclosures on assets
    - Inventories are sum of Merchandise, …
  - **dimensional information** indentifying breakdowns in which a concept can be reported
    - Inventories can be reported in breakdown for types of products
  - **other** necessary custom characteristics

Thinking
Forward.

Linkbases – *Technical information*

- may be „embedded in" XML Schema file or instance document (report) – this solution is not recommended as it decreases extensibility and flexibility as well as possibility of modularization (division into files has secondary priority)

- file extension: *.xml*

- root element: *<link:linkbase>*

- necessity of declaring *roles* and *arcroles* used on extended links, locators and resources (except from standard *roles* and *arcroles* defined by the spec)

- linkbases make use of XML technologies:

  - **XLink** (XML Linking Languages) which enables creating hyperlinks in XML documents

  - **XPointer** (XML Pointing Languages) which is used for finding fragments inside of XML and XBRL documents (e.g. element definitions in XBRL Schema files)

- when building relationships it is necessary to indicate relevant elements and/or external resources and determine the type of the relation

Thinking
Forward.

Linkbases – *Components: Definitions*

- **extended link** – set of **relations** representing particular piece of a report (e.g. statement or disclosure) „named" by a **role**

- **relation** – consists of **two locators** or **one locator and one resource** or **two resources** and an **arc** which **arcrole** describes the type and characteristics of this relation

- **locator** – points to an element defined in XBRL Schema file

- **resource** – a label or a reference of a particular type defined by its **role**

- **arc** – connects two locators or a locator and a resource

- **arcrole** – describes the type of a relation

- **role** – characteristics/type of an extended link or a resource

Thinking
Forward.

Linkbases – *Components: Relationships*

Thinking
Forward.

Linkbases – *Example of a relation*

relation

```
<loc xlink:type="locator"
        xlink:href="schema.xsd#p_Assets"
        xlink:label="Assets_Locator"/>
<loc xlink:type="locator"
        xlink:href="schema.xsd#p_CurrentAssets"
        xlink:label="CurrentAssets_Locator"/>
<(...)Arc xlink:type="arc"
        xlink:arcrole="(...)"
        xlink:from="Assets_Locator" xlink:to="CurrentAssets_Locator"/>
```

locator: points to an element defined in XBRL Schema

arc

arcrole: characteristics/type of an arc

Thinking Forward.

linkbase

references to custom sets and types of relations and resources

schema

concepts

custom names of sets of relations (role)

custom sets of relations (extended links)

custom relations (arcs)

custom types of relations (arcrole)

custom resources

custom types of resources (role)

custom contents of resources (e.g. parts)

set of relations — role

locator	link (href)	label	
locator	link (href)		label

arc	arcrole	from/to	from/to	use	priority
	other attributes: order, weight, prefer label, usable, context element, *custom*				

set of relations — role

locator	link (href)	label	
resource	role		label	*custom content and attributes*
arc	arcrole	from/to	from/to	use	priority	*custom*

set of relations — role

resource	role	label		*custom content and attributes*
resource	role		label	*custom content and attributes*
arc	arcrole	from/to	from/to	use	priority	*custom*

thinking Forward.

Sets of relation - Types

o   different kinds of sets of relations

o   additional documentation:
- label
- reference
- generic (custom)

o   relations between concepts:
- presentation
- calculation
- definition
- generic (custom)

o   dimensional information:
- definition

o   other
- generic (custom)

Thinking Forward.

Sets of relation - Names

- o splitting linkbases in sections
- o gathering relations that have something in common
- o e.g.:
  - hierarchy of concepts in *Income statement*
  - labels to be used for concepts in *Balance sheet*
  - references of a concept relating to a particular dimensional breakdown
  - set of business rules applicable for a particular table (e.g. *CR-SA*)
  - ...

Thinking Forward.

Sets of relations

- *(extended) link* – collection (set) of relations within a linkbase used in taxonomies to split information in linkbases:

  - into smaller, logical 'chunks' (each statement and each note separately)

  - in order to allow for different classifications of concepts (necessary when one concept has different subelements in **different breakdowns**), e.g.:

ELR1: Profit and loss statement (by nature)	
Gross profit (loss)	
+	Revenue from sales
-	Operating costs

=

ELR2: Profit and loss statement (by function)	
Gross profit (loss)	
+	Profit (loss) on sales
-	Costs of sales
-	Costs of administration

- name of extended link is defined by its *role* hence: *extended link role (ELR)*

- the same *extended link role* may be used in many files (extensions and modular frameworks) and as a result all of the relations defined in different files land in a single extended link role (which allows for modularization and extending taxonomies)

Thinking
Forward.

Defining names of sets of relations (*roles* used on *extended links*)

- predefined (standard):
  - *http://www.xbrl.org/2003/role/link*
  - *http://www.xbrl.org/2008/role/link* (generic link)

- custom:
  - definition in XBRL schema:
    - *roleURI, id* – identification and linking
    - *definition* – human readable name (<u>lack of mechanism for translation by extension taxonomies </u>)
    - *usedOn* – indicates extended link (or locator/resource – TBD later) where the role can be applied (BP: allow all)
  - reference to definition from a linkbase

Custom extended link roles - *Example*

definition in the XBRL schema file:

```
<link:roleType roleURI="http://www.br-ag.eu/role/StatementOfFinancialPosition" id="StatementOfFinancialPosition">
    <link:definition>Statement of financial position</link:definition>
    <link:usedOn>link:presentationLink</link:usedOn>
    <link:usedOn>link:calculationLink</link:usedOn>
    <link:usedOn>link:definitionLink</link:usedOn>
</link:roleType>
<link:roleType roleURI="http://www.br-ag.eu/role/ProfitAndLossStatement" id="ProfitAndLossStatement">
    <link:definition>Profit and loss statement</link:definition>
    <link:usedOn>link:presentationLink</link:usedOn>
    <link:usedOn>link:calculationLink</link:usedOn>
    <link:usedOn>link:definitionLink</link:usedOn>
</link:roleType>
```

use in the presentation linkbase:

```
<link:roleRef roleURI="http://www.br-ag.eu/role/BalanceSheet" xlink:type="simple" xlink:href="schema.xsd#StatementOfFinancialPosition"/>
<link:roleRef roleURI="http://www.br-ag.eu/role/BalanceSheet" xlink:type="simple" xlink:href="schema.xsd#ProfitAndLossStatement"/>

<link:presentationLink xlink:type="extended"  xlink:role="http://www.br-ag.eu/role/StatementOfFinancialPosition">
    <!-- Definitions of presentation relationships in statement of financial position-->
</link:presentationLink>

<link:presentationLink xlink:type="extended"  xlink:role="http://www.br-ag.eu/role/ProfitAndLossStatement">
    <!-- Definitions of presentation relationships in profit and loss statement -->
</link:presentationLink>
```

Thinking
Forward.

FINREP 1.3 and COREP

- differences in naming due to different structuring
    - COREP
    - FINREP 1.3
- even COREP itself is inconsistent:
    - "/hc" or "/...Hypercube"
    - "/hcExcluded" or "/Exc...Hypercube"

Thinking
Forward.

Eurofiling proposal for roles on extended links

Extended link purpose	Role URI
Domain definition	{framework URI}/role/domain/domain-abbreviation e.g. http://www.c-ebs.org/eu/fr/esrs/finrep/role/domain/instrument
Sub-domain definition	{framework URI}/role/domain/domain-abbreaviation/subdomain-abbreviation e.g. http://www.c-ebs.org/eu/fr/esrs/finrep/role/domain/instrument/1
Default dimension member definitions	{eurofiling framework URI}/role/dimension-defaults e.g. http://www.c-ebs.org/eu/fr/esrs/eurofiling/role/dimension-defaults
Table	{framework URI}/role/table/table-abbreviation e.g. http://www.c-ebs.org/eu/fr/esrs/finrep/role/table/t1
Section	{table extended link role}/section-code e.g. http://www.c-ebs.org/eu/fr/esrs/finrep/role/statement/t1/p1s1
Formula	{framework URI}/role/formula
Labels	http://www.xbrl.org/2003/role/link
Global references	http://www.xbrl.org/2003/role/link
Table specific references	Table extended link

- definition (description) – to be defined

- issues: impossible to modify on national level (national language and different numbering of tables)

Thinking
Forward.

Sets of relation - Types

presentation

calculation

generic

(extended) links

definition

reference

label

- human readable description of a concept
- elements' names can be effective for consuming applications but unreadable for the taxonomy users, e.g.:

    StatementThatFinancialStatementsAndCorrespondingFiguresForPreviousPeriodsHaveBeenRestatedForChangesInPurchasingPower

  or codes

    MI20101121

- XBRL enables assigning many different labels for each one element:
  - depending on context (type of relationship and placement of an element in a financial statement)
  - depending on language used
  - containing documentation

Thinking
Forward.

Label linkbase
Example of multilingual labels

```
<label xlink:type="resource"
    xlink:role="http://www.xbrl.org/2003/role/label"
    xlink:label="ifrs_Assets_lbl"
    xml:lang="en">Assets, Total</label>
<label xlink:type="resource"
    xlink:role="http://www.xbrl.org/2003/role/label"
    xlink:label="ifrs_Assets_lbl"
    xml:lang="de">Vermögenswerte, Gesamt</label>
<label xlink:type="resource"
    xlink:role="http://www.xbrl.org/2003/role/label"
    xlink:label="ifrs_Assets_lbl"
    xml:lang="pl">Aktywa, Razem</label>
```

locators' and arcs' definitions are intentionally omitted here for slide's clarity reasons

Thinking Forward.

Label linkbase
Example of contextual labels

```
Balance Sheet, Classified Format
  Balance Sheet (Presentation)
    Assets (Presentation)
      Assets, Non-Current (Presentation)
        Property, Plant and Equipment, Net
        Investment Property
        Intangible Assets, Net
        Biological Assets, Non-Current
        Investments in Subsidiaries, at Cost
        Investments in Associates, at Cost
        Investments in Joint Ventures, at Cost
```

```
Explanatory Disclosures on Assets
  Assets Disclosures
    Property, Plant and Equipment Disclosures
      Movements in Property, Plant and Equipment (Presentation)
        Movements in Construction in Progress
        Movements in Land
        Movements in Buildings, Net
        Movements in Plant and Equipment, Net
        Movements in IT Equipment, Net
        Movements in Fixtures and Fittings, Net
        Movements in Motor Vehicles, Net
        Movements in Leasehold Improvements, Net
        Movements in Other Property, Plant and Equipment, Net
        Movements in Property, Plant and Equipment, Net
          Property, Plant and Equipment, Net, Beginning Balance
          Changes in Property, Plant and Equipment, Net (Presentation)
          Property, Plant and Equipment, Net, Ending Balance
```

```
<label xlink:type="resource"
        xlink:role="http://www.xbrl.org/2003/role/label"
        xlink:label="ifrs-gp_PropertyPlantAndEquipment_lbl"
        xml:lang="en">Property, Plant and Equipment, Net</label>
<label xlink:type="resource"
        xlink:role="http://www.xbrl.org/2003/role/periodStartLabel"
        xlink:label="ifrs-gp_PropertyPlantAndEquipment_lbl"
        xml:lang="en">Property, Plant and Equipment, Opening Balance</label>
<label xlink:type="resource"
        xlink:role="http://www.xbrl.org/2003/role/periodEndLabel"
        xlink:label="ifrs-gp_PropertyPlantAndEquipment_lbl"
        xml:lang="en">Property, Plant and Equipment, Closing Balance</label>
<label xlink:type="resource"
        xlink:role="http://www.xbrl.org/2003/role/terseLabel"
        xlink:label="ifrs-gp_PropertyPlantAndEquipment_lbl"
        xml:lang="en">PPE</label>
```

- preferred label attribute in presentation linkbase

locators' and arcs' definitions are intentionally omitted here for slide's clarity reasons

Thinking Forward.

Other

Types of labels (standard and custom roles of labels) :

- related to reported value, e.g. *Profit (Loss)*: *Profit* when value if positive (positiveLabel) or *Loss* when value is negative (negativeLabel)

- containing word *Total* (totalLabel)

- short label in context of a particular table (e.g. „*- from related parties"*) (terseLabel)

Sets of labels (custom roles on label link):

- related to placement (in different notes) and containing order numbers

Unique codes based on a pattern (support for mapping and versioning) - alternative to naming elements using codes

Thinking
Forward.

Label linkbase
Predefined types of labels

role	meaning
label	Standard label for a concept.
terseLabel	Short label for a concept, often omitting text that should be inferable when the concept is reported in the context of other related concepts.
verboseLabel	Extended label for a concept, making sure not to omit text that is required to enable the label to be understood on a stand alone basis.
positiveLabel **positiveTerseLabel** **positiveVerboseLabel** **negativeLabel** **negativeTerseLabel** **negativeVerboseLabel** **zeroLabel** **zeroTerseLabel** **zeroVerboseLabel**	Label for a concept, when the value being presented is positive (negative, zero). For example, the standard and standard positive labels might be "profit after tax" and the standard negative labels "loss after tax", the terse label and terse positive labels might both be "profit", while the negative terse label might be "loss".
totalLabel	The label for a concept for use in presenting values associated with the concept when it is being reported as the total of a set of other values.
periodStartLabel **periodEndLabel**	The label for a concept with periodType="instant" for use in presenting values associated with the concept when it is being reported as a start (end) of period value.
documentation	Documentation of a concept, providing an explanation of its meaning and its appropriate usage and any other documentation deemed necessary.
definitionGuidance	A precise definition of a concept, providing an explanation of its meaning and its appropriate usage.
disclosureGuidance	An explanation of the disclosure requirements relating to the concept. Indicates whether the disclosure is · mandatory (i.e. prescribed by authoritative literature); · recommended (i.e. encouraged by authoritative literature; · common practice (i.e. not prescribed by authoritative literature, but disclosure is common); · structural completeness (i.e., included to complete the structure of the taxonomy).
presentationGuidance	An explanation of the rules guiding presentation (placement and/or labelling) of this concept in the context of other concepts in one or more specific types of business reports. For example, "Net Surplus should be disclosed on the face of the Profit and Loss statement".
measurementGuidance	An explanation of the method(s) required to be used when measuring values associated with this concept in business reports.
commentaryGuidance	Any other general commentary on the concept that assists in determining definition, disclosure, measurement, presentation or usage.
exampleGuidance	An example of the type of information intended to be captured by the concept.

Thinking
Forward.

Labels

- COREP (Data model, Taxonomy)
- FINREP 1.3 (Data model, Taxonomy)
- Revised FINREP Data model

issues:

- standard label (labeling convention, e.g. IFRS)
- single concept with different labels in different tables

Thinking
Forward.

Unique identification of concepts
Labeling convention (1)

- unifying labels across templates (e.g. *Derivatives – Hedge accounting* vs.. *Derivatives held for hedging; Assets* vs.. *Financial assets*)

8. Derivatives - Hedge accounting		Carrying amount		Notional amount	
By type of risk	By product or by type of market	Assets	Liabilities	Assets	Liabilities
Interest rate	OTC options				

- consistent structure of names that consist of many components, e.g.:

Financial assets without derivatives held for hedging	Entirely recognized	Original assets, Total	IFRS 7.13 (c)
		Of which securitization	
		Associated liability	IFRS 7.13 (c)
	Recognized by the entity's continuing involvement	Original assets, Total	IFRS 7.13 (d)
		Part of asset still recognised [continuing involvement]	
		Of which securitization	
		Associated liability	IFRS 7.13 (d)
	Derecognised for capital purposes		CRD Art.94
	Entirely derecognized		
Financial assets held for trading	Entirely recognized	Original assets, Total	IFRS 7.13 (c)
		Of which securitization	
		Associated liability	IFRS 7.13 (c)
	Recognized by the entity's continuing involvement	Original assets, Total	IFRS 7.13 (d)
		Part of asset still recognised [continuing involvement]	
		Of which securitization	
		Associated liability	IFRS 7.13 (d)
	Derecognised for capital purposes		CRD Art.94

Thinking
Forward.

Unique identification of concepts
Labeling convention (2)

- distinction in names of same labeled concepts for assets and liabilities or for incomes and expenses (e.g. *Derivatives – Hedge accounting*, *Custody,* etc.) - issue not valid when using dimensions for these breakdowns

- elimination of unused characters (e.g. -, ., /, …) and words/expressions (e.g. *Amount of…*: *Amount of cumulative change in the fair values attributable to changes in the credit risk*)

- removing unnecessary/explanatory components, e.g.:

  - *Amounts not recognised as an asset, due to limits <u>of para 58 (b)</u>*

  - *Issuance of Other Equity Instruments <u>[e.g. options, warrants..]</u>*

  (references, documentation label, …)

Thinking
Forward.

Sets of relation - Types

presentation

generic

calculation

(extended) links

reference

definition

label

- gives legal basis for concepts defined by a taxonomy (concepts without legal basis should not be created)
- examples
  - IFRS-GP taxonomy refers to IFRS Bound Volume (book)
  - PL-DTS taxonomy refers to Polish Accounting Act
  - COREP taxonomy refers to
    - EU Directive (in the CEBS version)
    - local regulations (in national extensions of COREP)
- reference linkbase does not contain text of the regulations but only the reference to their structure (paragraph, clause, point …) *[but: text of the regulation can be embedded in label linkbase as documentation – see old US-GAAP taxonomy]*

Thinking
Forward.

Reference linkbase
Structure of references - *Reference parts (1)*

- predefined:
  - *http://www.xbrl.org/2004/ref*
  - *http://www.xbrl.org/2006/ref*

Element	Documentation
Appendix	Refers to the name of an Appendix, which could be a number or text.
Article	Article refers to a statutory article in legal material.
Chapter	For a publication that uses chapters, this part should be used to capture this information. Chapters are not necessarily numbered.
Clause	Sub component of a sub paragraph.
Example	Example captures examples used in reference documentation.
Exhibit	Exhibit refers to exhibits in reference documentation.
Footnote	Footnote is used to reference footnotes in reference information.
IssueDate	The issue date of the specific reference. The format is CCYY-MM-DD.
Name	Name refers to the specific publication. For example, "Statement of Financial Standards", "Statement of Position" or "IFRS". It does not include the number.
Note	Notes can contain reference material; use this element when the note is published as a standalone document.
Number	Number is used to record the actual number of the specific publication. For example, the number for FAS 133 would be 133.
Page	Page number of the reference material.
Paragraph	Paragraph is used to refer to specific paragraphs in a document.
Publisher	Publisher of the reference material, such as SEC, FASB, or AICPA.
Section	Section is used to capture information typically captured in sections of legislation or reference documents.
Sentence	In some reference material individual sentences can be referred to, and this element allows them to be referenced.
Subclause	Subcomponent of a clause in a paragraph.
Subparagraph	Subparagraph of a paragraph.
Subsection	Subsection is a subsection of the section part.
URI	Full URI of the reference such as "http://www.fasb.org/fas133".
URIDate	Date that the URI was valid, in CCYY-MM-DD format.

Reference linkbase
Structure of references - *Reference parts (2)*

- possibility of defining custom parts:
  - substitution group *link:part*
  - flexibility of structures and types (which are being validated)

```
<xsd:element name="DocumentName" type="xsd:string" substitutionGroup="link:part"/>
<xsd:element name="PublicationDate" type="xsd:date" substitutionGroup="link:part"/>
<xsd:element name="Article" type="xsd:positiveInteger" substitutionGroup="link:part"/>
<xsd:element name="Point" type="xsd:positiveInteger" substitutionGroup="link:part"/>
```

Thinking
Forward.

Reference linkbase – *Example*

```
<loc xlink:type="locator" xlink:href="ifrs-(…).xsd#ifrs_CashFlowsFromUsedInOperations"
     xlink:label="CashFlowsFromUsedInOperations_Locator"/>
<referenceArc xlink:type="arc" xlink:arcrole="http://www.xbrl.org/2003/arcrole/concept-reference" xlink:from="(…)" xlink:to="(…)"/>
<reference xlink:type="resource"
  xlink:role="http://www.xbrl.org/2003/role/presentationRef"
  xlink:label="IAS_7_14_ref">
    <ref:Name>IAS</ref:Name>
    <ref:Number>7</ref:Number>
    <ref:Paragraph>14</ref:Paragraph>
</reference>
<reference xlink:type="resource"
  xlink:role="http://www.xbrl.org/2003/role/measurementRef"
  xlink:label="IAS_7_18_a_ref">
    <ref:Name>IAS</ref:Name>
    <ref:Number>7</ref:Number>
    <ref:Paragraph>18</ref:Paragraph>
    <ref:Subparagraph>a</ref:Subparagraph>
</reference>
```

Different types of references

Predefined or custom reference structure

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Reporting cash flows from operating activities

18   An entity shall report cash flows from operating activities using either:

a)   the direct method, whereby major classes of gross cash receipts and gross cash payments are disclosed; or:

b)   the indirect method, whereby profit or loss is adjusted for the effects of transitions of a non-cash nature, any deferrals or accruals or past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows.

IFRS

Thinking Forward.

Reference linkbase
Predefined types of references

role	Meaning
reference	Standard reference for a concept
definitionRef	Reference to documentation that details a precise definition of the concept.
disclosureRef	Reference to documentation that details an explanation of the disclosure requirements relating to the concept. Specified categories include:
mandatoryDisclosureRef	- mandatory
recommendedDisclosureRef	- recommended
unspecifiedDisclosureRef	Reference to documentation that details an explanation of the disclosure requirements relating to the concept. Unspecified categories include, but are not limited to:
	- common practice
	- structural completeness
	The latter categories do not reference documentation but are indicated in the link role to indicate why the concept has been included in the taxonomy.
presentationRef	Reference to documentation which details an explanation of the presentation, placement or labelling of this concept in the context of other concepts in one or more specific types of business reports
measurementRef	Reference concerning the method(s) required to be used when measuring values associated with this concept in business reports
commentaryRef	Any other general commentary on the concept that assists in determining appropriate usage
exampleRef	Reference to documentation that illustrates by example the application of the concept that assists in determining appropriate usage.

Thinking
Forward.

References

- FINREP 1.3 (Data model and Taxonomy)
- COREP (Data model and Taxonomy)
- Revised FINREP Data model

issues:

- parts
- differences between tables
- combining concepts and dimensions

Thinking
Forward.

Issues
Splitting references

- are these references applicable to measures or dimension members? is it really the same financial concept?
- possible technical solution: template custom ELRs in reference linkbase

Thinking
Forward.

Customizing types of resources

- *role* attribute on labels and resources
- used to define different types of resources (labels and/or references)
- set of predefined roles in spec (already discussed on slides)
- custom roles - defined identically to roles used on extended links:
  - declaration in schema (id, roleURI, definition)
  - referenced in linkbases
  - use on resources:
    - label
    - reference

Thinking
Forward.

role on resources - *Example*

Role definition in XBRL Schema file:

```
<link:roleType roleURI= 'http://(...)/role/IDLabel" id="IDLabel">
    <link:definition>Technical ID Label used for mappings and versioning</link:definition>
    <link:usedOn>link:label</link:usedOn>
</link:roleType>
```

Label linkbase:

```
<link:linkbase (..)>
    <link:roleRef roleURI="http://(...)/role/IDLabel" xlink:type="simple" xlink:href="(..).xsd#IDLabel"/>
    <link:labelLink xlink:type="extended" xlink:role="http://www.xbrl.org/2003/role/link">
            <link:loc xlink:type="locator" xlink:href="(..).xsd#p_Assets" xlink:label="Assets"/>
            <link:label xlink:type="resource" xlink:label="label_Assets"
                    xlink:role= 'http://(...)/role/IDLabel" xml:lang="en"
                    id="label_Assets">A-0023</link:label>
            <link:labelArc xlink:type="arc"
                    xlink:arcrole="http://www.xbrl.org/2003/arcrole/concept-label"
                    xlink:from="Assets" xlink:to="label_Assets"/>
    </link:labelLink>
</link:linkbase>
```

Thinking
Forward.

Sets of relation - Types

presentation

generic

(extended) links

calculation

reference

definition

label

- facilitates browsing of taxonomy content
- hierarchical dependencies between concepts (only tree view)
- indicates reportable information

Thinking Forward.

Presentation links

Statement of financial position, current/non-current classification

Assets

  Non-current assets

Property, plant and equipment	X
Investment property	X
Goodwill	X
Intangible assets other than goodwill	X
Investment accounted for using equity method	X
Biological assets	X
Deferred tax assets	X
Other non-current financial assets	X
Other non-current non-financial assets	X
Total non-current assets	X

  Current assets

Inventories	X
Trade and other receivables	X
Current tax assets	X
Other current financial assets	X
Other current non-financial assets	X
Cash and cash equivalents	X
Total current assets other than assets or disposal groups classified as held for sale	X
Non-current assets or disposal groups classified as held for sale	X
Total current assets	X

| Total assets | X |

Statement of financial position [abstract]
1. ...
Assets [abstract]
1. Non-Current Assets 2. Current Assets 3. Assets, Total
1. Intangible Assets 2. Property, Plant and Equipment ...
1. Inventories 2. Receivables ...
1. Land and Buildings 2. Motor Vehicles 3. Furniture 4. Property, Plant and Equipment, Total

Presentation links - *Example*

```
<loc xlink:type="locator"
    xlink:href="schema.xsd#Assets"
    xlink:label="Assets_Locator"/>
<loc xlink:type="locator"
    xlink:href="schema.xsd#CurrentAssets"
    xlink:label="CurrentAssets_Locator"/>
<presentationArc xlink:type="arc"
    xlink:arcrole="http://www.xbrl.org/2003/arcrole/parent-child"
    xlink:from="Assets_Locator" xlink:to="CurrentAssets_Locator"
    order="1"
    use="optional"/>
```

type (role) of the arc in the presentation linkbase

attribute indicating order of the relation

Thinking
Forward.

Sets of relation - Types

presentation

generic

calculation

(extended) links

reference

definition

label

- defines validity checks to be performed on the content of reports
- created in a 'tree-like' fashion according to the rule: subelements sum-up (or are subtracted) in order to check validity of the value of the parent element
- only numeric items
- limited application
- formula linkbase far, far more powerful!

Thinking Forward.

Calculation link

+	Land and Buildings
+	Motor Vehicles
+	Furniture
=	**Property, Plant and Equipment, Total**

Thinking
Forward.

Calculation linkbase – *Example*

```
<loc xlink:type="locator" xlink:href="schema.xsd#p_GrossProfitLoss"
    xlink:label="GrossProfitLoss_Locator"/>
<loc xlink:type="locator" xlink:href="schema.xsd#p_ SalesRevenue"
    xlink:label="SalesRevenue_Locator"/>
<loc xlink:type="locator" xlink:href="schema.xsd#p_CostOfSales"
    xlink:label="CostOfSales_Locator"/>
<calculationArc xlink:type="arc"
    xlink:arcrole="http://www.xbrl.org/2003/arcrole/summation-item"
    xlink:from="GrossProfitLoss_Locator" xlink:to="SalesRevenue_Locator"
    order="1" weight="1" use="optional"/>
<calculationArc xlink:type="arc"
    xlink:arcrole="http://www.xbrl.org/2003/arcrole/summation-item"
    xlink:from="GrossProfitLoss_Locator" xlink:to="CostOfSales_Locat
    order="2" weight="-1" use="optional"/>
```

type (role) of the arc in the calculation linkbase

attribute indicating weight of the relation

Thinking Forward.

Calculation linkbase – *Characteristics*

- calculation rules CHECK (not automatic calculations)
- calculation linkbase enables additions or subtractions of multiplied element values (facts): X = ($^+$/$_-$) A $\times$ Y (e.g. Tax = 0,19 x Income)
- calculation rules (allowed operations):
  - credit element (Cr) + credit element (Cr)
  - credit element (Cr) – debit element (Dt)
  - debit element (Dt) + debit element (Dt)
  - debit element (Dt) – credit element (Cr)
- comparison with presentation linkbase – different tree structures

Presentation	Calculation	
Assets	Assets, Total	
Non-Current Assets	Non-Current Assets	+1
Current Assets	Current Assets	+1
Assets, Total		

Thinking
Forward.

Calculation linkbase – *Limitations*

- calculation validation does not work in case of not filling-in the parent element or any of sub elements

Non-Current Assets	100	100		0	100	100
Current Assets	50	50		0	50	
Assets, Total	**150**		**150**	**150**	**0**	**150**
Validation result	OK	OK	OK	ERROR	ERROR	ERROR

- it is impossible to perform calculations between an element characterized as a stock and an element characterized as a flow with XBRL 2.1 compliant application
  - calculation <u>only within one context </u>in an instance document (no cross-context calculations)
  - lack of calculations (partly) in e.g. *Statement of Changes in Equity* or tables of movements (*Movements in PPE*)
- **precision** of reporting (thousands, millions, …) is assigned in instance document by a reporting entity (although there is a possibility of enforcing required precision in taxonomies or by adding additional rules to validators)

Thinking
Forward.

Sets of relation - Types

o four standard types (roles) of relationships defined by XBRL Spec 2.1 rarely used in XBRL taxonomies:

- general-special
- essence-alias
- requires-element
- similar-tuples

o linkbase where dimensional information is assigned to concepts

Thinking Forward.

general-special

- *"general-special"* – from general concept its special representation
- enables distinction between general and more detailed elements (usually <u>restricting the data type of the general element</u>)
- for example worldwide used *Postal Code* can be expressed as a *ZIP Code* in the US – to indicate that *Postal Code* is general element while *ZIP Code* is special (US only) and has a particular structure (type restriction: *string* ⇨ *pattern of 5 digits*)

Postal Code *(string)*   general-special ⟶   Zip Code *(pattern)*

- indicates in the extension taxonomy that the special element should be reported (not the general one)

Thinking Forward.

essence-alias

- *"essence-alias"* – same as, synonym

- determines that two elements have the same meaning (essentially) e.g. *Short-term Assets* and *Current Assets*

- can be also used for defining relationships between two taxonomies, e.g. the element *Assets* from the IFRS-GP taxonomy is essentially the same as the element *Assets* from the US-GAAP taxonomy (convergence)

| ifrs-gp:Assets | *essence-alias* | us-gaap:Assets |

- used in extension taxonomies to indicate the preferred element to be reported

- validation consequences: values in instance documents for a particular context should be equal

Thinking
Forward.

requires-elements (1)

- *"requires-element"* – requirement for disclosing a value for an element if the other element is reported with a value

- used for elements which must be disclosed in an instance document if the disclosure of the related element appears in the instance document

- it is suggested to use formula linkbase for this purposes (possibility to define contextual relation)

Thinking
Forward.

requires-elements (2)

[210000] Consolidated statement of financial position, current/non-current classification

Statement of financial position, current/non-current classification

Assets

Non-current assets

Property, plant and equipment	X
Investment property	X
Goodwill	X
Intangible assets other than goodwill	X

[822100] Notes - Property, plant and equipment

Disclosure of property, plant and equipment [explanatory]	[explanatory]
Explanation of property, plant and equipment, pledged as security	[string]
Explanation of expenditures recognised for constructions	[string]
Explanation of contractual commitments for acquisition of property, plant and equipment	[string]
Explanation of amount of compensation from third parties for items of property, plant and equipment	[string]
Explanation of property, plant and equipment, temporarily idle	[string]
Explanation of gross carrying amount of fully depreciated property, plant and equipment	[string]
Explanation of carrying amount of property, plant and equipment retired from active use	[string]
Description of fair value of property, plant and equipment materially different from carrying amount	[string]

Thinking
Forward.

similar-tuples (1)

- *"similar-tuples"* – identical (from business perspective) elements of *xbrli:tuple* substitution group that have different content

- similar to *"essence-alias"* relationship but used for tuples

- connects two tuples having essentially the same definition but different from the XML perspective (having different content model)

- one of the reasons for use of this relationship is impossibility to redefine the XBRL schema file, which makes it impossible to change the content of a *tuple* (element *<redefine>* is prohibited by XBRL 2.1 spec)

Thinking
Forward.

similar-tuples (2)

taxonomy one

taxonomy two

Deposits

Description	Amount	Effective Rate of Return
…	…	…

Deposits

Description	Amount	Effective Rate of Return	Date
…	…	…	…

XBRL Dimensions 1.0 Specification

- recommendation: 2006-09-18

- aims:

  □ modular extension to XBRL Specification 2.1:

    • XBRL 2.1 based taxonomies and reports are still valid

    • dimensional information may be attached to taxonomies built upon XBRL 2.1

  □ definition of rules for providing dimensional contextual information with use of XBRL constructs and functionality:

    • elements,

    • relations,

    • labels,

    • references,

    • …

Dimensions 1.0

XBRL 2.1

Thinking
Forward.

Dimensions - *Terms*

concept (primary item, measure)

basic financial/accounting terms that can be reported with dimensional information in context in instance document

Financial assets, financial liabilities, …

dimension item

each of different types of breakdowns that can be reflected in dimensional context for a measure

Instruments, Counterparties, …

domain

complete breakdown of a dimension

list of instruments, list of counterparties, …

domain member

each enumeration of a domain

Instruments total, Equity instruments, debt securities, …

Counterparties total, Central banks, Governments, …

hypercubes

ordered list of dimensions which Cartesian product of members constitutes (or is prohibited for) dimensional context

By instruments and counterparties, …

Thinking Forward.

Dimensions - *Relations*

domain-member

- defines hierarchical relations for concepts (additionally, lower-level elements inherit dimensional information declared for upper level elements in a tree structure)
- defines hierarchical relations of domain members of each dimension

all

connects a measure to a hypercube implying use of dimensions (attached to this hypercube)

notAll

connects a measure to a hypercube prohibiting use of dimensions (attached to this hypercube)

hypercube-dimension

connects a hypercube and a dimension item

dimension-domain

connects a dimension to its top level domain member

dimension-default

connects a dimension to its default member (usually top level domain)

Thinking
Forward.

Dimensions - *Concepts & Relations*

domain-member

concept (primary item)
Profit, Assets, Cash Flow, Equity, …

all
notAll

hypercube
Geographical and by products division, Exclusion of…

hypercube-dimension

dimension
Instruments

dimension
Counterparties

dimension-domain

domain
list of Instruments

domain
list of counterparties

domain-member

domain-member

domain member
Instruments total, Equity instruments, debt securities, …

domain member
Counterparties total, Central banks, Governments, …

domain-member

Thinking Forward.

Explicit dimensions example
Data model

		Profit and loss statement		
		Revenues	Costs of production	Profit (Loss)
All products	All regions			
	Poland			
	Germany			
	Austria			
Cars	All regions			
	Poland			
	Germany			
	Austria			
Boats	All regions			
	Poland			
	Germany			
	Austria			
Ships	All regions			
	Poland			
	Germany			
	Austria			

Thinking Forward.

Explicit dimensions example

Taxonomy architecture and content

P: role:ProfitAndLossStatement

T: role:ExclusionBoatsShipsAustria

P: Profit and loss statement
abstract item

all

domain-member

P: Revenue
P: Costs of production
P: Profit (Loss)
monetary items

notAll
targetRole:ExclusionBoatsShipsAustria

T: Geographical and by products breakdown
abstract hypercube item

T: Exclusion of boats and ships in Austria
abstract hypercube item

hypercube-dimension

DG: Geographical breakdown
abstract dimension item

dimension-domain

DG: Austria
(abstract) item

By products breakdown
abstract dimension item

dimension-domain

Boats
Ships
(abstract) items

hypercube-dimension
targetRole: ByProductsBreakdown

hypercube-dimension
targetRole: GeographicalBreakdown

DP: By products breakdown
abstract dimension item

DG: Geographical breakdown
abstract dimension item

dimension-domain

dimension-domain

DP: All products
(abstract) item

DG: All regions
(abstract) item

domain-member

domain-member

DP: Cars
DP: Boats
DP: Ships
(abstract) items

DG: Poland
DG: Germany
DG: Austria
(abstract) items

DP: role:ByProductsBreakdown

DG: role:GeographicalBreakdown

Thinking
Forward.

Explicit dimensions example – Alternative modeling approach
Data model split

Explicit dimensions example – Alternative modeling approach

Split – Part 1

Thinking
Forward.

Explicit dimensions example – Alternative modeling approach
Split – Part 2

Thinking Forward.

Explicit dimensions example – Alternative modeling approach
Split – Part 3

P: role:ProfitAndLossStatementPart3

Thinking
Forward.

Explicit dimensions example – Alternative modeling approach

Reverse-engineered data model

role:ProfitAndLossStatementPart1

		Profit and loss statement		
		Revenues	Costs of production	Profit (Loss)
All products	All regions			
	Poland			
	Germany			
Cars	All regions			
	Poland			
	Germany			
Boats	All regions			
	Poland			
	Germany			
Ships	All regions			
	Poland			
	Germany			

role:ProfitAndLossStatementPart2

		Profit and loss statement		
		Revenues	Costs of production	Profit (Loss)
Austria	All products			
	Cars			

role:ProfitAndLossStatementPart3

		Profit and loss statement	
		Costs of production	Profit (Loss)
Austria	Boats		
	Ships		

- unambiguity of a „Total"
- does not support rendering (based on dimensions)

Thinking Forward.

XBRL Dimensions Validation in reports

- insufficient or unrequested additional information errors
  - lack of dimensional information for a measure
  - measure in inappropriate (invalid member for a dimension) or prohibited (excluded member for a dimension) dimensional information
  - content of a typed domain (components and their data types)
- calculation checks
  - calculation rules for measures
  - lack of cross-context calculation checks for dimensional breakdowns
  - possible with formula linkbase

Thinking
Forward.

Sets of relation - Types

presentation

generic

calculation

(extended) links

reference

definition

label

- flexible solution allowing to even more customize sets and types of relation (additional semantics)
- need support from software
  - syntax (base)
  - semantics
- base for new functionalities:
  - formula linkbase
  - rendering linkbase
  - …

Thinking Forward.

General remarks on generic link

- allows for defining and extending definitions of following components:
  - *extended links* (kinds of sets or relations)
  - *resources*
  - *arcs* (relations)

    (in XBRL 2.1 for predefined components one could only define types and characteristics in form of *roles* and *arcroles*)
- makes use of:
  - *link:linkbase*
  - *link:loc* (which *xlink:href* may point to any XML constructs)
  - *role* and *arcrole* definition and application mechanism
- XBRL compliant processors understand the syntax but not necessarily the semantics (need of documentation and implementation in tools)

Thinking
Forward.

Generic linkbase - *Example*

```
<ri:reportImageLink
        xlink:type="extended"
        xlink:role="http://www.xbrl.org/2003/link">
    <ri:image xlink:type="resource" xlink:label="Form10K"
            xlink:role="http://www.xbrl.org/2003/role/link">
            http://www.sec.gov/forms/10-K.pdf</ri:image>
    <link:loc xlink:type="locator" xlink:href="us-gaap.xsd#us-gaap_Assets"
            xlink:label="Assets"/>
    <ri:reportImageArc xlink:type="arc"
            xlink:arcrole="http://www.br-ag.eu/arcrole/report-image"
            xlink:from="Assets" xlink:to="Form10K" order="1.0"/>
</ri:reportImageLink>
```

- for formula and rendering – relations between resources

Thinking
Forward.

Links in Eurofiling taxonomies

- how to split information in links?
- which links to choose?

in order to make taxonomy:

- intuitive to browse and navigate (logical and searchable)
- usable for rendering purposes („view orientations")
  - presenting of required scope of data
  - indicating errors

Thinking
Forward.

Eurofiling - Tables and sections
Alternative 1: Table = Section (+ exclusions)

Financial liabilities, *carrying amount*		domestic	EMU countries	other EU countries	rest of the world
total portfolio	total instruments				
	derivatives				
	short positions				
	deposits				
	debt certificates				
	other financial liabilities				
held for trading	Total instruments				
	derivatives				
	short positions				
	deposits				
	debt certificates				
	other financial liabilities				
designated at fair value through profit or loss	Total instruments				
	derivatives				
	short positions				
	deposits				
	debt certificates				
	other financial liabilities				
measured at amortised cost	Total instruments				
	derivatives				
	short positions				
	deposits				
	debt certificates				
	other financial liabilities				

Thinking
Forward.

Eurofiling - Tables and sections
Alternative 2: Table = a number of sections (no exclusions)

Financial liabilities, *carrying amount* Section 1		domestic	EMU countries	other EU countries	rest of the world
total portfolio	total instruments				

Financial liabilities, *carrying amount* Section 2		domestic	EMU countries	other EU countries	rest of the world
held for trading	Total instruments				
	deposits				
	debt certificates				
	other financial liabilities				
designated at fair value through profit or loss	Total instruments				
	deposits				
	debt certificates				
	other financial liabilities				
measured at amortised cost	Total instruments				
	deposits				
	debt certificates				
	other financial liabilities				

Financial liabilities, *carrying amount* Section 3		domestic	EMU countries	other EU countries	rest of the world
held for trading	derivatives				
	short positions				

Thinking
Forward.

Eurofiling - Tables and sections
Alternative 3: Table = a number of section (+ exclusions)

- mixed approach
- choice made depending on number of exclusions
- cases:
  - table = section (no exclusions, + exclusions)
  - tables = a number or sections (no exclusions, with exclusions, both)
- most appropriate, as some tables may have:
  - mutually exclusive breakdowns
  - breakdowns that apply only to some concepts or concepts with no breakdowns

Thinking
Forward.

Mutually exclusive breakdowns
Examples of different classifications in a single table

Table A: Breakdown of loans and advances by product: carrying amount

Type of loans and advances	References	Central banks	General	Credit	Other	Non-financial	Non-financial	Households.	Households.
On demand [call] and short notice [current account]	IFRS 7.IG 21								
Mortgage loans (Real estate collateralized loans)	IFRS 7.IG 21								
Other collateralized loans	IFRS 7.IG 21								
FactoringTrade receivables	IFRS 7.IG 21								
Finance leases	IFRS 7.IG 21								
Reverse repurchase loans	IAS 39.AG 51 (a)								
Consumer credit	IFRS 7.IG 21								
Other term loans	IFRS 7.IG 21								
Other	CP								
Total loans and advances	CP								
of which: collateralized credit for consumption									

Table B. Available-for-sale financial assets

	References	Fair value of unimpaired assets IFRS 7.36 (c)	Fair value of impaired assets IAS 39.58-70	Carrying amount	Accumulated impairment [Allowances] IAS 39.67-70
Equity instruments	IAS 32.11				
of which at cost					
of which: credit institutions					
of which: other financial corporations					
of which: corporates					
Debt securities	IAS 39.9				
Central banks					
General governments					
Credit institutions					
Other financial corporations					
Corporates					
Retail					
Loans and advances	IAS 39.9				
Central banks					
General governments					
Credit institutions					
Other financial corporations					
Corporates					
Retail					
Available-for-sale financial assets	IAS 39.9				

Thinking Forward.

Breakdowns applicable only to some concepts in a table

1.1 Assets	References	Breakdown in table	Carrying amount
Cash	CP ECB/2008/32		
Financial assets held for trading	IFRS 7.8 (a)(ii); IAS 39.9	5	
Derivatives held for trading	IAS 39.9	3	
Equity instruments	IAS 32.11		
Debt securities	IAS 39.9		
Loans and advances	IAS 39.9		
Financial assets designated at fair value through profit or loss	IFRS 7.8 (a) (i); IAS 39.9	5	
Equity instruments	IAS 32.11		
Debt securities	IAS 39.9		
Loans and advances	IAS 39.9		
Available-for-sale financial assets	IFRS 7.8.(d); IAS 39.9	5	
Equity instruments	IAS 32.11		
Debt securities	IAS 39.9		
Loans and advances	IAS 39.9		
Loans and receivables	IFRS 7.8 (c); IAS 39.9, AG16, AG26	5	
Debt securities	IAS 39.9		
Loans and advances	IAS 39.9		
Held-to-maturity investments	IFRS 7.8 (b); IAS 39.9, AG16, AG26	5	
Debt securities	IAS 39.9		
Loans and advances	IAS 39.9		
Derivatives – Hedge accounting	IFRS 7.22 (b); IAS 39.9	8	
Fair value hedges	IFRS 7.22 (b) ;IAS 39.86 (a)		
Cash flow hedges	IFRS 7.22 (b); IAS 39.86 (b)		
Hedges of a net investment in a foreign operation	IFRS 7.22(b);IAS 39.86 (c)		
Portfolio Fair value hedge of interest rate risk	IAS 39.89A; IAS 39 IE 1-31		
Portfolio Cash flow hedge interest rate risk	IAS 39 IG F6 1-3		
Fair value changes of the hedged items in portfolio hedge of interest rate risk	IAS 39.89A (a)		
Tangible assets	CP	9	
Property, Plant and Equipment	IAS 1.54 (a)		
Investment property	IAS 1.54 (b)		
Intangible assets	IAS 1.54 (c)	9	
Goodwill	IFRS 3.B67 (d)		
Other intangible assets	IAS 38.118		
Investments in entities accounted for using the equity method	IAS 1.54 (e)		
Tax assets	IAS 1.54 (n-o)		
Current tax assets	IAS 1.54 (n)		
Deferred tax assets	IAS 1.54 (o)		
Assets under insurance and reinsurance contracts	IFRS 4.IG20.(b)-(c)		
Other assets	IAS 1.IG 6		
Non-current assets and disposal groups classified as held for sale	IAS 1.54 (j); IFRS 5.38		
Total assets	IAS 1.IG 6		

- some breakdowns are applicable to all concepts (e.g. *consolidation scope*)
- other breakdowns apply only to certain types of concepts (e.g. *instruments*, portfolio applies only to *financial assets* or *liabilities* but not for e.g. *tangible assets* or *equity*)
- issue with default values of dimensions

concepts with no breakdowns

Thinking Forward.

Tables and data points

- XBRL is data focused
- but - information about tables need to be maintained
  - communication between business users
    - what needs to be reported
    - error messages
  - repotting frequency is also based on required set of tables, e.g.:
    - monthly: T1, T2, T4, T&
    - quarterly: T1, T2, T4, T7, T8, T9, …
    - yearly: all tables

Thinking
Forward.

Where to define relations?

- presentation link?
- definiton link?
- rendering link?

- custom semantics?

Thinking
Forward.

Where to define relations?
Presentation link

- hierarchical relations: only tree view, no standard „tabular view"
- no semantic meaning for dimensional breakdowns
    - more flexible (no impact on reportable data)
    - need to define information in definition linkbase anyway (or in formula - ?)
- preferred label attribute: possibility to use different labels for a single concept appearing in table twice (e.g. *beginning* and *ending balance*)
- custom solutions:
    - abstracts: column, row, axis, …
    - attributes: order of columns/rows
    - patterns/meta patterns

Thinking
Forward.

Where to define relations?
Definition linkbase

- hierarchical relations: tree view not „tabular view", but…
- …ability to build rendering on dimensional semantics – not flexible, subject to XBRL dimensions logic and architecture (need to mind applicable and excluded combinations)
- needed anyway for definition of applicable dimensional breakdowns
- no preferred label attribute but
  - it may not be needed (depends on modeling)
  - it may be added (custom)

Thinking
Forward.

Where to define relations? Rendering linkbase

- IWD
- from data points directly to tables
- may reuse presentation or dimensional information (trees)
- structuring
  - document
  - container
  - components
- output:
  - inline XBRL

Thinking Forward.

Inline XBRL

Thinking Forward.

Inline-XBRL
Example

Microsoft Corporation Annual Report 2006 — *Microsoft*

Shareholder Letter | Financial Highlights | Financial Review | Directors & Officers | Investor Relations | Downloads

Financial Review

- → Financial Review
- → Business Description
- → Discussion & Analysis
- → Market Risk
- Income Statements
- → Balance Sheets
- → Cash Flows
- → Stockholders' Equity
- → Notes
- → Quarterly Information
- → Auditor's Report
- → Controls & Procedures

INCOME STATEMENTS

(In millions, except per share amounts)

Year Ended June 30	2006	2005	2004
Revenue	$44,282	$39,788	$36,835
Operating expenses:			
Cost of revenue	7,650	6,031	6,596
Research and development	6,584	6,097	7,735
Sales and marketing	9,818	8,563	8,195
General and administrative	3,758	4,536	5,275
Total operating expenses	27,810	25,227	27,801
Operating income	16,472	14,561	9,034
Investment income and other	1,790	2,067	3,162
Income before income taxes	18,262	16,628	12,196
Provision for income taxes	5,663	4,374	4,028
Net income	$12,599	$12,254	$ 8,168

inline-XBRL (XHTML)

```
<td class="rightalign">$
    <ix:nonFraction ix:name="us-gaap:Revenue" ix:contextRef="e2006" precision="5" ix:unitRef="USD"
     ix:scale="6" ix:format="ixt:numcommadot">44,282</ix:nonFraction>
</td>
```

resulting XBRL instance document

```
<us-gaap:Revenue contextRef="e2006" unitRef="USD" precision="5">44282000000</us-gaap:Revenue>
```

Thinking Forward.

Currently applied design techniques

- presentation link to express non-dimensional information, definition link to express dimensional information (and information on non-dimensional – empty hypercube when missing default dimensions)

- identical information in presentation and definition linkbases

not applied but possibile:

- definition linkbase only

- rendering linkbase

Thinking
Forward.

COREP Navigation (1)

ELR	L	Template
http://www.c-ebs.org/2006/corep/eu/ca	PL	CA
http://www.c-ebs.org/2006/corep/eu/t-ca/SectionCapitalRequirementsMainBreakdown (4)	DL	CA
http://www.c-ebs.org/2006/corep/eu/t-ca/SectionCreditRiskIRBNoOwnEstimatesBreakdown	DL	CA
http://www.c-ebs.org/2006/corep/eu/t-ca/SectionCreditRiskIRBOwnEstimatesBreakdown	DL	CA
http://www.c-ebs.org/2006/corep/eu/t-ca/SectionCreditRiskSABreakdown	DL	CA
http://www.c-ebs.org/2006/corep/eu/gd	DL	GD
http://www.c-ebs.org/2006/corep/eu/t-cs/SectionTotalExposures	DL	CR SA
http://www.c-ebs.org/2006/corep/eu/t-cs/SectionExposureTypes	DL	CR SA
http://www.c-ebs.org/2006/corep/eu/t-cs/SectionRiskWeights	DL	CR SA
http://www.c-ebs.org/2006/corep/eu/t-si/SectionExposures	DL	CR SEC IRB
http://www.c-ebs.org/2006/corep/eu/t-si/SectionInvestor	DL	CR SEC IRB
http://www.c-ebs.org/2006/corep/eu/t-si/SectionOriginator	DL	CR SEC IRB
http://www.c-ebs.org/2006/corep/eu/t-si/SectionSponsor	DL	CR SEC IRB
http://www.c-ebs.org/2006/corep/eu/t-ss/SectionExposures	DL	CR SEC SA
http://www.c-ebs.org/2006/corep/eu/t-ss/SectionExposureTypesForOriginator	DL	CR SEC SA
http://www.c-ebs.org/2006/corep/eu/t-ss/SectionExposureTypesForSponsor	DL	CR SEC SA
http://www.c-ebs.org/2006/corep/eu/t-ss/SectionExposureTypesForInvestor	DL	CR SEC SA

Thinking Forward.

COREP Navigation (2)

ELR	L	Template
http://www.c-ebs.org/2006/corep/eu/sd	DL	CR SEC Details
http://www.c-ebs.org/2006/corep/eu/t-ci/SectionExposures	DL	CR IRB
http://www.c-ebs.org/2006/corep/eu/t-ci/SectionExposureTypes	DL	CR IRB
http://www.c-ebs.org/2006/corep/eu/t-ci/SectionObligorGrade	DL	CR IRB
http://www.c-ebs.org/2006/corep/eu/t-ci/SectionRiskWeight	DL	CR IRB
http://www.c-ebs.org/2006/corep/eu/t-ce/SectionPDLGDAndSimpleRiskWeight	DL	CR EQU IRB
http://www.c-ebs.org/2006/corep/eu/t-ce/SectionObligorGradeBreakdown	DL	CR EQU IRB
http://www.c-ebs.org/2006/corep/eu/t-ce/SectionRiskWeightBreakdown	DL	CR EQU IRB
http://www.c-ebs.org/2006/corep/eu/t-ce/SectionTotalExposuresAndInternalModelsApproach	DL	CR EQU IRB
http://www.c-ebs.org/2006/corep/eu/t-ct/SectionMain	DL	CR TB SETT
http://www.c-ebs.org/2006/corep/eu/t-op/SectionBankingActivities	DL	OPR
http://www.c-ebs.org/2006/corep/eu/t-op/SectionSubjectToSTA	DL	OPR
http://www.c-ebs.org/2006/corep/eu/t-op/SectionSubjectToASA	DL	OPR
http://www.c-ebs.org/2006/corep/eu/t-od/SectionAll	DL	OPR Details
http://www.c-ebs.org/2006/corep/eu/t-od/SectionExcludedEventTypes	DL	OPR Details
http://www.c-ebs.org/2006/corep/eu/ol (Elementy 1-8)	DL	OPR Loss
http://www.c-ebs.org/2006/corep/eu/mt	DL	MKR SA TDI
http://www.c-ebs.org/2006/corep/eu/mf	DL	MKR SA FX
http://www.c-ebs.org/2006/corep/eu/me	DL	MKR SA EQU
http://www.c-ebs.org/2006/corep/eu/mc	DL	MKR SA COM
http://www.c-ebs.org/2006/corep/eu/md	DL	MKR IM
http://www.c-ebs.org/2006/corep/eu/mi	DL	MKR IM

Thinking
Forward.

Thinking Forward.

Architecture design

Reuse of IFRS

BR AG

XBRL Architecture

Thinking Forward.

Taxonomy extension – *Levels*

Company specific
- BP
- HSBC
- ...

Regional
- FINREP PL
- ..

Industry
- US-GAAP Oil
- FINREP
- ...

CORE
- US-GAAP
- IFRS
- ...

comparability and reuse of information while the original remains unchanged

Thinking
Forward.

Taxonomy extension
Definition, goal and types of extensions

- <u>definition</u>: modifying of a taxonomy without changing its code (base/core taxonomy must remain unchanged) but reusing already defined concepts and structures (comparability)
- <u>goal</u>: adapting already existing taxonomies (esp. these approved by XII) for a need of an industry or a regulator keeping maximal scope of data comparison
- types:
  - *adding elements*
  - *modifying (adding or prohibiting) relations*

Thinking
Forward.

Taxonomy extension
Procedure

creating extensions =   adding new elements and
relationships (arcs) with appropriate attributes

1. creation of a new taxonomy
2. import of a base taxonomy
3. definition of new elements and other components (e.g. ELRs) in new taxonomy
4. operations on relationship arcs in new linkbase files (referring to base ELRs):
   - prohibiting
   - overriding (setting priority)

attributes and characteristics applied:
   - *use*
   - *priority*
   - concept of equivalency

Thinking
Forward.

Taxonomy extension
Attributes

- *use* attribute
  - *"optional"* (default value) - indicates that an arc represents a relationship that is considered in the network of relations
  - *"prohibited"* - indicates lack of a relationship between elements connected via an arc
- *priority* – rank attribute
  - integer
  - default value: *"0"*
  - relationship has a priority equal to the value of this attribute (the higher value the higher priority of a relationship)
  - leads to overriding of relations

Thinking
Forward.

Taxonomy extension – *Example (1)*

base taxonomy:

Land	100
Buildings	200
Machinery	300
PPE	600

extension taxonomy:

Land and buildings	300
Land	*100*
Buildings	*200*
Machinery	300
PPE	600

Thinking
Forward.

Taxonomy extension
Example (2)

Land
monetaryItemType

arcrole = summation-item
weight = 1
priority = 0

Extension Taxonomy

arcrole = summation-item
use = prohibited
priority = 1
weight = 1

arcrole = summation-item
weight = 1
priority = 0

PPE
monetaryItemType

arcrole = summation-item
priority = 0
weight = 1

LandAndBuildings
monetaryItemType

arcrole = summation-item
weight = 1
priority = 0

arcrole = summation-item
use = prohibited
priority = 1
weight = 1

arcrole = summation-item
weight = 1
priority = 0

Buildings
monetaryItemType

arcrole = summation-item
weight = 1
priority = 0

Machinery
monetaryItemType

Thinking
Forward.

Taxonomy extension approach

- depends on:
  - scope
    - small extensions may modify base taxonomy
    - large extension should be build from scratch (reuse only concepts and dimensional breakdowns if possible)
  - design of the base taxonomy:
    - schema defining concepts refers linkbases – need to modify relations (extreme approach: prohibit everything)
    - schema defining concepts independent from relations (most common situation, e.g. IFRS, US-GAAP)
  - alignment with the base taxonomy
    - direct
    - indirect (e.g. by relations)
- comparability on concepts and applicable dimensional information
- extension by modifying relations helps in understanding differences, their reasons and consequences (even more semantics)

Thinking
Forward.

IASB, IASCF, XBRL

International Accounting Standards Committee Foundation®

- International Accounting Standards Board (IASB)
  - mission: development of international financial reporting standards
- International Accounting Standards Committee Foundation (IASCF):
  - independent not-profit private sector organization
  - mission: promotion of use and rigorous application of IFRSs

Thinking
Forward.

Thinking
Forward.

IASCF and XBRL

International Accounting Standards Committee Foundation ®

- **IASCF Foundation XBRL Team**
  - unit responsible for the development of IFRS taxonomy and supporting materials
  - two domains: technology and accounting
- **XBRL Advisory Council (XAC)**
  - strategic advice related to XBRL activities (development and adoption of IFRS Taxonomy)
- **XBRL Quality Review Team (XQRT)**
  - revision of developed taxonomies, advice and practical recommendation

Thinking Forward.

Bound Volume vs... IFRS Taxonomy

consequence: taxonomy is updated each year

Thinking
Forward.

IFRS taxonomies so far

BV 2004: PFS for FI
XBRL 2.1

BV 2005: PFS & EDAP
CI and FI

BV 2008: PFS & EDAP
common

BV 2003
XBRL 2.0a

BV 2009: PFS & EDAP
common

BV 2006: PFS & EDAP
CI and FI

EDAP for FI
XBRL 2.1

BV 2002: IAS PFS &
EDAP
XBRL 2.0

BV 2004: PSF
& EDAP
XBRL 2.1

November
2002

July
2003

January
2004

September
2004

November
2004

May
2005

August
2006

March
2008

April
2009

● Stable XBRL Specification 2.1   ● New architecture + Publication aligned with BV

Thinking
Forward.

IFRS taxonomy development
Alignment with IFRSs

- alignment with underlying IFRSs is aimed at incorporation of changes between Bound Volumes:
  - alignment of wording (terminology)
  - alignment of references
- result – IFRS Taxonomy:
  - covers issued and effective standards
  - allows for early adoption of IFRS standards

Thinking
Forward.

IFRS taxonomy development Revision (1)

- period: from January to the end of March
- internal by XQRT – 20-day comment period:
    - related to financial reporting (content) & technology (architecture)
    - completed before public comment period
- public – 60-day comment period:
    - open to everybody
    - requires particular registration on the IASCF website

Thinking Forward.

IFRS taxonomy development Revision (2)

- examples of past issues:
  - ▫ industry extensions
    - requirements of building extensions locally
    - risk of data incompatibility
  - ▫ requirements for labels translation
    - local adoption
  - ▫ element naming convention
    - changes in element names

Thinking
Forward.

IFRS taxonomy development Revision (3)

- comments submitted by:
  - filers
  - auditors
  - software developers
  - XBRL consultants
  - XBRL jurisdictions

Thinking
Forward.

Documentation

- IFRS Taxonomy Guide 2008 (applies to 2009)
- versioning report
  - XBRL International PWD of Versioning Specification
  - framework of documentation of differences
  - files reflecting changes between taxonomies IFRS 2008 and IFRS 2009
  - document which visualizes changes

Thinking
Forward.

Scope of data

- for a particular reporting period: taxonomy covers all effective standards

- allows for early adoption of IFRSs (standards which are issued but not yet obligatory effective)

Thinking
Forward.

Logical split of information

- comparing to 2006 IFRS-GP the 2008/2009 IFRS taxonomies introduce new approach of data modeling:
  - classification of information according to standards
    - IAS 1
    - IFRS 6
    - IFRIC
    - …
  - classification of information according to components of financial report
    - General information
    - Statement of financial position
    - Income statement
    - …

Thinking
Forward.

Comparing the versions

	IFRS		
	2009	**2008**	**2006**
Items	2743	2696	3975
of which: abstracts	353	369	235
of which: measures	2390	2327	3740
Tuples	0	0	124
Dimensions	9	12	0
Members	20	39	0
Hypercubes	4	0	0
ELRs	140 + 4	113 + 12	26

Thinking
Forward.

IFRS – *Some technical aspects*

- single schema with elements' definitions (two in 2008 – separate for dimensions)
- modularization on linkbases' level (catalogues)
- tuples are not used; dimensions are
- intersection tables (2008 version):
  - two extended link roles in presentation linkbase
  - modified construction of ELRs references in linkbases
  - different abstract elements (for rows and for columns)
- result – custom rendering solution

Thinking Forward.

Tuples

- replaced with
    - text elements
    - open intersection tables
    - dimensions

Thinking
Forward.

Dimensions in IFRS

- reasons for use of dimensions:
  - modeling of information
  - replacement for tuples
- classification of dimensions:
  - extensibility:
    - explicit defined
    - explicit open
  - use:
    - all ERLs
    - selected (indicated in documentation) ELRs
- default members assigned (issue for extenders!)

Thinking
Forward.

Dimensions in IFRS 2008

Dimension (ELR definition)	Open/closed	IFRSs
[901000] Dimension - Retrospective application and retrospective restatement	Closed explicit	IAS 8
[902000] Dimension - Financial effect of transition from previous GAAP to IFRSs	Closed explicit	IFRS 1
[903000] Dimension - Continuing and discontinued operations	Closed explicit	IFRS 5
[911000] Dimension - Annual and interim financial reports	Closed explicit	IAS 34
[912000] Dimension - Issue date of financial report	Open explicit	IAS 10
[913000] Dimension - Consolidated and separate financial statements	Closed explicit	IAS 27
[914000] Dimension - Accounting regime	Open explicit	IAS 1
[975100] Dimension - Operating segments	Open explicit	IFRS 8
[975200] Dimension - Geographical areas	Open explicit	IFRS 8; IAS 14
[975300] Dimension - Products and services	Open explicit	IFRS 8
[975400] Dimension - Major customers	Open explicit	IFRS 8
[975500] Dimension - Business segments	Open explicit	IAS 14

Thinking
Forward.

Dimensions in IFRS 2008 – *Example (1)*

- ## Restatements:
    - base: IAS 8.28 f/g; IAS 8.42 a/b; IAS 8.49 b/c
    - extensibility: explicit closed
    - use: all ELRs (monetary type)
    - default member: Originally stated

http://xbrl.iasb.org/role/ifrs/ifrs-dim_role-901000
Retrospective application and retrospective restatement [dimension]
Retrospective application and retrospective restatement
Originally stated
Financial effect of corrections of accounting errors
Financial effect of changes in accounting policy
Other retrospective application or retrospective restatement
Restated amounts
Originally stated - (Default)

Thinking
Forward.

Dimensions in IFRS 2008 – *Example (2)*

- ## Operating segments:
  - ▫ base: IFRS 8
  - ▫ extensibility: explicit open
  - ▫ use: all ELRs (monetary type)
  - ▫ default memeber: none

http://xbrl.iasb.org/role/ifrs/ifrs-dim_role-975100
Operating segments [dimension]
Reportable segments

Thinking
Forward.

IFRS 2009 – Dimensions and Hypercubes

Business combinations [dimension]

Consolidated and separate financial statements [dimension]

Continuing and discontinued operations [dimension]

Financial effect of transition from previous GAAP to IFRSs [dimension]

Geographical areas [dimension]

Major customers [dimension]

Operating segments [dimension]

Products and services [dimension]

Retrospective application and retrospective restatement [dimension]

Distinction of each business combination [hypercube]

Profit or loss, assets and liabilities for reportable segments [hypercube]

Segments, geographical areas [hypercube]

Segments, major customers [hypercube]

Segments, products and services [hypercube]

Thinking
Forward.

Naming convention
General considerations

- quality of a taxonomy depends heavily on consistent naming of elements
- setting naming rules (PATTERNS) - initial activity of any XBRL project
  - aim – avoiding duplicate concepts (one XBRL element for one business concept)
  - example: AssetsCurrent vs... CurrentAssets vs... ShortTermAssets
- no automatic quality control over elements' name:
  - fulfilling of rules depends heavily on data model developers
  - „executive" project team relatively small (3-5 people) and many reviewers

Thinking
Forward.

Naming convention
IFRS 2008 and 2009 – Style Guide

- published together with the taxonomy:
- comprehensive guidance on IFRS taxonomy labels
- rules for creation of new labels (taxonomy extension)
- enough information to understand concept and minimize length of labels

Development process:

Style Guide ⟶ *Label* ⟶ *Element name*

Thinking
Forward.

Technical aspects
Schemas (1)

- **ifrs-cor_2009-04-01.xsd**
  - definition of all concepts:
    - no tuples – tuple extensibility issues
    - no reference to labels/references
  - definition of dimensional information:
    - dimensions
    - domains
    - domain members
    - hypercubes

Thinking
Forward.

Technical aspects
Schemas (2)

- roles
  - ifrs-roles_2009-04-01.xsd
    - definition of IFRS Taxonomy proprietary reference and label role types:
      - non-authoritative literature
      - negated standard label
      - net label
      - ....
  - folder that represents each standard contains schema files defining roles used on extended type links

Thinking
Forward.

Linkbases and extended link roles

- IFRS Taxonomy uses all XBRL linkbases
- roles used on extended links
  - allow to view the taxonomy
    - by standards (when sorted by URI)
    - by components of the financial report (when sorted by definition)
  - contain six-digit numbers in square brackets
    - from [100000] to [899999] – refer to relations of primary items
    - from [900000] to [999999] – refer to dimensional components
    - allow for sorting by components of the financial statement
    - numbers are not related to the IFRSs

Thinking
Forward.

IFRS 2009 taxonomy diagram

http://www.iasb.org/xbrl

Viewer

Thinking
Forward.

ITMM
Idea and functionality

- IFRS Taxonomy Modules Manager
- platform provided by IASCF that allows for generation of entry point schema and instance referring to selected statements, notes and disclosures
- allows for previewing of the taxonomy content by:
  - IFRSs
  - statements/notes/disclosures
- allows for searching for concepts

http://www.xbrl-ifrs.org/ITMM/

Thinking
Forward.

Planned changes to IFRS Taxonomy

- element names as codes (currently: a lot of issues when wording in bound volume is changed – see versioning report)
- redesign of movement tables

Thinking
Forward.

FINREP 1.3 and IFRSs

FINREP
Taxonomy

*Credit
institutions*

IFRS-GP
Taxonomy

- **IFRS-GP 2006 was a base for FINREP 1.3**
  - IAS 30 was dedicated to financial institutions; IFRS 7 is not
- **10% of all IFRS-GP (2006) concepts were reused in FINREP 1.3 taxonomy (but own relations)**
  - according to the IFRS 2009 (general purposes) the number of concepts that can be reused will be smaller
- **FINREP should be stable**
  - IFRS are changing every year

Thinking
Forward.

FINREP 1.3 – Relation to IFRSs

FINREP 1.0

FINREP 1.3.1

- FINREP imports only IFRS concepts, labels and references (no relations):
  - FINREP 1.0 : IFRS files was included into the taxonomy folder (also in 1.3.0)
  - FINREP 1.3.1: absolute reference to web resources of the IASCF

Thinking
Forward.

Following IFRS taxonomy changes creates some problems…

Example of differences report…
New releases of FINREP taxonomy…

Changes because of conversion from old IFRS-GP to the new IFRS-GP:

1) The following elements have been renamed in the new IFRS-GP taxonomy, but their meaning did not change, so we simply reuse these renamed elements.

ifrs-gp_Amortisation	ifrs-gp_AmortisationOfIntangibleAssets
ifrs-gp_DepreciationAndAmortisation	ifrs-gp_DepreciationAmortisation
ifrs-gp_EmployeeExpensesByNature	ifrs-gp_EmployeeExpenses
ifrs-gp_FinancialLiabilitiesHeldForTradingDebtInstruments	ifrs-gp_FinancialLiabilitiesHeldForTradingDebtInstrumentsThatAreNotShortPositions
ifrs-gp_InterestExpenseFinancialLiabilitiesNotMeasuredAtFairValueThroughProfitOrLossTotal	ifrs-gp_InterestExpenseFinancialLiabilitiesMeasuredAtAmortisedCost
ifrs-gp_ShareBasedPaymentTransactionsByNature	ifrs-gp_ShareBasedPaymentTransactions
ifrs-gp_WageAndSalariesByNature	ifrs-gp_WageAndSalaries
ifrs-gp_MarketingCostsByFunction	ifrs-gp_MarketingCosts

2) The following elements do not exist any more in IFRS-GP, or have a different meaning than in FINREP, so we created FINREP elements for them:

   a. ifrs-gp_HeldToMaturityInvestmentsLoansAndAdvancesTotal (does not exist any more)

   b. ifrs-gp_InterestIncomeHedgingDerivatives and ifrs-gp_InterestExpenseHedgingDerivatives (do not exist any more). Therefore it was also necessary from a conceptual point of view to replace for the income the element ifrs-gp_InterestIncomeOtherFinancialInstitutions and for the expenses the element ifrs-gp_InterestExpenseTotalFinancialInsitutions (as the total does not include the Expenses on Share Capital Repayable on Demand) with FINREP elements.

   c. In the new IFRS-GP taxonomy, there is no more breakdown for: "Realised Gains (Losses) on Financial Instruments, Excluding Interest Flows, Total" nor for "Gains (Losses) on Financial Instruments Held for Trading, Total". So the following elements have been replaced:

ifrs-gp_GainsLossesOnFinancialInstrumentsHeldForTradingCommodities	p-FINREP_GainsLossesOnFinancialInstrumentsHeldForTradingCommodities
ifrs-gp_GainsLossesOnFinancialInstrumentsHeldForTradingCreditDerivatives	p-FINREP_GainsLossesOnFinancialInstrumentsHeldForTradingCreditDerivatives
ifrs-gp_GainsLossesOnFinancialInstrumentsHeldForTradingEquityInstruments	p-FINREP_GainsLossesOnFinancialInstrumentsHeldForTradingEquityInstruments
ifrs-gp_GainsLossesOnFinancialInstrumentsHeldForTradingForeignCurrency	p-FINREP_GainsLossesOnFinancialInstrumentsHeldForTradingForeignCurrency
ifrs-gp_GainsLossesOnFinancialInstrumentsHeldForTradingInterestRateInstruments	p-FINREP_GainsLossesOnFinancialInstrumentsHeldForTradingInterestRateInstruments
ifrs-gp_RealisedGainsLossesOnFinancialAssetsAvailableForSaleExcludingInterestFlows	p-FINREP_RealisedGainsLossesOnFinancialAssetsAvailableForSaleFinancialAssets
ifrs-gp_RealisedGainsLossesOnFinancialAssetsHeldToMaturityExcludingInterestFlows	p-FINREP_RealisedGainsLossesOnFinancialAssetsHeldToMaturityInvestments
ifrs-gp_RealisedGainsLossesOnFinancialAssetsLoansAndReceivablesExcludingInterestFlows	p-FINREP_RealisedGainsLossesOnFinancialAssetsLoansAndReceivables

   d. The item "ifrs-gp_AvailableForSaleFinancialAssetsAccumulatedImpairmentLosses" has been replaced by "p-FINREP_AvailableForSaleFinancialAssetsAccumulatedImpairmentLosses" because it does not exist any more in the new IFRS-GP taxonomy. Also, as the Available-for-Sale Financial Assets, Equity Instruments in FINREP has a different meaning than the Available-for-Sale Financial Assets, Equity Instruments in IFRS-GP (in IFRS-GP, the Equity Instruments carried at cost are reported separately, so are not part of the Available-for-Sale Financial Assets, Equity Instruments), we replaced the IFRS-GP element with a FINREP element.

   e.

3) In the old IFRS-GP taxonomy, the element "ProfitLossFromDiscontinuedOperationsNetOfTax" had a debit balance attribute. This was not correct, so we created our own FINREP element for this "p-FINREP:ProfitLossFromDiscontinuedOperationsNetOfTax". However, as this is corrected in the new IFRS-GP taxonomy we can use the IFRS-GP element "ifrs-gp:ProfitLossFromDiscontinuedOperationsNetOfTax".

4) The balance attribute of ifrs-gp_TransfersOfTreasurySharesTotal has changed from debit to credit. This has some consequences in the sample data file as the figures with regard to these transfers should be added and not subtracted (exception: columns "treasury shares" and "interim dividends" as these have another balance attribute in table 1.3 "Equity"). For the time being, I corrected the opening balances of Reserves (including retained earnings), <Treasury shares> and <Interim dividends>.

5) The concept "Fees and Commission Income, Trust and Other Fiduciary Activities" was added to the IFRS-GP taxonomy.

- there are some changes is naming that affect the FINREP taxonomy

- some elements do not exist anymore

- etc.

Thinking Forward.

IFRS 2009 and revised FINREP - dimensions

- very little in common
- different focus
- need for IFRS industry extension – FINREP?

Thinking
Forward.

IFRS 2009 Dimensions
Applied (1)

Thinking
Forward.

IFRS 2009 Dimensions
Applied (2)

Thinking Forward.

IFRS 2009 Dimensions
Applied (3)

Thinking
Forward.

IFRS 2009 Dimensions
For application

Thinking Forward.

FINREP Dimensions
One of proposals to Revised FINREP

- by product origin
- by instruments
- by risk
- by market
- by counterparty
- by geographical area
- by hedge type
- by revaluation items

- by loan
- by movement
- by scope of consolidation
- by duration
- by structure
- by guarantee
- by amount
- by related party

- + generic scope of consolidation applicable everywhere
- see data matrix for complete breakdowns
- IFRSs clearly indicates where the dimensions can be applied

Thinking
Forward.

Linking new FINREP with IFRS

1. Direct link – import of IFRS taxonomy (core schema defining concepts and dimensional information)
2. Indirect linking to IFRS taxonomy with:
    a. relations in linkbase (e.g. custom links)
    b. formulas

Thinking
Forward.

Direct link – importing IFRS

- pros:
  - reuse of exactly the same concepts
  - banks already reporting IFRS can reuse mapping but:
    - only few banks report in XBRL their IFRS statements
    - little information can be reused
- cons:
  - change of FINREP each year in order to be aligned with the latest version of IFRS taxonomy (changes may be significant and affect the modeling – IFRS slowly becomes stable as new technologies are introduces: dimensions, formula, rendering, …)
  - need to conform to IFRS taxonomy design – lower flexibility
    - naming convention
    - *concept = concept* not *concept = concept + dimension*

Thinking
Forward.

Indirect link – Relations in linkbase

- pros:
  - need to change only the link when new IFRS is released
- cons:
  - relations in linkbase: only for documentation purposes
  - with formula linkbase: possibility to automatically convert IFRS report to FINREP report and vice versa but
    - formula processor needed
    - how much information in common?

Thinking
Forward.

Problems with stability of FINREP using direct links to IFRS

- ## The available-for-sale and held-to-maturity categories currently in IAS 39 are not included in IFRS 9
  - New IFRS 9 divides all financial assets into two classifications:
    - those measured at amortised cost
    - those measured at fair value
- ## It will seriously affect FINREP taxonomy
  - Problem will be not that serious when dimension (not primaries) will be used to distinguish kinds of financial assets

Thinking
Forward.

Architecture design

Modularization

XBRL Architecture

Thinking Forward.

XBRL Architecture – Taxonomy
Taxonomy name (Namespace)

schema
taxonomy name
definitions of concepts
custom characteristics of concepts
components of dimensional information
customizing sets and types of relations and resources
references to (or embedded) linkbases
references to reused taxonomies

- solves name conflicts: two or more concepts with the same name but different meaning (defined by different regulators under different legislation)
- setting name: targetNamespace attribute (describes namespace for all elements and attributes defined in a particular schema file)
- namespace looks like URIs (Unique Resource Identifiers) because URIs:
  - are unique
  - belong to their owner

  NOTE: these are not Internet addresses!
- declaring reused namespace with prefix: prefix="namespace" (prefix is used instead of namespace when referencing concept)
- single taxonomy can have many schema files therefore many namespaces
  - for consistency reasons there is a pattern for creations of namespace in taxonomy frameworks such as COREP and FINREP

Thinking
Forward.

Use of namespaces
Example

Taxonomy 1:

```
<xsd:schema
       xmlns:xsd="http://www.w3.org/2001/XMLSchema"
       targetNamespace="http://www.iasb.org/xbrl/ifrs"/>
    <xsd:element name="Assets" … />
    <xsd:element name="Equity" … />

       …
</xsd:schema>
```

Taxonomy 2:

```
<xsd:schema
       xmlns:xsd="http://www.w3.org/2001/XMLSchema"
       targetNamespace="http://www.fasb.org/xbrl/us-gaap"/>
    <xsd:element name="Assets" … />
    <xsd:element name="Equity" … />

       …
</xsd:schema>
```

Report:

```
<xbrli:xbrl
       xmlns:xbrli="http://www.xbrl.org/2003/instance"
       xmlns:link="http://www.xbrl.org/2003/linkbase"
       xmlns:ifrs="http://www.iasb.org/xbrl/ifrs"
       xmlns:us-gaap="http://www.fasb.org/xbrl/us-gaap"/>
    <link:schemaRef xlink:type="simple" xlink:href="ifrs-2009-04-01.xsd"/>
    <link:schemaRef xlink:type="simple" xlink:href="us-gaap-2008-06-06.xsd"/>

    <ifrs:Assets …>1000</ifrs:Assets>
     <us-gaap:Assets …>1010</us-gaap:Assets>

       …
</xbrli:xbrl>
```

Thinking
Forward.

Proposed namespaces in COREP and FINREP

- root URI:

  http://www.c-ebs.org/eu/fr/esrs

- following components:
  - place in a framework
    - common: /eurofiling
    - FINREP: /finrep
    - COREP: /corep
  - date of release of standard/guidance, e.g.: /2010-01
  - date of publication of taxonomy, e.g.: /2010-12-31

    http://www.c-ebs.org/eu/fr/esrs/finrep/2009-11/2009-12-31/…

- further distinction in primary items, dimensions, technical constructs, etc…

Thinking
Forward.

DTS

- *DTS* (Discoverable Taxonomy Set) used for naming large taxonomy frameworks

- set of taxonomies (XBRL schema files and linkbase files) discoverable over the *xlink:href* attribute used on different elements such as: *xsd:import*, locators, *link:schemaRef*, *link:linkbaseRef*, *link:roleRef*, *link:arcroleRef*, …

- the term *DTS* was developed as taxonomies became more complicated (100+ files) and more closely related to one other

- from XBRL perspective <u>division in files is less important then division in *extended link roles (ELRs)*</u>

Thinking
Forward.

DTS Discovery

Thinking
Forward.

Taxonomy modularization (1)
Single file

Thinking
Forward.

Taxonomy modularization (2)
Single schema and separate linkbase files

Thinking
Forward.

Taxonomy modularization (3)
Many schema and linkbase files

Thinking
Forward.

FINREP 1.3 - Modularization

Thinking
Forward.

FINREP 1.3
Navigation and naming convention

- ifrs-gp: IFRS concepts
- p-FINREP-YYYY-MM-DD: measures
- p-FINREP-YYYY-MM-DD-TXX-Name: relations of measures
- d-Name-YYYY-MM-DD: dimensions and their domain members
- t-FINREP-YYYY-MM-DD-TXX-Name: templates (ascribing dimensional breakdowns to measures via hypercubes)
- t-FINREP-YYYY-MM-DD: import of all templates

Thinking
Forward.

FINREP 1.3 – *Content (1)*

#	Table name	Table prefix	Primary taxonomy prefix	TOTAL	Consolidation Approach	Counterparties	Defined Benefit Plans (Typed)	Entity Name (Typed)	Equity Instruments	Financial Assets	Investment Types	Past Due	Portfolio	Related Parties	Valuation Model	Consolidation Movements
				10	1	8	1	2	5	1	1	1	1	1	2	1
1.1	Consolidated Balance Sheet Statement - Assets	t-finrep	eu-ifrs-fr	2		x			x							
1.2	Consolidated Balance Sheet Statement - Liabilities	t-finrep	eu-ifrs-fr													
1.3	Consolidated Balance Sheet Statement - Equity and Minority Interest	t-finrep	eu-ifrs-fr													
2	Consolidated Income Statement	t-finrep	eu-ifrs-fr													
3	Derivatives held for trading	t-finrep	eu-ifrs-fr													
4	Financial Assets designated at fair value through profit or loss: credit risk information on loans and advances	t-finrep	eu-ifrs-fr	1		x										
5	Available-for-sale financial assets	t-finrep	eu-ifrs-fr	2		x			x							
6	Loans and receivables (including finance leases) and held-to-maturity investments	t-finrep	eu-ifrs-fr	1		x										
7	Information on Impairment and Past due assets	t-finrep	eu-ifrs-fr	3		x			x			x				
8	Derivatives - Hedge accounting	t-finrep	eu-ifrs-fr													
9	Property, Plant and Equipment	t-finrep	eu-ifrs-fr	1											x	
10	Investment property	t-finrep	eu-ifrs-fr													

Thinking
Forward.

FINREP 1.3 – *Content (2)*

#	Table name	Table prefix	Primary taxonomy prefix	TOTAL	Consolidation Approach	Counterparties	Defined Benefit Plans (Typed)	Entity Name (Typed)	Equity Instruments	Financial Assets	Investment Types	Past Due	Portfolio	Related Parties	Valuation Model	Consolidation Movements
				6	1	8	1	2	5	1	1	1	1	1	2	1
11	Goodwill and other intangible assets	t-finrep	eu-ifrs-fr	1											x	
12	Investments in associates, subsidiaries and joint ventures	t-finrep	eu-ifrs-fr	3	x			x			x					
13	Non-current assets and disposal groups classified as held for sale	t-finrep	eu-ifrs-fr													
14	Financial liabilities held for trading	t-finrep	eu-ifrs-fr													
15	Financial liabilities designated at fair value through profit or loss	t-finrep	eu-ifrs-fr													
16	Financial liabilities measured at amortised cost	t-finrep	eu-ifrs-fr													
17	Derecognition and financial liabilities associated with transferred financial assets	t-finrep	eu-ifrs-fr	2						x			x			
18	Provisions	t-finrep	eu-ifrs-fr													
19	Minority interests: Revaluation reserves and other valuation differences	t-finrep	eu-ifrs-fr													
20	Fee and commission income and expenses	t-finrep	eu-ifrs-fr													
21	Realised gains (losses) on financial assets and liabilities not measured at fair value through profit or loss, net	t-finrep	eu-ifrs-fr													
22	Gains (losses) on financial assets and liabilities designated at fair value through profit or loss	t-finrep	eu-ifrs-fr													

Thinking Forward.

FINREP 1.3 – *Content (3)*

#	Table name	Table prefix	Primary taxonomy prefix	TOTAL	Consolidation Approach	Counterparties	Defined Benefit Plans (Typed)	Entity Name (Typed)	Equity Instruments	Financial Assets	Investment Types	Past Due	Portfolio	Related Parties	Valuation Model	Consolidation Movements
				5	1	8	1	2	5	1	1	1	1	1	2	1
23	Gains (losses) from hedge accounting, net	t-finrep	eu-ifrs-fr													
24	Gains (losses) on derecognition of assets other than held for sale, net	t-finrep	eu-ifrs-fr													
25	Other operating income and other operating expenses	t-finrep	eu-ifrs-fr													
26	Staff expenses	t-finrep	eu-ifrs-fr													
27	General and administrative expenses	t-finrep	eu-ifrs-fr													
28	Reconciliation of statutory tax to effective tax	t-finrep	eu-ifrs-fr													
29	Profit or loss after tax from discontinued operations	t-finrep	eu-ifrs-fr													
30	Information on Credit Risk and Impairment	t-finrep	eu-ifrs-fr	2		x			x							
31	Information on fair value of financial instruments	t-finrep	eu-ifrs-fr													
32	Leasing: Additional information	t-finrep	eu-ifrs-fr													
33	Repurchase agreements, reverse repurchase agreements and related agreements	t-finrep	eu-ifrs-fr	2		x			x							
34	Related party disclosures	t-finrep	eu-ifrs-fr	1										x		

Thinking Forward.

FINREP 1.3 – *Content (4)*

#	Table name	Table prefix	Primary taxonomy prefix	TOTAL	Consolidation Approach	Counterparties	Defined Benefit Plans (Typed)	Entity Name (Typed)	Equity Instruments	Financial Assets	Investment Types	Past Due	Portfolio	Related Parties	Valuation Model	Consolidation Movements
	Tables			**Dimensions**												
				4	1	8	1	2	5	1	1	1	1	1	2	1
35	Defined benefit plans	t-finrep	eu-ifrs-fr	1			1									
36	Loan commitments, financial guarantees and other commitments	t-finrep	eu-ifrs-fr	1		x										
37	Cash flow statement	t-finrep	eu-ifrs-fr													
38	Analysis of equity	t-finrep	eu-ifrs-fr													
39	Scope of consolidation	t-finrep	eu-ifrs-fr	2				x								x
40	Optional Table: Accrued Interest Income and Expenses from Financial Instruments	t-finrep	eu-ifrs-fr													

Thinking
Forward.

COREP - Modularization

Thinking Forward.

t-ce template (CR EQU IRB)

Thinking
Forward.

COREP – *Content*

Templates					Dimensions													
#	Template name	Template prefix	Own primary taxonomy prefix	Imported primary taxonom	#	Exposure class	Exposure type	Risk Weight	Own estimates of LGD	Credit Risks	Securitization type	Market risk	Unsettled transactions	Banking activities	Business lines	Event types	Currency	Hypercube definition	Common typed dimension
						d-ec	d-et	d-rw	d-oe	d-cr	d-st	d-mr	d-ut	d-ba	d-bl	d-ev	d-cu	d-hh	d-ty
1	CA	t-ca	p-ca	p-cm-ca	6	x			x	x		x	x	x				(x)	
2	GROUP Solvency Details	t-gd	p-gd	p-cm-ca	1													(x)	x
3	CR SA	t-cs	p-cs	p-cm-ca p-cm-cr	3	x	x	x		x									
4	CR IRB	t-ci	p-ci	p-cm-ca p-cm-cr	6	x	x	x	x	x									x
5	CR EQU IRB	t-ce	p-ce	p-cm-ca p-cm-cr	3			x		x									x
6	CR SEC SA	t-ss	p-ss	p-cm-ca p-cm-cr	3		x			x	x							(x)	
7	CR SEC IRB	t-si	p-si	p-cm-ca p-cm-cr	3		x			x	x							(x)	
8	CR SEC Details	t-sd	p-sd	p-cm-ca p-cm-cr	1													(x)	x
9	CR TB SETT	t-ct	p-ct	p-cm-ca	1								x					(x)	
10	MKR SA TDI	t-mt	p-mt	p-cm-ca p-cm-mr	2							x					x	(x)	
11	MKR SA EQU	t-me	p-me	p-cm-ca p-cm-mr	2							x						(x)	x
12	MKR SA FX	t-mf	p-mf	p-cm-ca p-cm-mr	1							x						(x)	
13	MKR SA COM	t-mc	p-mc	p-cm-ca p-cm-mr	2							x						(x)	x
14	MKR IM	t-mi	p-mi	p-cm-ca	1							x						(x)	
15	MKR IM Details	t-md	p-md		2														x
16	OPR	t-op	p-op	p-cm-ca	2									x	x			(x)	
17	OPR Details	t-od	p-od		2										x	x			
18	OPR LOSS Details	t-ol	p-ol		2										x				x

Thinking Forward.

Taxonomy framework
Interrelated modules

Thinking
Forward.

Eurofiling
Proposed framework and modularization

EUROFILING Framework

Taxonomy modularization and framework

- no best practices or perfect solutions – dependent on specific needs and requirements
- pros:
  - reusable components (decrease in redundancy)
  - maintenance (common concepts, versioning of files)
- many possibilities to achieve the same outcome
- extensions should follow practices of core taxonomies

Thinking
Forward.

Architecture design

Other issues

Default value of dimension

- dimensions can have default members that are by default applied to all items
- only few dimensions are truly global, e.g.:
    - measurement – carrying amount
    - consolidation scope – CRD
- in order to directly link core information and non core information, all applicable dimensions need to be applied to core information

Thinking
Forward.

Mixture of dimensional information

- same information in different breakdowns
- four additional breakdowns in lower table:
  - by type of risk
  - by market
  - by product
  - by counterparty
- information in upper table also appears in these breakdown as a total for all of them applied at the same time
- but all breakdowns in lower table are never applied at once:
  - by type of market is combined with part of by type of risk
  - by counterparty is applicable only to one member from by market which additionally has no relation to by type of risk breakdown

1.1 Assets	References	Breakdown in table	Carrying amount
Cash	GP ECB/2008/32		
Financial assets held for trading	IFRS 7.8 (a)(ii); IAS 39.9	5	
Derivatives held for trading	IAS 39.9	3	
Equity instruments	IAS 32.11		
Debt securities	IAS 39.9		
Loans and advances	IAS 39.9		
Financial assets designated at fair value through profit or loss	IFRS 7.8 (a) (i); IAS 39.9	5	
Equity instruments	IAS 32.11		
Debt securities	IAS 39.9		

By type of risk	By product or by type of market	Carrying amount		Notional amount	
		Assets	Liabilities	Total	of which: sold
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				
Currency (FX)	OTC options				
	OTC other				
	Organized market options				
	Organized market other				
	of which: economic hedges				
Credit	Credit default swap				
	Credit spread option				
	Total return swap				
	Other				
	of which: economic hedges				
Commodity					
	of which: economic hedges				
Other					
	of which: economic hedges				
Total					
	of which: OTC - credit institutions				
	of which: OTC - other financial corporations				
	of which: OTC - rest				

Thinking Forward.

Empty hypercubes and empty dimensions

- used in COREP or FINREP to:
  - allow reporting dimensional and non-dimensional information for concepts when some applied dimensions don't have logical/generally applicable default members
  - increase XBRL validation (indicate not-reportable concepts) - to be replaced with formula linkbase in new releases

Thinking
Forward.

Case 1: Non-reportable elements

- *Situation:* non-abstract element not used in relationships
    - ▫ extension (e.g. FINREP)
    - ▫ modularization (e.g. COREP)
- *Meaning:* element is not meant to be reported
- *XBRL Validation:* element may be reported with any context
- *Solution:* in the definition linkbase an element is a source of the all arc which targets hypercube with one empty dimension (explicit dimension with no breakdown in domains and their members)

Thinking
Forward.

Case 1: Non-reportable elements (COREP)

Thinking
Forward.

Case 1: Non-reportable elements (FINREP)

- ifrs-gp (4000 items)
- 400 items
- p-FINREP (1600 items)
- 100 items
- 90 items
- p-T01-BalanceSheet
- t-T01-BalanceSheet
- p-T09-PPE
- t-T09-PPE
- t-FINREP (?)
- Counterptys
- EquityInstr
- ValModel
- hh (?)

Thinking Forward.

Case 2: Elements reportable in base context only

- *Situation:* element appearing in presentation linkbase only or in the presentation and definition linkbase (where some of applicable dimensions don't have default members)
- *Meaning:* element is mean to be reported with base context only or also with base context (in addition to dimensional)
- *XBRL Validation:* element may be reported with any context or only with dimensional context
- *Solution:* in the definition linkbase an element is a source of the all arc which targets hypercube with no dimensions attached

Case 2: Elements reportable in base context only

120+ items

p-ca

p-cm-ca

10+ items

d-_

t-ca

role: ca — 137 items — PL

role: capital requirements main breakdown — 4 items

role: credit risk SA breakdown — 1 item

role: credit risk IRB own estimates breakdown — 1 items

role: credit risk IRB no own estimates breakdown — 1 items

role: securitisation positions SA — 1 item

role: securitisation positions IRB — 1 item

role: traded debt instruments — 1 item

role: adimensional items — 120+ items

DL

Thinking Forward.

Nillable attribute

- reporting „empty" information
- *Depreciation = 0* equal to *There is no depreciation* ?
- correcting of a report by submitting
  - a full new report (old information disregarded)
  - delta (only the changes) – in this case need to be able to „clear" error data

corrected report

base report

Loan commitments = 120
Financial guarantees = 110
Other commitments = 70

Loan commitments = 120
Financial guarantees = 180

full report

Financial guarantees = 180
Other commitments = *Nil*

delta report

- proposal for Eurofiling: all concept can be nilled - formula linkbase is aware of 'nil'

Thinking
Forward.

Validation (1)

- technical (syntax and specification)
- reporting of required information:
    - scope
    - entity, period, unit, …
- business rules:
    - value of a concept (including precision)
    - value of a concept with relation to other concepts

Thinking
Forward.

Validation (2)

- no standard validation on Eurofiling level
  - calculation rules and dimensional constraints
- national custom solutions on customized taxonomies
  - sensitivity
  - scope of data required
    - different periods
    - accepting (disregarding) / rejecting additional data
  - error messages

Thinking
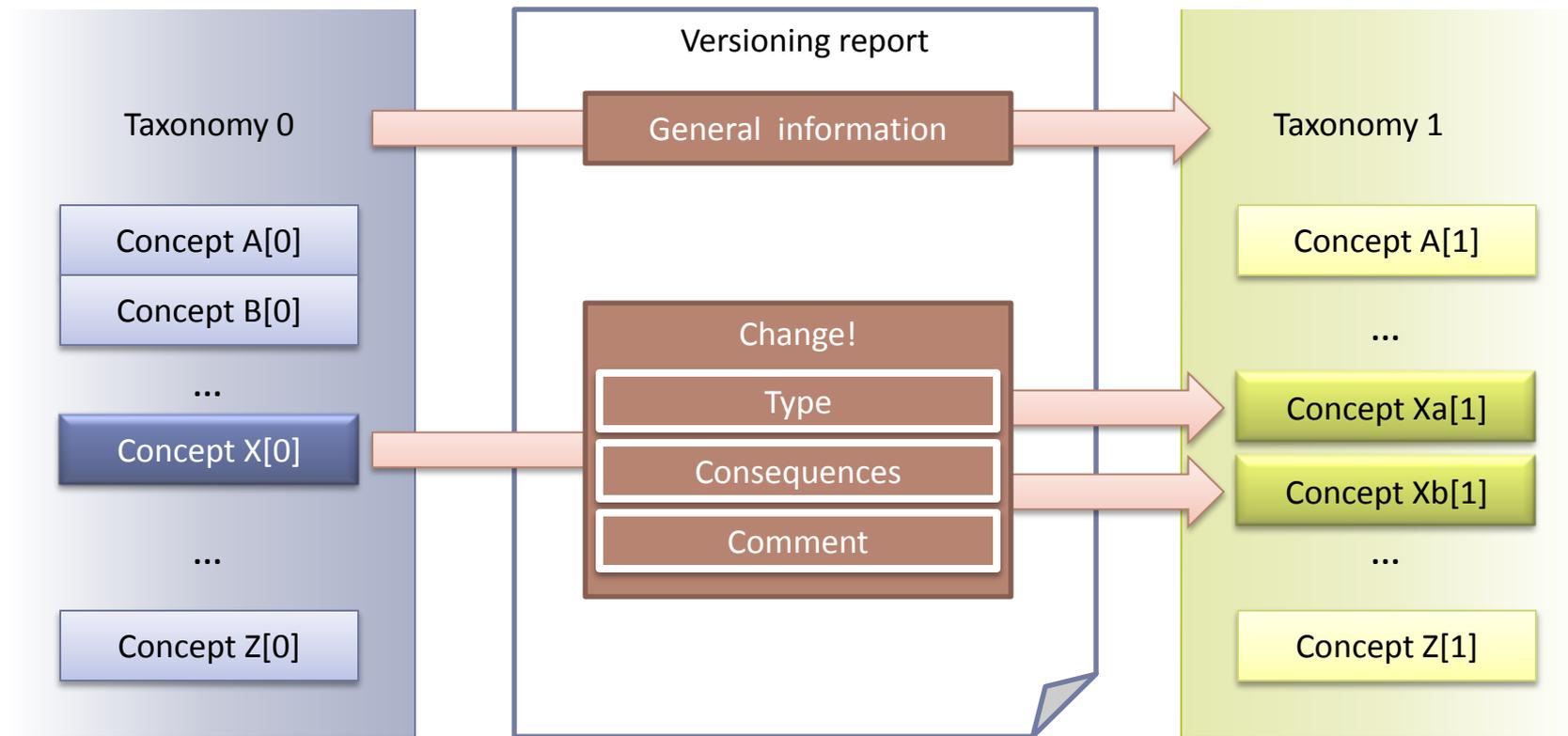Forward.

Validation (3)

- business users to define:
  - format: in data model? (what if more rules apply to one cell)
- calculation linkbase:
  - very limited functionality
  - but also a form of documentation
- replace completely with formula?

Other

- calculation rules if different precision – rounding problem
- not reported information:
    - zero?
    - missing?
    - nil?
- dimensional information in segment or scenario?
- information about reporting entity and person responsible for reporting:
    - envelope?
    - concepts (included in COREP/FINREP or separate taxonomy)?
    - contextual information (if different entities/persons responsible for data in a single report)
    - not related (FINREP and COREP is financial data not general administration information)
- identification of a reporting entity
    - ECB - MFI?
    - IBAN?
    - BIC?
- consolidated/solo - monthly/quarterly/yearly - test/actual/corrected
    - element?
    - separate concepts?
    - context?
    - entry file?
- one/may reports in a single submission/instance

Thinking Forward.

Versioning

Thinking Forward.

Thinking Forward.

Thank you!

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