D1.1 – Survey on standardized e-Document formats

**Analysis of structured e-Document formats used in Trans-European Systems**

##

## Financial Reporting based on XBRL used by the European Banking Authority (EBA) and the European Insurance and Occupational Pensions Authority (EIOPA) and proposed by XBRL Europe

### Context

The European Banking Authority (formerly Committee of European Banking Supervisors), the European Insurance and Occupational Pensions Authority (EIOPA) and XBRL Europe maintain four specifications for financial reporting:

* **COREP**: The European Banking Authority (EBA) Common Reporting Framework (COREP) is the common **solvency ratio reporting framework** **for credit institutions and investment firms** under EU capital requirements regime . The COREP Framework is based initially on Recasted European Directives 2000/12/CE and 93/6/EEC released in July 2004 and currently in accordance with Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (EBA, 2013).
* **FINREP**: The European Banking Authority (EBA) Financial Reporting Framework (FINREP) is designed for **credit institutions** that use IAS/IFRS for their published **financial statements** and that have to provide similar information in the periodic prudential reports they are required to submit to their supervisory authorities . FINREP is designed in compliance with the international financial reporting standards (IAS/IFRS) or the Capital Requirements Directive 2006/48/EC and currently in accordance with Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (EBA, 2013)
* **Solvency II**: Solvency II is a project by EIOPA concerning the establishment of the European insurance and reinsurance undertakings (EIOPA, 2014). In 2009, the Council of the European Union and the European Parliament have approved the Solvency II Directive, which is scheduled for application as of 1 January 2016 .
* **XBRL Europe Business Registers**: The national Business Register collect the annual accounts and related information of each company in the country. Common concepts and tags described in the XBRL Europe Business Register (xEBR) Taxonomy contribute to the harmonisation of financial statements and company identification in order to be interoperable . Contrary to the Eurofiling initiatives, where the specifications are imposed by law at the European level, XBRL Europe has a bottom-up approach, where specifications are created as needed by the countries. The xEBR Working Group works at ensuring the interoperability between the countries.

In 2005, the Committee of European Banking Supervisors (CEBS) and XBRL in Europe hosted a conference in the Chartered Accountants' Hall in London to discuss the promises and challenges involved in the propagation of XBRL in the financial sector (CEBS, 2005). This conference was the starting point of XBRL as format for Financial Supervision.

In 2013, the European Banking Authority published a draft concerning the implementation of uniform reporting requirements covering the FINREP and COREP guidelines, the Implementing Technical Standards:

“*On 26 July 2013 the EBA published final draft Implementing Technical Standards (ITS) on supervisory reporting, in accordance with Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (colloquially known as Capital Requirements Regulation or CRR). (…)*

*As the final draft ITS on supervisory reporting will become part of the single rulebook with the particular aim of specifying uniform prudential reporting requirements, the implementation of the reporting requirements imposed on credit institutions and investment firms shall be based on uniform technical specifications of a granular level of detail*” .

“*These ITS will cover reporting of own-funds and capital requirements (currently under the COREP Guidelines), reporting of financial information (currently under the FINREP Guidelines) and reporting on large exposures (currently under the COREP Large Exposures Guidelines)”* (EBA, 2013)*.*

### e-Document engineering method

The use of XBRL is recommended for financial reporting. The Eurofiling project is an open joint initiative of the open joint initiative of the European Banking Authority (EBA) and the European Insurance and Occupational Pensions Authority (EIOPA) in in collaboration with XBRL Europe, as well as stakeholders as banks, solutions providers, academy and individuals (Eurofiling, about us). The collaborative network collaborates in the development of the technical specifications of the reporting frameworks (COREP, FINREP and Solvency II). Being a community of experts, Eurofiling helps generating an applicable methodology for the taxonomies along with public testing and improvements to be made to the data formats. XBRL Europe also collaborates with national Business Registers in the European xEBR Taxonomy.

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XBRL is an XML general-purpose language for business reporting. Regulatory supervisors, such as the EBA, EIOPA, and Business Registers usually create an **XBRL taxonomy** for their regulatory reporting requirements that defines the specific data elements that are used for individual items of data (such as "net profit"), their attributes and their interrelationships.

* **Methodology**: The Data Point Model Methodology is formalized under the CEN Workshop on XBRL, and used to define the COREP, FINREP and Solvency II XBRL taxonomies . A *DataPointModel* defines structures of data describing the characteristics of the information exchanged in the context of supervisory reporting processes. A DataPointModel consists of a dictionary of business concepts and their properties, which are represented in tables and corresponding textual explanation. To reflect the defined structures in a machine-readable form, it can be accompanied by an XBRL taxonomy.
* **Library of data elements**: Data Point Models are published for COREP 2.0.0, FINREP 2.0.0 and Solvency II. Identified common elements are published in Eurofiling repository.
* **The naming and design rules**: the XBRL Taxonomies follow the naming and design rules of the XBRL specification.
* **e-Document engineering tools:** The tools used to produce XBRL Taxonomies are either commercial tools as well as Supervisory developed tools (Jones, 2013).
* **Representation techniques**: the formats are defined as XBRL taxonomies, consisting of XML Schemas and XBRL linkbases.

### Governance mechanisms

* **Change management**
* ***Organisation roles***:
	+ XBRL Europe, Eurofiling: collaborative network of experts for discussing changes
	+ EBA and EIOPA: authorities that promulgate new formats
* ***Decision making process***: Methodologies, Practices, Standards and Changes are discussed by the collaborative network of experts within XBRL Europe and Eurofiling. They are then contributed to the EBA and EIOPA authorities who develop, communicate and publish the new formats.

New editions of data formats are published for review under a unique “released” URL. Once the review period has concluded, the official URLs are updated to point to the new edition. New editions are announced on the mailing list and discussed using conference calls. Previous releases remain accessible, users can thus choose between using the URL of a specific frozen release, or an official URL that is updated, but tested for backward compatibility.

* ***Documentation***:
* **Enforcement policy:** The sharing and reuse of the XBRL format is currently voluntary between reporting authorities and national authorities within the same country (“first level”). Such authorities have the option to apply the traditional approach or make use of XBRL. It is up to each country to decide whether the use of XBRL is made mandatory. On the “second level”, i.e., communication between national authorities and European authorities, the use of XBRL is in the process of being made mandatory.
* **Authoritative source**: The ITS and DPM are pending publication in the Official Journal of the European Union, and adoption as EU Regulations that will be directly applicable throughout the EU. XBRL Taxonomies are to be published by the respective regulator as EBA and EIOPA. Common EBA/EIOPA definitions are published by Eurofiling. The non-profit XBRL International publishes the language source (XBRL Specification).
* **Licensing framework**: The EUPL is a class 3 licence, give the rights to use, redistribute, and modify via copy left.
* **Quality controls:** Test cases are made public by EBA and EIOPA. XBRL Taxonomies are tested by National Supervisors and Software Vendors before publication. Drafts are also made public for comments. The main challenge is the lack of comprehensive test cases, as all the EBA and EIOPA information is confidential, and simulating actual business cases is too complex (Eurofiling Minutes, 2014).

### Conformance mechanisms

* **Application profile**: The Taxonomy is one particular IT representation of the Data Point Model, representing the requirements of the templates, instructions and wider text of the ITS as captured in the DPM. The definition of those requirements remains purely in the ITS, with the detailed identification and classification of them expressed in the DPM.
* **Validation mechanism**: To facilitate uniform implementation and avoid implementation problems, validation rules (quantitative relations between rows and columns of each template, and among templates) are included in the ITS. These have been translated into XBRL formula assertions. Validations tools are common for any XBRL Taxonomy, as COREP, FINREP, Solovency II or xEBR. A more or less updated list of industry solutions is public[[1]](#footnote-1) along with several Open Source experiences[[2]](#footnote-2) is public (WikiXBRL)
* **Conformance certification**: There are no mechanisms to certify that a system conforms to the EBA reporting requirements.

### Security mechanisms

The CEN Workshop on XBRL project (developed as part of the Eurofiling collaborative network) defines an e-Document container format that allows to securely transfer structured and unstructured data.[[3]](#footnote-3) Containers can be encrypted using W3C XML Encryption, which ensures the **confidentiality**. The data is encrypted with a symmetric algorithm (AES-256) with a generated secret key. The secret key is itself encrypted with an asymmetric algorithm (RSA-OAEP). An electronic signature with XAdES-BES/EPES format can also be attached to the container. The signature algorithm used is RSA with a SHA512 hash. The scheme provides **authentication**, **integrity** and **non-repudiation of origin**.

### Usage

* **Number of e-Document formats**: 4 data formats (COREP, FINREP, SOLVENCY II, Business Registers)
* **Number of known implementations in production-grade software**: about 10 commercial tools are available implementing the XBRL Taxonomies. The Openfiling[[4]](#footnote-4) provides additional open-source artefacts.
* **Number of e-Documents formats exchanges annually**: In each country using XBRL, about 10,000 for COREP and FINREP, and about 1 million for Business Registers

### Summary table

Table - Description of Financial Reporting based on XBRL

|  |
| --- |
| Financial Reporting based on XBRL |
| **DESCRIPTIVE METADATA** |
| **Licence** | European Union Public Licence[[5]](#footnote-5) (Eurofiling Initiative, 2011) |
| **Publisher** | European Banking Authority (EBA), European Insurance and Occupational Pensions Authority (EIOPA) |
| **Publisher type** | Supra-national authority |
| **Theme(s)** | Finance  |
| **Access URL** | FINREP: [http://www.eurofiling.info/finrepTaxonomy/taxonomy.shtml](http://www.eurofiling.info/finrepTaxonomy/taxonomy2012.shtml)COREP: <http://www.eurofiling.info/corepTaxonomy/taxonomy.shtml>Solvency II: <http://www.eurofiling.info/solvencyII/index.shtml> |
| **CONTEXT** |
| **Administrative process context** | * **COREP**: Financial institutions reporting their credit risk, market risk, operational risk, own funds and capital adequacy ratios to national supervisors
* **FINREP**: Financial institutions reporting data concerning their balance sheet and income statement to their national supervisory authority
* **Solvency II**: Financial institutions reporting data concerning insurance and reinsurance undertakings
 |
| **Geopolitical context** | European Union |
| **Legal context** | * **COREP**: Directive [2006/48/EC](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:177:0001:01:EN:HTML) 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 (recast);

Directive [2006/49/EC](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0049:en:NOT) of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions (recast)* **FINREP**: International financial reporting standards IAS/IFRS or Capital Requirements Directive [2006/48/EC](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:177:0001:0001:EN:PDF).
* **ITS**: Regulation (EU) [No 575/2013](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32013R0575:EN:NOT) of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (colloquially known as Capital Requirements Regulation or CRR).
 |
| **DOCUMENT ENGINEERING METHODOLOGY** |
| **Methodology** | Data Point Model Methodology (CEN/WS XBRL, 2013) |
| **Library of data elements** | Data Point Model |
| **Naming and Design Rules** | Naming and design rules of the XBRL specification |
| **e-Document engineering tools** | Unspecific |
| **Representation techniques** | XBRL Taxonomy, XML Schema |
| **GOVERNANCE MECHANISMS** |
| **Goals** | * **COREP**: Create a harmonised business model for the European solvency reporting requirements.
* **FINREP**: Use standardized data formats and data definitions for prudential reporting in all countries.
* **Solvency II**: Create a harmonised supervisory system in insurance.
 |
| **Change management** | * **Organisational roles:**

XBRL Europe, Eurofiling: open discussions and contributionsEBA and EIOPA: formal development, communication and publication of the changes* **Decision making process:** Publication of new editions of data formats for review under unique URL. They are published on the mailing list and discussed using conference calls. Once approved, the official URLs are updated.
* **Documentation:** no information found
 |
| **Enforcement policy** | * **Sharing and reuse:** National decision on first level (primary reporting between reporting entities and National authorities); mandatory on second level (between National authorities and European authorities)
 |
| **Authoritative source** | * **ITS**: Official Journal of the European Union (pending)
* **COREP, FINREP and Solvency II**: EBA, EIOPA, Eurofiling and XBRL repository of XBRL taxonomies and modules
 |
| **Licensing framework** | **Class 3:** Free to use, redistribute, and modify via copy left licence |
| **Quality controls** | Quality Control Process for Taxonomy Development |
| **CONFORMANCE AND SECURITY MECHANISMS** |
| **Conformance mechanism** | * **Application profile:** XBRL
* **Validation:** Validation rules in ITS; XBRL Validation Tools: Market driven (WikiXBRL)
* **Conformance certification:** Nonexistent
 |
| **Security mechanism** | * **Authentication:** Electronic signature to container
* **Integrity:** Electronic signature to container
* **Confidentiality:** Encrypted containers (W3C XML Encryption)
* **Non-repudiation:** Electronic signature to container
 |
| **USAGE** |
| **Number of e-Document formats** | 4 (COREP, FINREP, Solvency II, XBRL Europe Business Registers) |
| **Number of known implementations in production-grade software** | 30 commercial tools |
| **Number of e-Documents exchanges annually** | 10,000 by Authority/year (1 million for Business Registers) |

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1. <http://wikixbrl.info/index.php?title=XBRL_Industry_Solutions> [↑](#footnote-ref-1)
2. <http://wikixbrl.info/index.php?title=Open_Source_and_XBRL> [↑](#footnote-ref-2)
3. Improving transparency in financial and business reporting — Metadata container: <http://cen.eurofiling.info/wp-content/upLoads/data/CWA_XBRL_WI002-E.pdf> [↑](#footnote-ref-3)
4. <http://www.openfiling.info/> [↑](#footnote-ref-4)
5. European Union Public License: <http://joinup.ec.europa.eu/software/page/eupl> [↑](#footnote-ref-5)