29th Eurofiling Conference
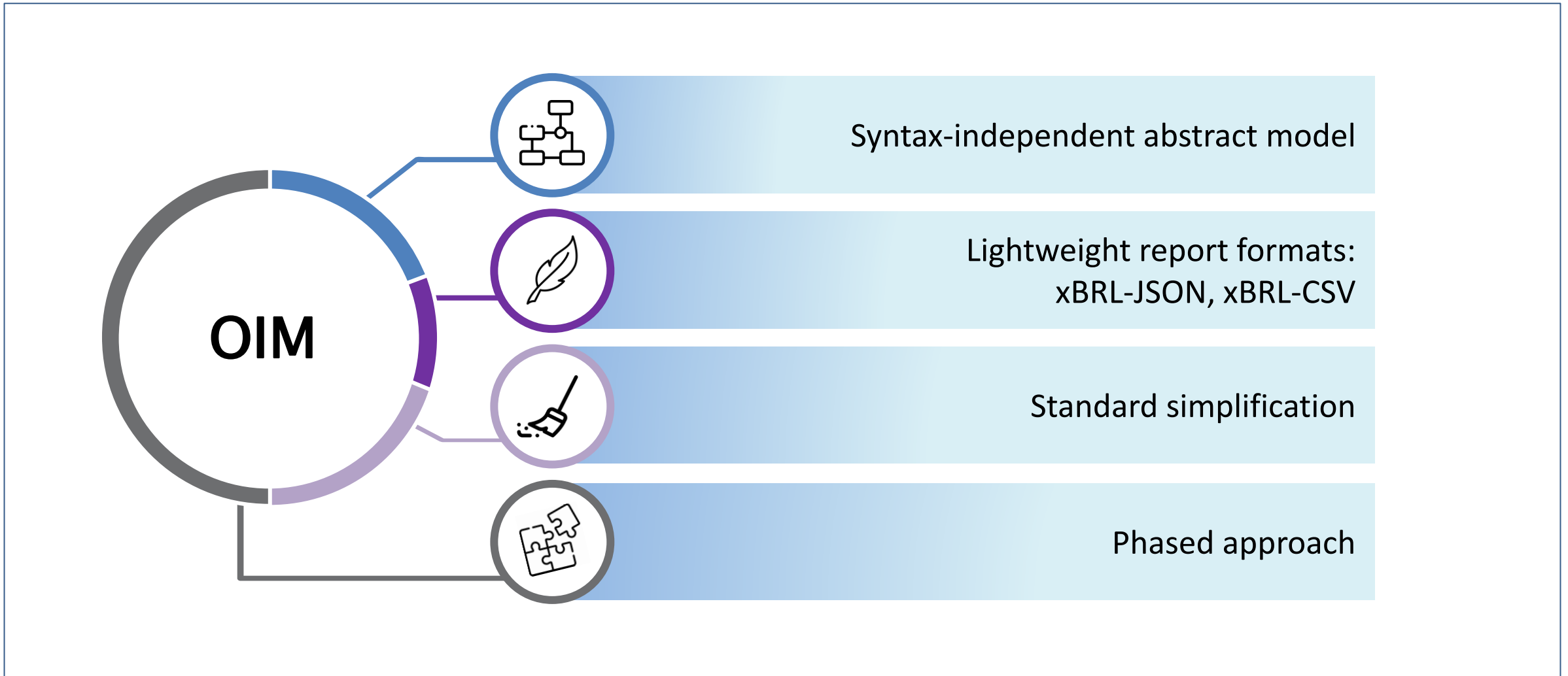
5th and 6th June 2024 | Central Bank of Ireland | Dublin, Ireland

Handling OIM in regulatory reporting platforms

Sebastian Lewicki, Fujitsu

Open Information Model

OIM

- Syntax-independent abstract model
- Lightweight report formats: xBRL-JSON, xBRL-CSV
- Standard simplification
- Phased approach

Open Information Model

Why do we need to implement OIM?

- EBA decided to use xBRL-CSV

- EIOPA to follow

- DORA – xBRL-CSV to be used

What are the actual requirements?

- Supporting new formats:

    – xBRL-CSV

    – Report Package

- It must be possible for xBRL-XML and xBRL-CSV to live together (for the transition period and for resubmission)
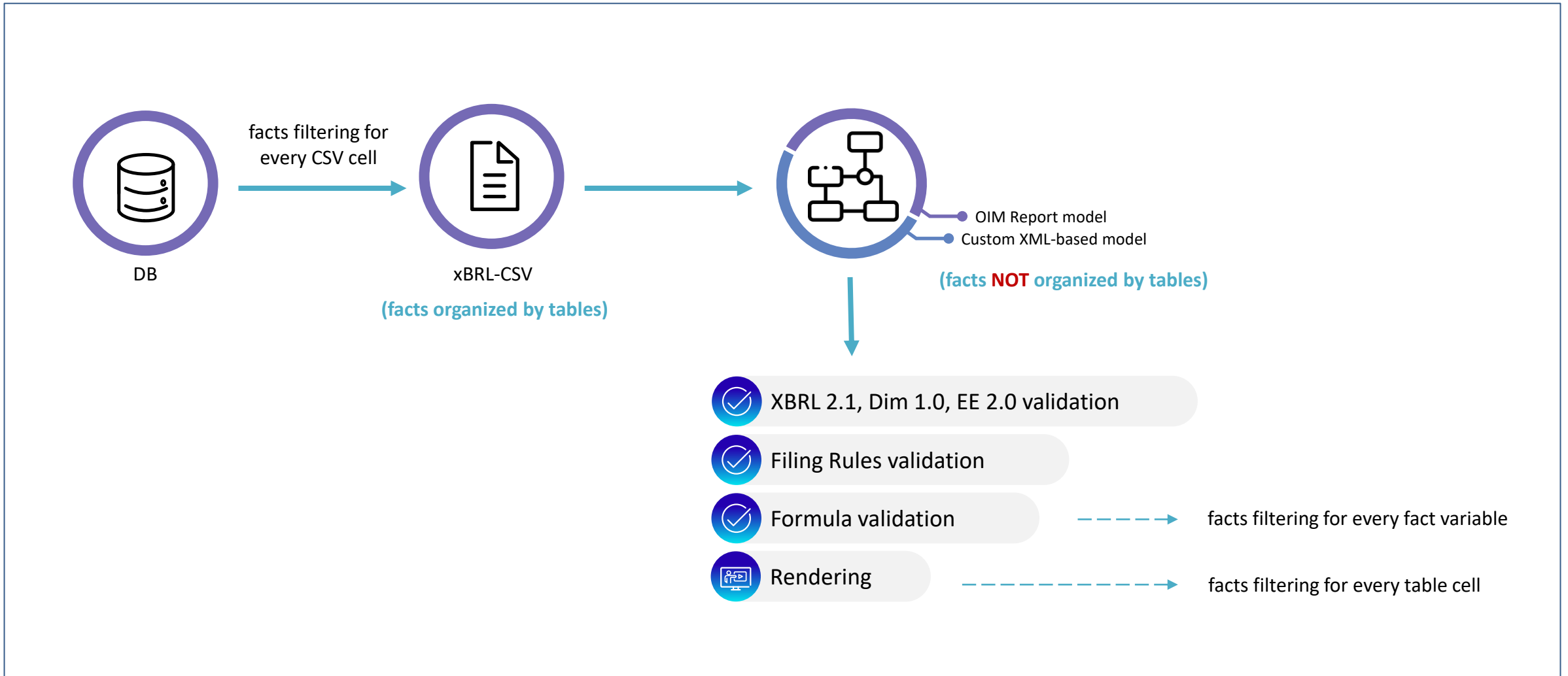
Complexity behind simplicity

- Adding xBRL-CSV support to existing systems is easy, once implementation has been provided

- Actual implementation of the standard is tricky

- xBRL-CSV is flexible – data files in various forms (defined by JSON metadata), e.g. EBA-style (one fact per line) or "plain CSV" layout (one table row per line)

- Conformance suite (2023-04-19) is quite comprehensive:

  – xBRL-CSV: 367 test cases

  – xBRL-JSON: 292 test cases

- Implementing xBRL-CSV support in-house may cost more than expected
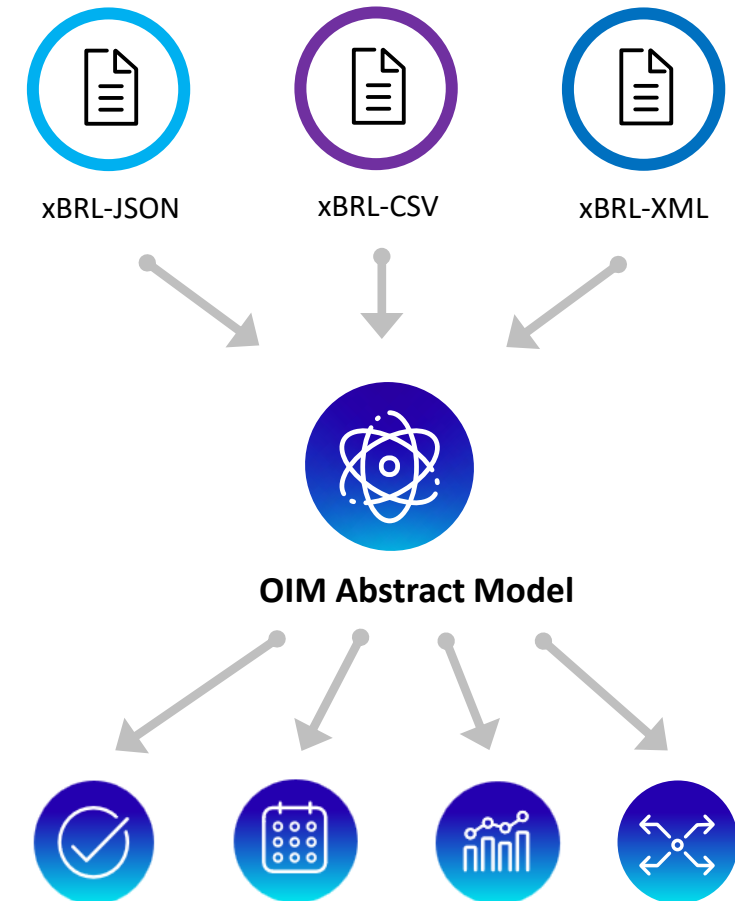
Formula validation and xBRL-CSV

- Business rules performance is of key interest in granular data processing

- Lots of expectations associated with OIM

- In the current, early stage, the benefits are limited

- Fundamental issues with Formula processing model still remain

- Several initiatives within XBRL II can significantly boost formula and overall processing performance:

  – OIM Taxonomy

  – OIM Formula: OIM Compatible Formula (CR), Functions Registry update

  – table-based formula optimized for CSV

  – XBRL Rules 3.0

Formula validation and xBRL-CSV

DB

facts filtering for every CSV cell

xBRL-CSV

(facts organized by tables)

OIM Report model
Custom XML-based model

(facts NOT organized by tables)

✓ XBRL 2.1, Dim 1.0, EE 2.0 validation

✓ Filing Rules validation

✓ Formula validation — — — → facts filtering for every fact variable

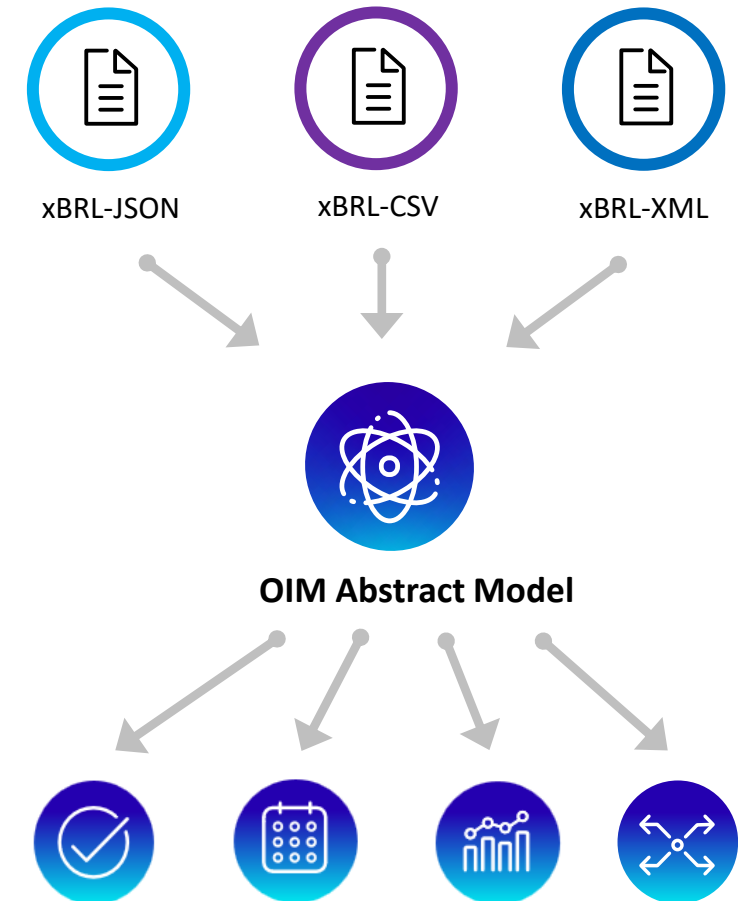▣ Rendering — — — — — → facts filtering for every table cell

Benefits of implementing OIM

- Compliance with EBA's xBRL-CSV reporting (EIOPA to follow)

- xBRL-CSV report's size much smaller than equivalent xBRL-XML instance (even x17 smaller)

- xBRL-CSV allows for tabular organization of data (in TBL fashion)

- Easy addition to existing systems (xBRL-CSV, xBRL-JSON, xBRL-XML as equivalent document formats)

- xBRL-JSON simplest, easy for data transfer to non-XBRL systems

xBRL-JSON   xBRL-CSV   xBRL-XML

OIM Abstract Model

Benefits of implementing OIM

- OIM abstract model can be the foundation of future systems

- With expected OIM Taxonomy Model (phased implementation) and XBRL Rules 3.0 reports and taxonomies can be processed in a uniform way, independent of their syntax (XML, CSV, JSON)

- All typical operations: validation, presentation, analytics, transformations can be done on common abstract model

- Opportunities for significant performance optimizations of time, CPU and memory

xBRL-JSON   xBRL-CSV   xBRL-XML

OIM Abstract Model

Frequently Asked Questions

1. What is the relationship between DPM Refit and OIM?

DPM Refit is a methodology with an XBRL taxonomy being one of artifacts defining reporting requirements. XBRL tools with OIM capability (xBRL-CSV processing) are ready for DPM Refit.

2. What is the relationship between DORA reporting and OIM?

DORA reporting will use so called plain-CSV data files which are regular xBRL-CSV files. Will be handled by OIM capable processors without problems.

3. Can xBRL-XML and xBRL-CSV reporting be used simultaneously?

Yes, they are just document formats which can be used interchangeably or in parallel.

Frequently Asked Questions

4. What performance benefits should be expected with xBRL-CSV?

Performance depends on validation model rather than solely on input format. Once the validation model has been changed (XBRL Rules 3.0), significant benefits can be expected. Still, smaller memory footprint can be expected (no need to create XML DOM).

5. What is the purpose of OIM Compatible Formula specs and Functions Registry update?

The main purpose is to define a subset of Formula 1.0, which can be evaluated without the presence of XML DOM (XML document is not needed to perform the evaluation). New fact- and report-related functions do not depend on XML syntax anymore.

Thank you for your attention!

xbrl@fqs.pl