

XBRL EUROPE

XBRL IT

24th XBRL EUROPE DAY in Milan

5-6th FEBRUARY 2020

Hosted by



xBRL-CSV for BIRD datasets

- Mark Goodhand
- CoreFiling
- XBRL UK

What is BIRD?

- Banks' Integrated Reporting Dictionary
- ECB initiative
- SMCube Information Model
 - sits above XBRL & SDMX
- Access Database

BIRD frameworks

Code	Maintenance Agency	Name
AE_REF	ECB	Asset Encumbrance Reference
ANCRDT	ECB	AnaCredit
BIRD	ECB	Banks' Integrated Reporting Dictionary
AE	EBA	Asset Encumbrance
COREP	EBA	Common Reporting
FINREP	EBA	Financial Reporting
RES	EBA	Resolution
SHS	ECB2	Securities Holdings Statistics
FINREP_REF	ECB	Financial Reporting - Reference
RES_REF	ECB	Resolution Planning Reference
SDD	ECB	Single Data Dictionary information model
SHS_REF	ECB	Securities Holdings Statistics - Reference

BIRD releases

- BIRD Database 5.0 (December 2019)
- BIRD Database 4.2 (18 November 2019)
- BIRD Database 4.1 (4 October 2019)
- BIRD Database 4.0 (10 July 2019)
- BIRD Database 3.0 (1 March 2019)
- BIRD Database 2.1.1 (8 February 2019)
- BIRD Database 2.0 (29 June 2018)
- BIRD Database 1.0 (28 April 2017)

Further reading on BIRD

- [Single Data Dictionary \(SDD\) and Banks' Integrated reporting dictionary \(BIRD\)](#)
 - Silvia Giacinti, 2019-06-19
 - [Towards a PoC for BIRD and XBRL?](#)
 - Jean-Marc Israël, 2019-05-29
 - [The Integrated Reporting Framework \(IReF\) and the Banks' Integrated Reporting Dictionary \(BIRD\) – A convergence process?](#)
 - Romana Peronaci, 2019-02-08
 - [What is the BIRD?](#)
-

Is XBRL good enough?



2004: Y [XBRL 2.1]	2010: Y [iXBRL 1.0]	2016: Y [Taxonomy Packages 1.0]
2005: Y	2011: Y	2017: Y
2006: Y [Dimensions 1.0]	2012: Y	2018: Y
2007: Y	2013: Y [iXBRL 1.1]	2019: Y
2008: Y	2014: Y [Table Linkbase 1.0] [EE 1.0]	2020: ?
2009: Y [Formula 1.0]	2015: Y	2021: ?

XBRL 2020 – The Good Parts

- Mature global standard, proven in the real world
- Wide range of interoperable, certified software
- Standardised validation (Formula) and rendering (Table Linkbase)
- Support for filer-defined presentation (iXBRL)

Beacon CoreFiling

Home > Dummy > C 27.00 (LE 1) Identification of the counterparty mrg@corefiling.com

< Show

COUNTERPARTY IDENTIFICATION						
Name	LEI code	Residence of the counterparty		Sector of the counterparty	NACE code	Type of counterparty
020	030	040	050	060	070	
1	7826	5813	CEMAC (Communauté Économique et Monétaire de l'Afrique Centrale)	Households	C19 - Manufacture of coke and refined petroleum products	U - Unregulated
2	5336	5560	ANGUILLA	Financial corporations other than credit institutions and investment firms	P - Education	
3	6711	2460	LAO PEOPLE'S DEMOCRATIC REPUBLIC	Financial corporations other than credit institutions	B6 - Extraction of crude petroleum and natural gas	U - Unregulated

Cell
✓
-
⚠
-
✗
-
⊘
-

Large instance problem

- COREP LE
 - ~ 400 MB
- Solvency II
 - ~ 800 MB
- WGN 2012: [*Notes on the Processing of Large XBRL Instances*](#)
- Software vendors did enough to cope with current sizes
- But trend to granular reporting means trouble ahead



AnaCredit – one that got away

 **List of legal forms**

last update: 16 September 2019

 **List of national identifiers**

last update: 16 September 2019

 **List of international organisations**

last update: 16 September 2019

- 10 large, simple datasets
- XBRL perceived as
 - too verbose
 - too complicated
- No international standard
- Divergent custom formats
- urn:xmlns:centralbank.ie:anacredit
- http://bof.fi/AC

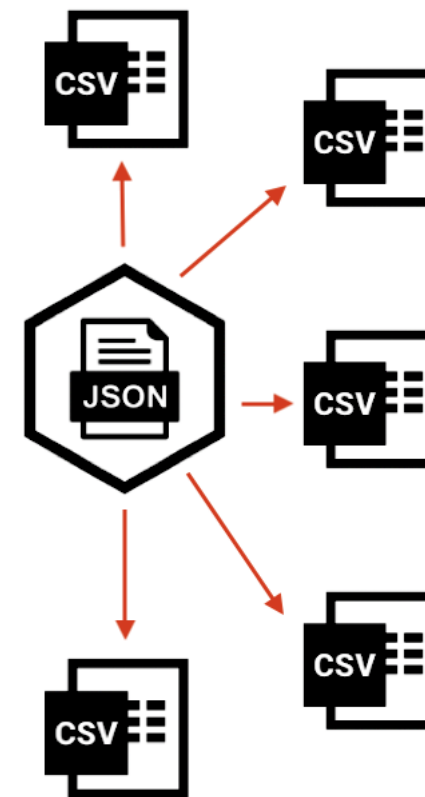
Table 28 Overview of data attributes in the financial dataset

Data attribute	Internal identifier	Data type	Section in Part II
Reporting agent identifier	√	String	2.1.2.1
Observed agent identifier	√	String	2.1.2.2
Contract identifier	√	String	2.1.2.4
Instrument identifier	√	String	2.1.2.5
Interest rate		Numerical	4.4.1
Next interest rate reset date		Date	4.4.2
Default status of the instrument		Code list	4.4.4
Date of the default status of the instrument		Date	4.4.5
Transferred amount		Amount in euro	4.4.3
Arrears for the instrument		Amount in euro	4.4.6
Date of past due for the instrument		Date	4.4.7
Type of securitisation		Code list	4.4.8
Outstanding nominal amount		Amount in euro	4.4.9
Accrued interest		Amount in euro	4.4.11
Off-balance-sheet amount		Amount in euro	4.4.10

xBRL-CSV

- JSON metadata file + CSV files
- Share information
 - Common to all facts in a row
 - Common to all facts in a column
 - Common to all facts in a table
 - Common to all facts in a report

```
{
  "documentInfo": {
    "documentType": "http://xbrl.org/YYYY/xbrl-csv",
    "namespaces": {
      "ld": "http://xbrl.org/oim/conformance/firm-lo",
      "lei": "http://standards.iso.org/iso/17442",
      "iso4217": "http://www.xbrl.org/2003/iso4217"
    },
    "taxonomy": [
      "https://xbrl.org/oim/conformance/firm-loans.xls"
    ]
  },
  "dimensions": {
    "entity": "$entityLEI",
    "period": "$reportPeriod"
  },
  "tableTemplates": {
    "loan_data_template": {
      "columns": {
        "loan_id": {},
        "company_lei": {
          "dimensions": {
            "concept": "ld:CompanyLEI"
          }
        },
        "country_inc": {
          "dimensions": {
            "concept": "ld:CountryOfIncorporat:"
          }
        },
        "local_currency": {},
        "fixed_rate_period": {},
        "deposit_amount_hc": {
          "dimensions": {
            "concept": "ld:DepositAmount",
            "period": "$fixed_rate_period@start",
            "unit": "iso4217:EUR"
          }
        }
      },
    },
  },
}
```



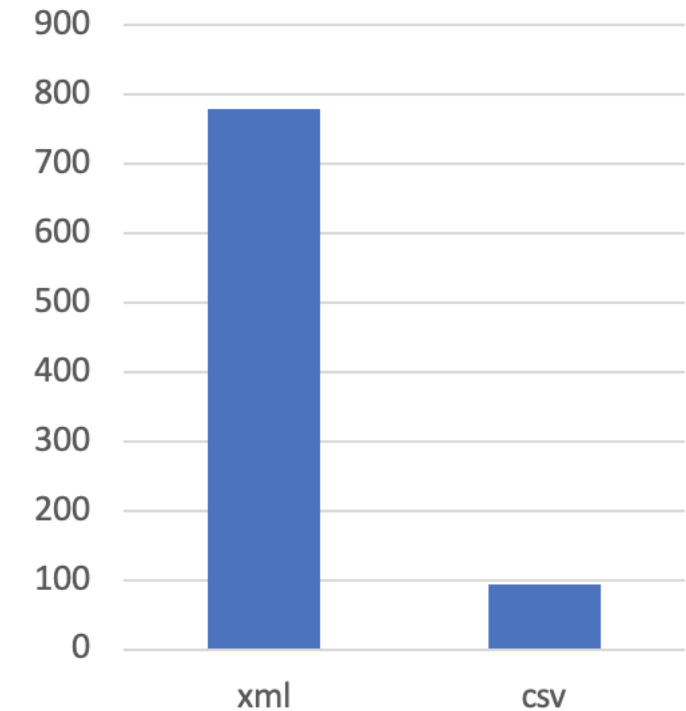
xBRL-XML

xBRL-CSV

```
1 <xbrli:context id="c6">
2   <xbrli:entity>
3     <xbrli:identifier scheme="http://standards.iso.org/iso/17442">
4       DUMMYLEI123456789012</xbrli:identifier>
5     </xbrli:entity>
6     <xbrli:period>
7       <xbrli:instant>2018-12-31</xbrli:instant>
8     </xbrli:period>
9     <xbrli:scenario>
10      <xbrldi:typedMember dimension="eba_dim:INC">
11        <eba_typ:CC>3</eba_typ:CC>
12      </xbrldi:typedMember>
13    </xbrli:scenario>
14  </xbrli:context>
15  <eba_met:si168 contextRef="c6">6711</eba_met:si168>
16  <eba_met:si288 contextRef="c6">2460</eba_met:si288>
17  <eba_met:ei152 contextRef="c6">eba_GA:LA</eba_met:ei152>
18  <eba_met:ei219 contextRef="c6">eba_CT:x18</eba_met:ei219>
19  <eba_met:ei218 contextRef="c6">eba_NC:B6</eba_met:ei218>
20  <eba_met:ei316 contextRef="c6">eba_ZZ:x28</eba_met:ei316>
```

```
INC,si168,si288,ei152,ei219,ei218,ei316
3,6711,2460,eba_GA:LA,eba_CT:x18,eba_NC:B6,eba_ZZ:x28
```

88% fewer characters



xBRL-CSV for BIRD

- PoC proposal from the Bank and Insurance Working Group
 - Illustrate full XBRL coverage for granular data
 - ANACREDIT
 - SHS
 - Match BIRD Variables/Dimensions/Domain members
-

Taxonomy + xBRL-CSV metadata from BIRD

BIRD

New revision

Version 0.1

Status Draft

Revision 1  committed 17 hours ago

 Prepare >  Generate >  Validate

Settings

Input files

Pipeline

Output files

 Prepare

 Generate

 Validate

 Extract tables

 Generate taxonomy

 Validate taxonomy

 Build taxonomy definition

 Extract tables

Status  PASSED

Started 17 hours ago

Duration 27s

[Logs](#)

[Files](#)

```
Unzipping database
Archive: /tmp/database.zip
  creating: BIRD_release/
  inflating: BIRD_release/db_comparison.xlsx
  inflating: BIRD_release/README.txt
  inflating: BIRD_release/BIRD_release_5.0.accdb
-rw-r--r-- 1 root root 662M Feb  5 12:28 /tmp/BIRD.accdb
Extracting tables ...
AXIS
AXIS_ORDINATE
COMBINATION
COMBINATION_ITEM
CUBE
CUBE_GROUP
CUBE_GROUP_ENUMERATION
CUBE_HIERARCHY
CUBE_MAPPING
CUBE_RELATIONSHIP
CUBE_STRUCTURE
CUBE_STRUCTURE_ITEM
CUBE_TO_COMBINATION
DOMAIN
```

Taxonomy from BIRD

- Approach:

- Start from CUBE_STRUCTURE_ITEM
- Generate an XBRL hypercube for each CUBE_STRUCTURE_ID
- For each variable with ROLE 'D', generate an XBRL dimension
- For each variable with ROLE 'O', generate an XBRL primary item
- SMCube attributes (ROLE 'A') ??
 - Probably use an XBRL primary item for these too

CUBE_STRUCTURE_ID	CUBE_VARIABLE_CODE	ROLE	SUBDOMAIN_ID	VARIABLE_ID
ANCRDT_ACCNTNG_C_1	OBSRVD_AGNT_CD	D	STRNG_RSTRICTD_ID_50	OBSRVD_AGNT_CD
ANCRDT_ACCNTNG_C_1	DT_RFRNC	D	DT_END_QRTR_YYYY_MM_DD	DT_RFRNC
ANCRDT_ACCNTNG_C_1	CNTRCT_ID	D	STRNG_RSTRICTD_ID_60	CNTRCT_ID
ANCRDT_ACCNTNG_C_1	INSTRMNT_ID	D	STRNG_RSTRICTD_ID_60	INSTRMNT_ID
ANCRDT_ACCNTNG_C_1	ACCNTNG_CLSSFCTN	O	ACCNTNG_CLSSFCTN_ANCRDT_CLLCTN	ACCNTNG_CLSSFCTN
ANCRDT_ACCNTNG_C_1	RCGNTN_STTS	O	RCGNTN_STTS_ANCRDT_CLLCTN	RCGNTN_STTS
ANCRDT_ACCNTNG_C_1	ACCMLTD_WRTFFS	O	MNTRY_NN_NGTV_2D	ACCMLTD_WRTFFS
ANCRDT_ACCNTNG_C_1	ACCMLTD_IMPRMNT	O	MNTRY_NN_NGTV_2D	ACCMLTD_IMPRMNT
ANCRDT_ACCNTNG_C_1	IMPRMNT_STTS	O	CRDT_QLTY_IMPRMNT_STTS_ANCRDT_CLLCTN	IMPRMNT_STTS
ANCRDT_ACCNTNG_C_1	IMPRMNT_ASSSSMNT_MTHD	O	IMPRMNT_ASSSSMNT_MTHD_ANCRDT_CLLCTN	IMPRMNT_ASSSSMNT_MTHD
ANCRDT_ACCNTNG_C_1	SRC_ENCMBRNC	O	SRC_ENCMBRNC_ANCRDT_CLLCTN	SRC_ENCMBRNC
ANCRDT_ACCNTNG_C_1	ACCMLTD_CHNGS_FV_CR	O	MNTRY_ALL_2D	ACCMLTD_CHNGS_FV_CR
ANCRDT_ACCNTNG_C_1	PRFRMNG_STTS	O	CRDT_QLTY_PRFRMNG_STTS_ANCRDT_CLLCTN	PRFRMNG_STTS
ANCRDT_ACCNTNG_C_1	DT_PRFRMNG_STTS	O	DT_FLL_YYYY_MM_DD	DT_PRFRMNG_STTS
ANCRDT_ACCNTNG_C_1	PRVSNS_OFF_BLNC_SHT	O	MNTRY_NN_NGTV_2D	PRVSNS_OFF_BLNC_SHT
ANCRDT_ACCNTNG_C_1	FRBRNC_STTS	O	FRBRNC_STTS_ANCRDT_CLLCTN	FRBRNC_STTS
ANCRDT_ACCNTNG_C_1	DT_FRBRNC_STTS	O	DT_FLL_YYYY_MM_DD	DT_FRBRNC_STTS
ANCRDT_ACCNTNG_C_1	CMLTV_RCVRS_SNC_DFLT	O	MNTRY_NN_NGTV_2D	CMLTV_RCVRS_SNC_DFLT
ANCRDT_ACCNTNG_C_1	PRDNTL_PRTFL	O	PRDNTL_PRTFL_ANCRDT_CLLCTN	PRDNTL_PRTFL
ANCRDT_ACCNTNG_C_1	CRRYNG_AMNT	O	MNTRY_ALL_2D	CRRYNG_AMNT
ANCRDT_ACCNTNG_C_1	NEVS_ACCNTNG_CLSSFCTN	A	NEVS_CLLCTN	NEVS
ANCRDT_ACCNTNG_C_1	NEVS_IMPRMNT_STTS	A	NEVS_CLLCTN	NEVS
ANCRDT_ACCNTNG_C_1	NEVS_PRFRMNG_STTS	A	NEVS_CLLCTN_WTHT_NA	NEVS
ANCRDT_ACCNTNG_C_1	NEVS_DT_FRBRNC_STTS	A	NEVS_CLLCTN_WTHT_NA	NEVS
ANCRDT_ACCNTNG_C_1	NEVS_DT_PRFRMNG_STTS	A	NEVS_CLLCTN_WTHT_NA	NEVS

xBRL-CSV metadata from BIRD

- Approach:
 - Start from CUBE_STRUCTURE_ITEM
 - Generate a tableTemplate for each CUBE_STRUCTURE_ID
 - For each variable with ROLE 'D', generate a dimension column
 - For each variable with ROLE 'O', generate a fact column
 - SMCube attributes (ROLE 'A') ??
 - Probably use a fact column for these too
 - Add unit dimension for MNTRY?

```
1      "tableTemplates": {
2          "ANCRDT_ACCNTNG_C_1": {
3              "columns": {
4                  "OBSRVD_AGNT_CD": {},
5                  "DT_RFRNC": {},
6                  "CNRCT_ID": {},
7                  "INSTRMNT_ID": {},
8                  "ACCNTNG_CLSSFCTN": {
9                      "dimensions": {
10                         "concept": "bird:ACCNTNG_CLSSFCTN"
11                     }
12                 },
13                 "RCGNTN_STTS": {
14                     "dimensions": {
15                         "concept": "bird:RCGNTN_STTS"
16                     }
17                 },
18                 "...": "..."
19             },
20             "dimensions": {
21                 "bird:OBSRVD_AGNT_CD": "$OBSRVD_AGNT_CD",
22                 "bird:DT_RFRNC": "$DT_RFRNC",
23                 "bird:CNRCT_ID": "$CNRCT_ID",
24                 "bird:INSTRMNT_ID": "$INSTRMNT_ID",
25             }
26         }
27     }
```

Questions?

