

ERROR HANDLING PANEL: FORMULAS EXPRESSED IN NATURAL LANGUAGE

5th Eurofiling.

XBRL week in Rome.

5th-7th May 2014

Ignacio Santos

Bank of Spain

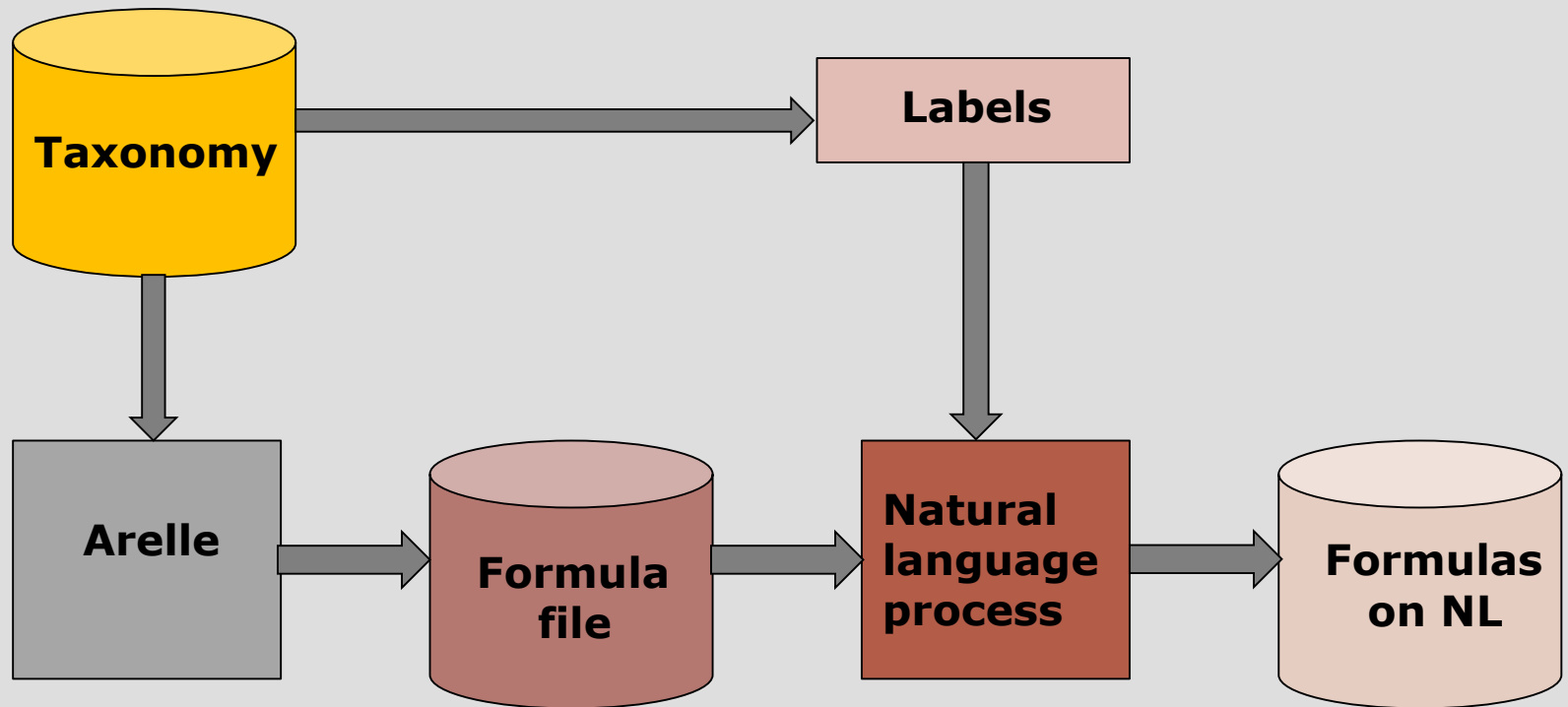
Madrid, May 5th, 2014

SUMMARY



- 1. Structure.**
- 2. Example of a report.**
- 3. Formula from Arelle.**
- 4. Formula in Natural Language.**
- 5. Formula in Excel.**

STRUCTURE



EXAMPLE OF REPORT



Germany

Euros

Financial assets, period: 1st quarter, 2012

Financial institution	Type of Loan	Type of Asset	Value
BNP Paribas	The bank itself	Real Estate	10,000.00
BNP Paribas	To other banks	Real Estate	20,000.00
ING Group	The bank itself	Real Estate	10,000.00
ING Group	To other bank	Real Estate	15,000.00
BNP Paribas	To bank itself and other banks	Real Estate	30,000.00

FORMULA:

- The real estate loans of the bank must be equal to the sum of the real estate loans with the bank itself and other banks.

FORMULA FROM ARELLE I

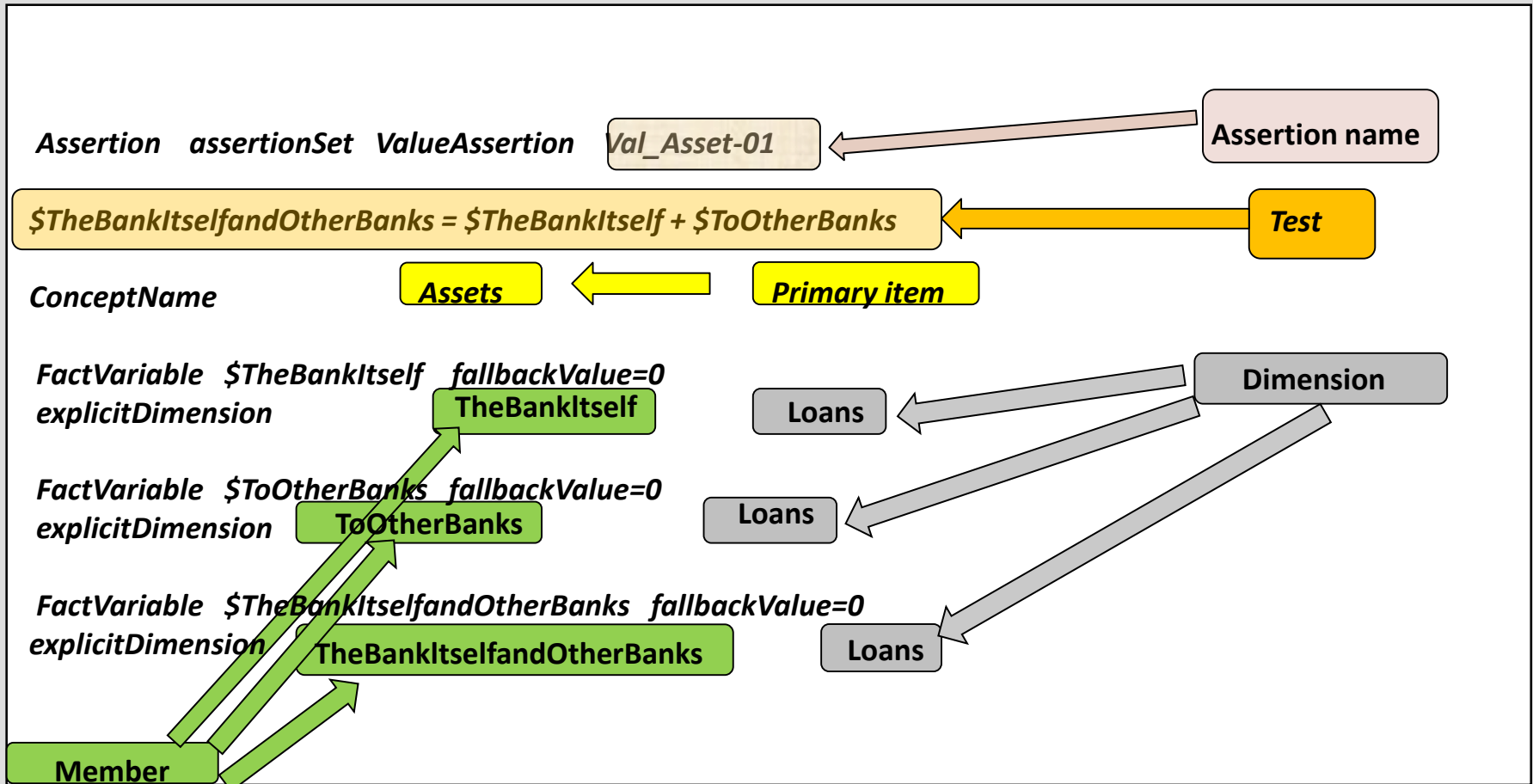
***Assertion assertionSet ValueAssertion Val_Asset-01
\$TheBankItselfandOtherBanks = \$TheBankItself + \$ToOtherBanks***

ConceptName Assets

***FactVariable \$TheBankItself fallbackValue=0
explicitDimension TheBankItself Loans***

***FactVariable \$ToOtherBanks fallbackValue=0
explicitDimension ToOtherBanks Loans***

***FactVariable \$TheBankItselfandOtherBanks fallbackValue=0
explicitDimension TheBankItselfandOtherBanks Loans***



FORMULA IN NATURAL LANGUAGE



Labels

Assertion assertionSet ValueAssertion Val_Asset-01
\$TheBankItselfandOtherBanks = \$TheBankItself + \$ToOtherBanks

ConceptName Assets

FactVariable \$TheBankItself fallbackValue=0
explicitDimension TheBankItself Loans

FactVariable \$ToOtherBanks fallbackValue=0
explicitDimension ToOtherBanks Loans

FactVariable \$TheBankItselfandOtherBanks fallbackValue=0
explicitDimension TheBankItselfandOtherBanks Loans

Formula in natural language:

- For an asset of an entity in a set period of time, the real estate loans of the bank must be equal to the sum of the real estate loans with the bank itself and other banks.



*Assertion assertionSet ValueAssertion Val_Asset-01
\$TheBankItselfandOtherBanks = \$TheBankItself + \$ToOtherBanks*


ConceptName Assets

*FactVariable \$TheBankItself fallbackValue=0
explicitDimension TheBankItself Loans*

*FactVariable \$ToOtherBanks fallbackValue=0
explicitDimension ToOtherBanks Loans*

*FactVariable \$TheBankItselfandOtherBanks fallbackValue=0
explicitDimension TheBankItselfandOtherBanks Loans*

**cell ('The bank itself and other banks') =
cell ('The bank itself') + cell ('To other banks').**



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