

Harmonizing XBRL Taxonomies

Susan Thomas, SAP AG, susan.marie.thomas@sap.com



| EU Label | Source |
|---|--------|
| KEY BALANCE SHEET FIGURES [Report] | xebr |
| Assets [Presentation] | bach |
| Subscribed capital unpaid [Presentation] | bach |
| Subscribed capital unpaid [Total] | bach |
| Fixed assets [Presentation] | bach |
| Intangible fixed assets [Presentation] | bach |
| Formation (preliminary) expenses | bach |
| Other intangible fixed assets | bach |
| Intangible fixed assets [Total] | bach |
| Tangible fixed assets [Presentation] | bach |
| Property, plant, and equipment [Presentation] | xebr |

Work done by XBRL European Business Registrars:

- xEBR taxonomy (Core Taxonomy)
- Mappings from local taxonomies

← xEBR (Core) Taxonomy

Map from Belgian to xEBR

| | pfs tag | link | xEBR tag |
|--|--|--------------|--------------------------------|
| | pfs_BalanceSheet | exact match | KeyBalanceSheetFiguresReport |
| | pfs_AssetsTitle | exact match | AssetsPresentation |
| | pfs_FixedAssets | exact match | FixedAssetsTotal |
| | pfs_FormationExpenses | narrow match | FixedAssetsTotal |
| | pfs_IntangibleFixedAssets | exact match | IntangibleFixedAssetsTotal |
| | pfs_TangibleFixedAssets | exact match | TangibleFixedAssetsTotal |
| | pfs_LandBuildings | exact match | LandAndBuildings |
| | pfs_PlantMachineryEquipment | exact match | PlantAndMachinery |
| | pfs_FurnitureVehicles | exact match | FurnitureFixturesAndEquipment |
| | pfs_LeasingSimilarRights | exact match | OtherPropertyPlantAndEquipment |
| | pfs_OtherTangibleAssets | exact match | OtherTangibleFixedAssets |
| | pfs_AssetsUnderConstructionAdvancePayments | narrow match | OtherTangibleFixedAssets |
| | pfs_FinancialFixedAssets | exact match | FinancialFixedAssetsTotal |
| | pfs_ParticipatingInterestsAmountsReceivableAffiliatedEnterprises | exact match | AffiliatedEnterprises |
| | pfs_ParticipatingInterestsAffiliatedEnterprises | narrow match | AffiliatedEnterprises |
| | pfs_AmountsReceivableAffiliatedEnterprises | narrow match | AffiliatedEnterprises |



- Map French to Spanish Balance Sheet
 - With help of Géraud Amic
 - Using only Calculation Hierarchy in RDF form
- Use these mappings
 - To evaluate automatic suggestions
 - Diploma Thesis of Xichuan Wu at SAP
 - Uses logical reasoning to suggest mappings

RDF Resource Description Framework, a Semantic Web Technology

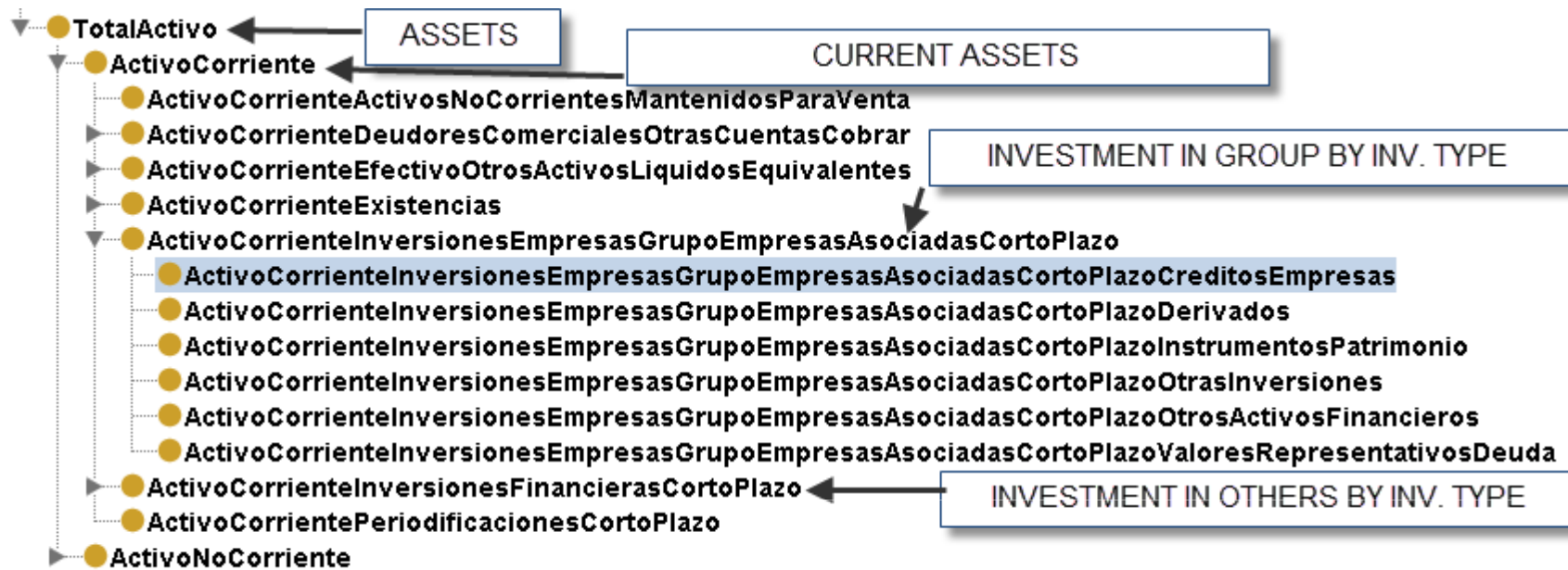
| FRENCH | ID | SPANISH | ID |
|--|-----|---|----|
| ► Bilan actif, Brut. | 1 | ▼ Total assets | 1 |
| ► Bilan actif, Amortissements et dépréciations. | 51 | ▼ non current assets | 2 |
| ▼ Bilan actif, Net. | 95 | ▼ non current assets; intangible fixed assets | 3 |
| ▼ Actif immobilisé et capital souscrit, non appelé, Net. | 96 | non current assets; intangible fixed assets; development | 4 |
| Capital souscrit, non appelé. | 97 | non current assets; intangible fixed assets; concessions | 5 |
| ▼ Immobilisations incorporelles, Net. | 98 | non current assets; intangible fixed assets; patents, trade marks and other | 6 |
| Frais d'établissement, Net. | 99 | non current assets; intangible fixed assets; goodwill | 7 |
| Frais de recherche et de développement, Net. | 100 | non current assets; intangible fixed assets; computer software | 8 |
| Concessions, brevets, licences, marques, procédés, logiciels, droits et valeurs similaires, Net. | 101 | non current assets; intangible fixed assets; research | 9 |
| Fonds commercial, Net. | 102 | non current assets; intangible fixed assets; other intangible fixed assets | 10 |
| Autres immobilisations incorporelles, Net. | 103 | ▼ non current assets; tangible fixed assets | 11 |
| Immobilisations incorporelles en cours, Net. | 104 | non current assets; tangible assets; land and buildings | 12 |
| Avances et acomptes sur immobilisations incorporelles, Net. | 105 | non current assets; tangible assets; technical facilities, machinery, tools, furniture, and other tangible assets | 13 |
| ▼ Immobilisations corporelles, Net. | 106 | non current assets; advances and tangible assets in-progress | 14 |
| Terrains, Net. | 107 | ▼ non current assets; investment property | 15 |
| Constructions, Net. | 108 | non current assets; investment property, land | 16 |
| Installations techniques, matériel et outillage industriels, Net. | 109 | non current assets; investment property, buildings | 17 |
| Autres immobilisations corporelles, Net. | 110 | ▼ non current assets; long-term investments in group companies and associates | 18 |
| Immobilisations corporelles en cours, Net. | 111 | non current assets; long-term investments in group companies and associates; equity instruments | 19 |
| Avances et acomptes sur immobilisations corporelles, Net. | 112 | non current assets; long-term investments in group companies and associates; loans to companies | 20 |
| ▼ Immobilisations financières, Net. | 113 | non current assets; long-term investments in group companies and associates; debt securities | 21 |
| ▼ Participations, Net. | 114 | non current assets; long-term investments in group companies and associates; derivatives | 22 |
| Participations évaluées par équivalence, Net. | 115 | | |
| Participations, Hors participations évaluées par équivalence, Net. | 116 | | |
| Créances rattachées à des participations, Net. | 117 | | |
| Titres immobilisés de l'activité de portefeuille, Net. | 118 | | |

| FRENCH | RELATION | SPANISH | NOTE |
|--------|------------|---------|------|
| 95 | exactMatch | 1 | |

Buttons: Add, Delete, Save, SaveLabel

Calculation Hierarchy Only: Parent is the sum of its direct children.

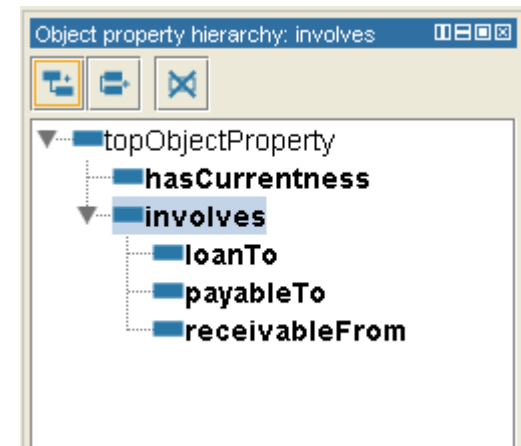
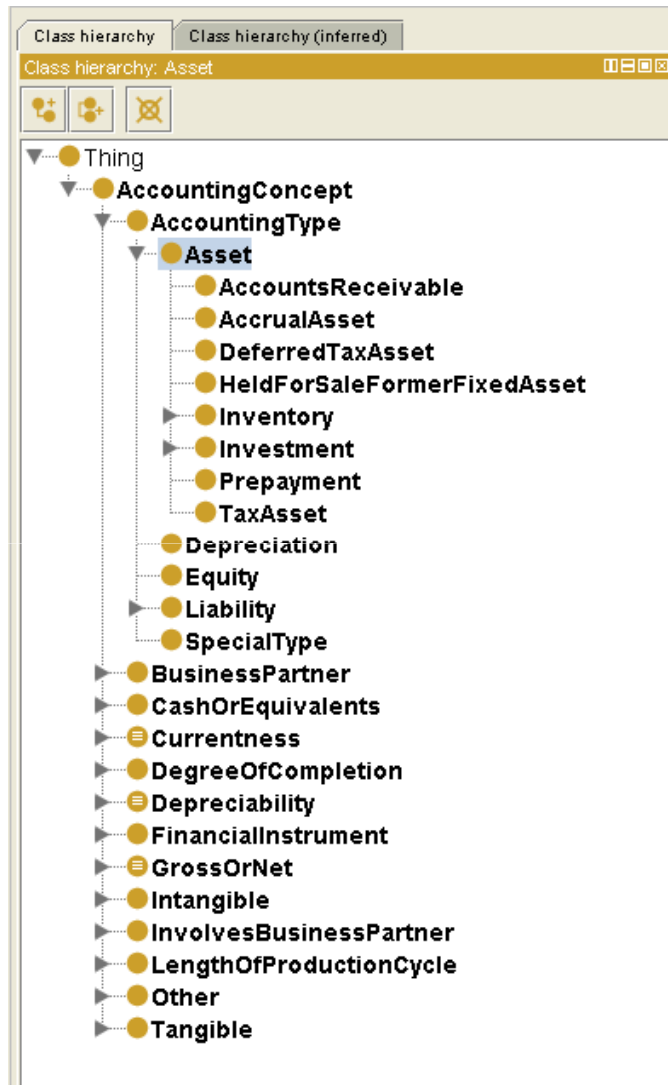
Observation: Adding a new local taxonomies reduces the number of common concepts.



English label: Current assets; short-term investments in group companies and associates; loans to companies

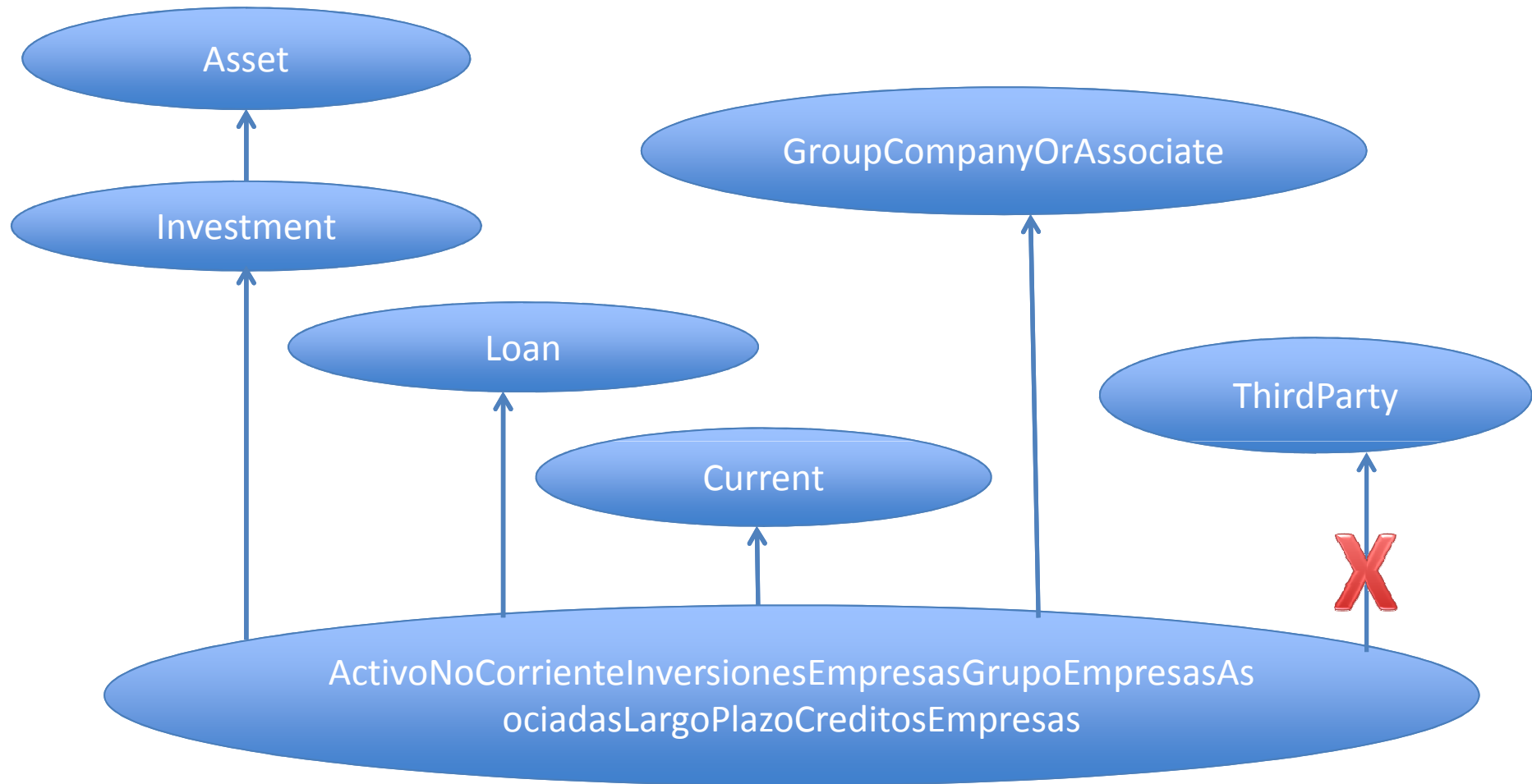
Define line item in terms of basic accounting concepts:

Investment and Loan and (hasCurrentness some Current) and (loanTo some GroupCompanyOrAssociate) and (loanTo only GroupCompanyOrAssociate)



Define line item in terms of basic accounting concepts:

Investment and Loan and (hasCurrentness some Current) and (loanTo some GroupCompanyOrAssociate) and (loanTo only GroupCompanyOrAssociate)



Investment and Loan and (hasCurrentness some Current) and (loanTo some GroupCompanyOrAssociate) and (loanTo only GroupCompanyOrAssociate)

English label: Current assets; short-term investments in group companies and associates; loans to companies

- Concepts easier to understand
- Easier, better matching of taxonomies
 - Each expert defines concepts in the taxonomy they know.
 - Definition records similarities and differences
 - Matches can be inferred from the definitions
- Better translation process
 - Basic accounting concepts translated first
 - Every line item translation uses those translations
- New ways to aggregate data

- ActivoCorrienteInversionesEmpresasGrupoEmpresasAsociadasCortoPlazo
 - ActivoCorrienteInversionesEmpresasGrupoEmpresasAsociadasCortoPlazoCreditosEmpresas
 - ActivoCorrienteInversionesEmpresasGrupoEmpresasAsociadasCortoPlazoDerivados
 - ActivoCorrienteInversionesEmpresasGrupoEmpresasAsociadasCortoPlazoInstrumentosPatrimonio
 - ActivoCorrienteInversionesEmpresasGrupoEmpresasAsociadasCortoPlazoOtrasInversiones
 - ActivoCorrienteInversionesEmpresasGrupoEmpresasAsociadasCortoPlazoOtrosActivosFinancieros
 - ActivoCorrienteInversionesEmpresasGrupoEmpresasAsociadasCortoPlazoValoresRepresentativosDeu
- ActivoCorrienteInversionesFinancierasCortoPlazo
 - ActivoCorrienteInversionesFinancierasCortoPlazoCreditosEmpresas
 - ActivoCorrienteInversionesFinancierasCortoPlazoDerivados
 - ActivoCorrienteInversionesFinancierasCortoPlazoInstrumentosPatrimonio
 - ActivoCorrienteInversionesFinancierasCortoPlazoOtrasInversiones
 - ActivoCorrienteInversionesFinancierasCortoPlazoOtrosActivosFinancieros
 - ActivoCorrienteInversionesFinancierasCortoPlazoValoresRepresentativosDeuda
 - ActivoCorrienteDerivadosFinancierasCortoPlazo

Investment and Loan and (hasCurrentness some Current) and (loanTo some GroupCompanyOrAssociate) and (loanTo only GroupCompanyOrAssociate)

Investment and Loan and (hasCurrentness some Current) and (loanTo some ThirdParty) and (loanTo only ThirdParty)

Investment and Loan and (hasCurrentness some Current) (calculate concept as sum of other two)

- Thank you!
- Please contact me if you are interested:
- susan.marie.thomas@sap.com