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# **Financial Industry Business Ontology – Business Entities**

*Request for Comments*

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# Preface

## About the Object Management Group

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### OMG Modeling Specifications

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- IDL/Language Mappings
- Specialized CORBA specifications
- CORBA Component Model (CCM)

### Platform Specific Model and Interface Specifications

- CORBAservices
- CORBAfacilities
- OMG Domain specifications
- OMG Embedded Intelligence specifications
- OMG Security specifications

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Times/Times New Roman - 10 pt.: Standard body text

**Helvetica/Arial - 10 pt. Bold:** OMG Interface Definition Language (OMG IDL) and syntax elements.

**Courier - 10 pt. Bold:** Programming language elements.

Helvetica/Arial - 10 pt: Exceptions

NOTE: Terms that appear in italics are defined in the glossary. Italic text also represents the name of a document, specification, or other publication.

# **0. Submission-Specific Material**

## **0.1 Submission Preface**

The EDM Council, on behalf of its members and other industry participants, is pleased to present a standard set of terms and definitions for legal entities, business entities and the relationships among these.

Chapter 0 of this document contains information specific to the OMG submission process and is not part of the proposed specification. The proposed specification starts with Clause 1 “Scope”. All clauses are normative unless explicitly marked as informative. The section numbering scheme, starting with Clause 1, represents the final numbering scheme and will remain stable throughout the submission process.

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## **0.3 Submission Team**

The FIBO RFCs are being submitted by the EDM Council, a membership organization in the financial sector, on behalf of its members. There is therefore not a consortium or FIBO-specific submission team; instead all submissions are by the EDM Council as representative of the community of its members.

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## **0.4 General Requirements**

The FIBO initiative started out as a collaborative project within the Enterprise Data Management Council, with the stated aims of:

- (i) Defining common terms, definitions and business relationships (i.e. common semantics) for the financial services industry, and
- (ii) Presenting this for review, validation, completion and sign-off by industry subject matter experts (i.e. presentation)

The two business requirements for common semantics and for visual and textual presentation of these to industry subject matter experts led to the creation of the “Semantics Repository”, with the additional strong mandate to “keep the philosophy out of sight”, meaning that the repository was built along semantic web principles but with the more technical views of semantic web notations kept out of sight of industry subject matter experts.

This initial Semantics Repository was built using an early version of the Object Management Group’s standard Ontology Definition Metamodel (ODM) which at the time was in draft. Certain features of the then draft of ODM were not amenable to the stated EDM Council requirement to present the subject matter to business experts without the intrusion

of technical modeling language constructs, and so considerable modification and customization of that ODM draft was undertaken. The resultant model, which was maintained within the Sparx Enterprise Architect modeling tool, was displayed on a custom-built website in the form of tables and diagrams at varying levels of detail and complexity, but free of semantic web notation.

This project brings the content developed within the above modeling framework and refactors it to the latest version of the ODM standard. Many of the customizations which the EDM Council undertook for the reasons described above have parallels in the most recent versions of ODM (versions 1.0 and the upcoming version 1.1) and so it was deemed possible to retain the commitments made to business consumers of the content while upgrading the model to a fully conformant rendition of ODM.

#### **0.4.1 EDM Council Involvement with the OMG**

The EDM Council is submitting the Semantics Repository as a series of specifications under the FIBO umbrella for the following reasons:

- To leverage the OMG to manage these standards within a well-founded process as provided by the OMG;
- To bring our application of the OMG's Ontology Definition Metamodel (ODM) standard up to date, based on our earlier usage and adaptation of what was an early draft of that specification.

#### **0.4.2 This FIBO Specification (FIBO for Business Entities)**

This FIBO specification is intended to be viewed and used alongside the FIBO Foundations specification, and contains the "Semantics Repository" material specific to business entities and legal entities.

Historically this section of the Semantics Repository, unlike those for securities, derivatives, market data/pricing and so on, started out as a set of "Foundational" terms.

In the foundational ontologies, the stated intention has been and remains to try to identify suitable industry bodies, academic research or formal standards which could be regarded as the authoritative source for business meanings in a given set of terms. In the case of business entities and legal entities, there was no formal body that was obviously dealing with the formal semantics of these concepts. With this in mind, along with industry initiatives towards a common, global "Legal Entity Identifier" standard within the financial services industry, it was decided that this area of content should be taken on by the EDM Council on behalf of its own community, on the basis that the most difficult and immediate problems to do with business entities and legal entities semantics are those faced by the financial services community itself. As an example, part of the LEI initiative has been the stated aim to go beyond a "dumb" identifier of the entities themselves, to set up databases of legal entities with their networks of relationships of ownership and control. This information is necessary for global regulatory oversight of the financial industry.

### **0.5 Future Changes to this Specification**

It is anticipated that aspects of this specification may need to be updated on an ongoing basis:

- Content: for the content in this specification it is expected that this will need to be extended and refined on an ongoing basis;
- Conformance: it is anticipated that additional conformance points may be added to the ones in this specification on a more regular basis as new ways of applying the content of this and other FIBO content specifications are identified, for example operational ontologies may introduce new ways of applying this content, which may be determined to be conformant.

#### **0.5.1 What is "Content"?**

For the purposes of this and other FIBO specifications, "Content" is defined in Section 4 of this document as "Subject matter or meta-content", while "Subject matter" is defined as "Information about things in the universe of discourse; the essential facts, data, or ideas that constitute the basis of spoken, written, or artistic expression or representation; often : the substance as distinguished from the form especially of an artistic or literary production."

All content in the FIBO specifications is subject matter in the form of ontologies, that is models in which the model content has as its referent some feature of the business domain. This is described in further detail in the Conformance section of this specification, under “Model Theoretic Conformance”.



# 1 Scope

This specification is a model of business concepts that are represented by finance industry terms as used in official regulatory and financial organization documents on the subject of Business Entities.

## 1.1 Overview

This specification is part of a family of specifications called the Financial Industry Business Ontology (FIBO).

FIBO is a modularized formal model of the concepts represented by finance industry terms as used in official financial organization documents such as contracts, product/service specifications and governance and regulatory compliance documents. This is referred to as a *Business Conceptual Model* as distinct from models or descriptions of data or IT implementations.

The scope of *finance industry* encompasses a broad range of organizations that manage money, including credit unions, banks, credit card companies, insurance companies, consumer finance companies, stock brokerages, investment funds and some government sponsored enterprises.

The FIBO for Business Entities specification covers two considerations: the content of the model as a set of business concepts, and the presentation of this content for business domain expert review as described in FIBO Foundations (finance/2013-09-02) ([Foundations]). The latter requirement is important both for the use of the content as a formal business conceptual model within a technology development lifecycle, and for extension of this model content.

Extension of this model may be undertaken either by individual firms, or as part of the submission of model content for future versions of this specification.

This specification describes the content of FIBO for Business Entities. The [Foundations] specification describes the modeling notation which has been employed and the requirements for presentation of this material to domain experts.

## 1.2 Scope of Financial Industry Business Ontologies for Business Entities

### 1.2.1 How This Specification fits with the overall FIBO

This specification describes a set of ontologies of and relating to business entities, including legal entities and specific forms of entity, within the overall framework and heading of the Financial Industry Business Ontology (FIBO). The ontology content described in this specification is developed and maintained using the same modeling framework as all FIBO ontologies. It uses, either by extension or by reference, a sub-set of the “Foundational” mid-level ontologies described in [Foundations].

### 1.2.2 Business Scope

The business scope of this specification is all terms relating to and descriptive and/or definitive of a range of business entities and legal entities that are considered by financial industry firms, regulators and other industry participants to be of relevance in the financial services domain.

The scope of the concepts in this specification is those common to

- Legal entities,
- Formal organizations,
- Terms definitive of or descriptive of companies incorporated by the issuance of shares and other forms of incorporated entity,
- Terms which define the existence of other kinds of legal entity,

- Terms specific to trusts,
- Terms defining the relationships for example of ownership and control between and among the kinds of organization listed above.
- Entities defined not by their legal structure but according to their role or function, including but not limited to banks, non-profit entities, government bodies, non-government and quasi-non government organizations, international bodies and the like.

### **1.2.3 Relation to Existing Business Entity Standards**

The model defined in this specification is a “business conceptual model” as described in Section 1.2 of the [Foundations] specification. A business conceptual model in the sense used here is one which represents things in the business domain as distinct from data descriptions for data about those things, and which does not reflect the technical constraints of any given application. As such this specification is intended to be complementary to technical standards in the financial services industry, most of which were developed and are framed (positioned) either as logical data models or as physical message schemas.

To the extent that logical data model or physical message standards include content relating to business entities, this specification defines the semantics of those data and message elements. The W3C standard Organization Ontology deals with a sub-set of business entities concepts, relating specifically to organizations – please refer to [W3C Organization Ontology] in the References section.

## **1.3 Definitions**

The human readable definitions have been constructed by and with the input of business subject matter experts.

Many definitions have been derived from definitions of data elements corresponding to those terms in industry data or messaging standards. These have been adapted where necessary to ensure that they are descriptive of the thing or fact itself and not of data elements for data about those things or facts, and have then been reviewed by industry subject matter experts to ensure that such adaptation accurately captures the sense of the business concept. In cases where the definition in a data or message standard was incomplete, context-specific or tautologous, a fresh definition was framed by the industry subject matter experts who participated in these reviews, or a third party definition was proposed and adopted.

### **1.3.1. Definitions Policy**

In some cases, definitions have been obtained from third party sources. The policy for arriving at definitions for the FIBO industry terms was as follows (and remains so for future iterations and extensions):

1. In the absence of a definition endorsed by the subject matter experts for a term, “Barrons DICTIONARY OF FINANCE AND INVESTMENT TERMS, 8<sup>th</sup> Edition John Downes and Jordan Elliot Goodman” shall be used.
2. If a term and its acceptable definition is not in the Barrons Dictionary, then <http://www.investopedia.com/dictionary/> shall be the authoritative source, subject to licensing requirements being met.
3. If a term and its acceptable definition is not in either the Barrons Dictionary or the investopedia dictionary, then <http://www.bankersalmanac.com/addcon/dictionary/> shall be the authoritative source.
4. If a term has no acceptable definition in these Financial Industry sources or does not exist in these Financial Industry sources then <http://www.merriam-webster.com> shall be the authoritative source.
5. When there is a conflict with the definition of a Financial Industry term with the same term in another Industry, the Financial Industry definition will be used within FIBO.

In all cases the source from which the definition was obtained, or from which it was adapted, is recorded in annotation metadata for that concept.

## 2 Conformance

**Audience:** Technical, semantic technology and standards audiences.

### 2.1 Applications for which Conformance Points Exist

This chapter defines conformance points for the following types of artifacts:

- Technical applications of FIBO such as logical data models, XML schemas, operational ontologies, code, and other technical artifacts
- Extensions of FIBO
- Representations of FIBO for business consumption
  - o In diagrams
  - o In spreadsheets or tables

Conformance of technical applications of FIBO is the most important conformance point, because it addresses the core issue of what it means to conform to the ontologies that FIBO defines.

Note that in addition to conformant applications, there are a number of scenarios in which someone may make use of the FIBO ontologies as a business conceptual model while applying their own design to meet their requirements. It is not possible to define specific conformance points for each of the possible ways in which one may legitimately develop a conventional database application or an operational OWL ontology that would be a good application.

### 2.2 Conformance Points

This specification has the following conformant points for the above applications:

- Conformant extension: as described in FIBO [Foundations] for conformant extensions to model content
- Operational ontologies: conformance may be asserted for
  - o This entire specification (FIBO-Full conformance)
  - o Ontology conformance – subject to the ontology dependencies;
- The content of this specification may be rendered conformant with the model presentation conformance points described under “Conformant Presentation of model Content” in [Foundations] both for diagrams and for tabular reports.
- Spreadsheets may assert conformance to the “tabular presentation” conformance point described under “Conformant Presentation of model Content” in [Foundations] without reference to other material.

### 2.3 Operational Ontology Conformance

An OWL ontology is conformant to this specification if:

- It uses individual ontologies in this specification along with imports of any ontologies that are shown as imported by the ontologies in this specification; or
- It uses some sub-set of the terms contained in individual ontologies in this specification, along with imports of any ontologies that are shown as imported by the ontologies in this specification and the terms which are used in the ontology make reference to the terms which are in the imported ontologies; there is no need to import ontology which contain only terms which are not referred to by the terms that are used in the operational ontology.

When asserting conformance in terms of this conformance point, the operational ontology should identify and name to which of the individual ontologies in this specification the application is conformant.

For detailed descriptions of the above conformance points and others, please refer to [Foundations].

# 3 References

## 3.1 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this specification. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply.

Reference	Description
[Dublin Core]	DCMI Metadata Terms, Issued 2013-06-14 by the Dublin Core Metadata Initiative. Available at <a href="http://www.dublincore.org/documents/dcmi-terms/">http://www.dublincore.org/documents/dcmi-terms/</a> .
[FIBO Foundations]	Financial Industry Business Ontology (FIBO) – Foundations. Available specification, finance/2013-09-02. Available at <a href="http://www.omg.org/cgi-bin/doc?finance/2013-09-02">http://www.omg.org/cgi-bin/doc?finance/2013-09-02</a>
[ISO 1087]	ISO 1087-1:2000 Terminology — Vocabulary — Part 1: Theory and application
[MOF Core]	Meta Object Facility (MOF™) Core, v2.4.1. OMG Available Specification, formal/2011-08-07. Available at <a href="http://www.omg.org/spec/MOF/2.4.1/">http://www.omg.org/spec/MOF/2.4.1/</a> .
[MOF XMI]	MOF 2/XMI (XML Metadata Interchange) Mapping Specification, v2.4.1. OMG Available Specification, formal/2011-08-09. Available at <a href="http://www.omg.org/spec/XMI/2.4.1/">http://www.omg.org/spec/XMI/2.4.1/</a> .
[ODM 1.0]	Ontology Definition Metamodel (ODM), v1.0. Available Specification, formal/2009-05-01. Available at <a href="http://www.omg.org/spec/ODM/1.0/">http://www.omg.org/spec/ODM/1.0/</a> .
[ODM 1.1]	Convenience Specification for the Ontology Definition Metamodel (ODM), v1.1, available specification, ptc/13-08-03. Available at <a href="http://www.omg.org/cgi-bin/doc?ptc/13-08-03">http://www.omg.org/cgi-bin/doc?ptc/13-08-03</a>
[OMG AB Specification Metadata]	OMG Architecture Board recommendations for specification of ontology metadata, Available at <a href="http://www.omg.org/techprocess/ab/SpecificationMetadata/">http://www.omg.org/techprocess/ab/SpecificationMetadata/</a>
[OWL 2]	OWL 2 Web Ontology Language Quick Reference Guide (Second Edition), W3C Recommendation 11 December 2012. Available at <a href="http://www.w3.org/TR/2012/REC-owl2-quick-reference-20121211/">http://www.w3.org/TR/2012/REC-owl2-quick-reference-20121211/</a> .
[RDF 1.1]	RDF 1.1 Concepts and Abstract Syntax, W3C Last Call Working Draft. Latest version Available at <a href="http://www.w3.org/TR/2013/WD-rdf11-concepts-20130723/">http://www.w3.org/TR/2013/WD-rdf11-concepts-20130723/</a>
[RDF Concepts]	Resource Description Framework (RDF): Concepts and Abstract Syntax. Graham Klyne and Jeremy J. Carroll, Editors. W3C Recommendation, 10 February 2004. Latest version is available at <a href="http://www.w3.org/TR/rdf-concepts/">http://www.w3.org/TR/rdf-concepts/</a> .
[RDF Schema]	RDF Vocabulary Description Language 1.0: RDF Schema. Dan Brickley and R.V. Guha, Editors. W3C Recommendation, 10 February 2004. Latest version is available at <a href="http://www.w3.org/TR/rdf-schema/">http://www.w3.org/TR/rdf-schema/</a> .
[SKOS]	SKOS Simple Knowledge Organization System Reference, W3C Recommendation 18 August 2009. Available at <a href="http://www.w3.org/TR/2009/REC-skos-reference-20090818/">http://www.w3.org/TR/2009/REC-skos-reference-20090818/</a> .
[UML2]	Unified Modeling Language™ (UML®), version 2.4.1. OMG Specification, formal/2011-08-06. Available at <a href="http://www.omg.org/spec/UML/2.4.1/">http://www.omg.org/spec/UML/2.4.1/</a> .
[Unicode]	<i>The Unicode Standard, Version 3</i> , The Unicode Consortium, Addison-Wesley, 2000. ISBN 0-201-61633-5, as updated from time to time by the publication of new versions. (See <a href="http://www.unicode.org/unicode/standard/versions/">http://www.unicode.org/unicode/standard/versions/</a> for the latest version and additional information on versions of the standard and of the Unicode Character Database).
[UTF-8]	RFC 3629: UTF-8, a transformation format of ISO 10646. F. Yergeau. IETF, November 2003, <a href="http://www.ietf.org/rfc/rfc3629.txt">http://www.ietf.org/rfc/rfc3629.txt</a>
[W3C Datatypes in RDF and OWL]	XML Schema Datatypes in RDF and OWL, W3C Working Group Note 14 March 2006, Available at <a href="http://www.w3.org/TR/2006/NOTE-swbp-xsch-datatYPES-20060314/">http://www.w3.org/TR/2006/NOTE-swbp-xsch-datatYPES-20060314/</a> .
[XML Schema Datatypes]	XML Schema Part 2: Datatypes. W3C Recommendation 02 May 2000. Latest version is available at <a href="http://www.w3.org/TR/xmlschema-2/">http://www.w3.org/TR/xmlschema-2/</a> .

## **3.2 Non Normative References**

The following informative documents are referenced throughout this text or in parts of the Annexes:

Reference	Description
[ODM 1.1 RTF Report]	ODM 1.1 RTF Report, November 2013. Available from the ODM 1.1 RTF as document number ptc/13-08-01. Available at <a href="http://www.omg.org/cgi-bin/doc?ptc/13-08-01">http://www.omg.org/cgi-bin/doc?ptc/13-08-01</a>
[OMV]	Ontology Metadata Vocabulary (OMV) - <a href="http://omv2.sourceforge.net/">http://omv2.sourceforge.net/</a> (a standard giving metadata for ontology-level information)
[W3C Organization Ontology]	W3C Organization Ontology. Available at: <a href="http://www.w3.org/TR/vocab-org/">http://www.w3.org/TR/vocab-org/</a>

## **3.3 Changes to Adopted OMG Specifications**

This specification does not change or replace any OMG specifications.

## 4 Terms and Definitions

For the purposes of this specification, the following terms and definitions apply.

### Content

Definition: Subject matter or meta-content.

### Business conceptual model

Definition: A model which represents and only represents business subject matter without reference to the design of any solution or data model representation.

### Ontology

Definition: A formalization of a conceptualization. For the purposes of this specification the formalization is in OWL, using ODM as a means to render this, and the conceptualization is that of business subject matter.

### Operational Ontology

Definition: An ontology which is intended for use within some application.

### Subject matter

Definition: Information about things in the universe of discourse; the essential facts, data, or ideas that constitute the basis of spoken, written, or artistic expression or representation; often : the substance as distinguished from the form especially of an artistic or literary production.

### Taxonomy

Definition: A set of terms which stand in some classification relation to one another.

## **5 Symbols and Abbreviations**

### **5.1 Symbols**

There are no symbols introduced by this specification.

### **5.2 Abbreviations**

The following abbreviations are used throughout this specification:

- LEI – Legal Entity Identifier
- OWL – Web Ontology Language
- ODM – Ontology Definition Metamodel
- RDF – Resource Definition Framework
- SME – Subject Matter Expert
- UML – Unified Modeling Language
- URI – Uniform Resource Identifier
- URL – Uniform Resource Locator
- XMI – XML Metadata Interchange
- XML – eXtensible Markup Language

Additional symbols and abbreviations that are used only in annexes to this specification are given in those annexes.

## **6 Additional Information**

### **6.1 How to Read this Specification**

#### **6.1.1 Audience**

This specification has the following audiences:

- The standards community
- The finance industry business community
- The regulatory community
- Technical architects
- Semantic Modelers

#### **6.1.1.1 Standards Community**

This audience is intended to be able to follow and validate the way in which this specification sets out the arrangements for the production and maintenance of model content, and the production of business facing reports and diagrams representing parts of that content.

### **6.1.1.2 The Finance Industry Business Community**

As noted in the section on conformance (section 2) this specification includes detailed requirements for the production of diagrams and reports which are intended for consumption by business subject matter experts. This specification also contains material addressed at this audience, this being an informative annex on “Interpreting Model Content”. This audience is not intended to read and understand the remaining parts of this specification.

### **6.1.1.3 The Regulatory Community**

As for Finance Industry Business Community.

### **6.1.1.4 Technical Architects**

These include but are not limited to:

- Tooling vendors and developers
- Other content providers / enriched content providers
- Business Analysts – anyone who use the model on site, whether they are a modeler, a metadata analyst, etc.
- Technology Management

The bulk of the “Architecture” section is intended to be read and understood by these audiences and by the ‘Semantic Modelers’ audience.

### **6.1.1.5 Semantic Modelers**

Much of the material in this specification is intended to be read and understood by semantic modelers. This includes the ‘Conformance’ section (Section 2) and the ‘Architecture’ section (Section 8).

## **6.2 Acknowledgements**

The following organization submitted this specification:

- Enterprise Data Management Council

The following companies have provided significant expertise and resources in the development of its content and architecture:

- Adaptive Inc.
- Australia and New Zealand Banking Group
- AVOX/DTCC
- Bank of America
- Barclays Capital
- BBH
- Bloomberg
- Business Semantics
- CIBC
- Citigroup Inc.
- Credit Suisse Group AG
- CUSIP
- The Federal National Mortgage Association (Fannie Mae)
- David Frankel Consulting

- FacetApp
- Fidelity
- GoldenSource Corporation
- HSBC Holdings plc
- JPMorgan Chase & Co.
- The Manufacturers Life Insurance Company
- Michigan State University
- Model Driven Solutions
- Model Systems
- Morgan Stanley
- MphasiS
- National Australia Bank
- No Magic
- Nomos Software
- Nordea Bank
- Oakland University
- OntoAge
- OpenFinance
- PricewaterhouseCoopers LLP
- Revelytix
- Sallie Mae
- SAP
- Semantic Arts
- State Street
- Sungard
- SWIFT
- Tahoe Blue
- Thematix Partners LLC
- Thomson Reuters
- UBS AG
- University of British Columbia
- University College Cork
- Wells Fargo
- Wizdom Systems, Inc.

## 6.3 Interpreting the Business Model Content

**Intended Audiences:** *Business Subject Matter experts*

### 6.3.1 Introduction

The model content is intended by read and understood by business domain experts with knowledge of business entities and legal concepts. It requires no knowledge of modeling theory, technical modeling languages, technology development or data modeling.

The following knowledge is required to interpret the model content:

- Set theory
- Logic
- Business (commerce, law, finance)

### 6.3.2 The Model

#### 6.3.2.1 What the Model Contains

The model described in this specification contains elements called 'Things', Simple Properties about those things in the form of unstructured information, and Relationship Properties in the form of relationships between one 'Thing' and another. Things, Simple Properties and Relationship Properties all have as a minimum the definition for the term that they represent, plus additional information on usage, review history, sources of terms and definitions and so forth.

#### 6.3.2.2 Model Views

Whereas the information given in this specification conveys all of the model content, the diagrams and tables that are created for a business audience will not show all of this information, but only a sub-set. This sub-section describes those formats and views, and is to be read by a business audience to understand what those views show. This sub-section contains no technical language about OWL or other modeling constructs but uses the plain English alternative terms for those concepts.

The content of the model is rendered in two basic forms: visual information in the form of diagrams, and textual information in the form of tables. The diagrams are available in varying levels of detail and are created to show different sets of terms and relationships across or within sections of the model. The textual information is created as web based tabular reports and as spreadsheets. These contain basic information of term, definition and synonym and in some cases will contain additional information about the types of thing or the types of information to which facts in the model refer. Business tables and spreadsheets do not show relationships between relationships as such information would be difficult to visualize in the tabular format.

Diagrams and tables reflect the information retained in the underlying model repository directly. For example, if two 'Thing' elements have a relationship between them and they appear on the same diagram, the relationship between them will always appear.

#### 6.3.2.3 Business Diagrams

Business diagrams reflect any set of terms in the model, within or across sections of the content. These may be rendered with varying levels of detail. Diagrams created during reviews of the subject matter will typically contain a greater range of terms than diagrams created for presentation to the wider community of potential users.

### 6.3.3 Interpretation

The model conveys 'Things' and 'Facts'. Facts are in two forms:

- 'Simple Properties': these are a statement about something which is framed in terms of some simple type of information, such as textual entries, yes/no answers, dates, numbers and selections of textual information

- 'Relationship Properties': these are a statement about something which is framed in terms of something else, that other thing also being framed as a kind of 'Thing'.

In addition, there are relationships which represent additional set theory concepts, notably logical unions, mutual exclusivity.

Each 'Thing' also has a 'Parent' relationship, with the sense of 'is a', shown as an upward point arrow on the diagrams. This relationship indicates that the thing from the non-arrowed end is "a kind of" the thing at the end with the arrow.

These concepts are described in the sections which follow.

### **6.3.3.1 Thing**

A Thing is a set theory construct. This is shown on the diagrams as a box with a name. On some diagrams, additional textual entries in the box show the Simple Properties about that thing.

A Thing is defined as the set of individuals which are defined according the facts (properties) given for that kind of thing. Membership of the set is defined in the sense that any individual in the world of which the stated facts are true or applicable, is a member of that set. In terms of logical theory, these sets are defined intensionally. It is also possible to define a set explicitly as a list of its members (in logical theoretic terms, an extensional definition) but this is not used in practice in the model.

### **6.3.3.2 Inheritance: the Parent 'is a' relationship**

Each Thing in the model has one or more parent Things. The relationship between the Thing and its parent may be interpreted as an 'is a' form of relationship, meaning that the thing of which the parent relationship is shown is a kind of the thing to which the arrow in the Parent relationship is pointing.

This relationship formally indicates that the thing that has the Parent, inherits all of the facts about that parent. In addition, this relationship is transitive, meaning that the parent relationships of the parent are passed on to the child term. For example, if a share is a security and a security is a transferable contract then a share is a transferable contract.

The relationships of this type create a formal inheritance structure called a Taxonomy. Taxonomies in this sense may be single inheritance (as is often seen in technical model designs) or multiple inheritance. In the FIBO models these are multiple inheritance, meaning that types of thing (such as types of contract) may be classified in more than one way. So for example an interest rate swap is both a swap and an interest rate derivative.

As an example of multiple inheritance, one might say that in terms of the Linnaeus Taxonomy of Species, a whale is a mammal, while one may also create a set of taxonomic classifications based on habitat, in terms of which a whale may also be a marine animal.

On a technical note, the Parent relationship is functionally identical to the relationship known as 'Generalization' in the UML modeling language.

### **6.3.3.3 Simple Properties**

Simple Properties are assertions about things in a class, which may be framed in terms of some simple type of information.

Types of information about which Simple Properties are asserted are:

- Text
- Date
- Number
- Whole number
- Yes/no answer
- Selection of textual descriptors

To a technical person these may easily be identified with what are called 'datatypes'. However these represent the types of information not data as such. A special case is the selection of possible answers - this refers to a list of entries (see Selection Lists).

#### **6.3.3.4 Relationship Properties**

A Relationship Property is defined as a fact about something which is framed in terms of a relationship to some other thing.

These are indicated on the diagrams as a blue arrowed line. Some diagrams additionally show a box attached to this blue line; this is used to indicate relationships between those Relationship Properties, which are shown as lines between those boxes.

Relationship Properties are of the form subject-relationship-object where the subject is the Thing from which the line is drawn and the object is the thing to which the blue arrow points.

The label on the line is the verb itself, while the attached box indicates the full name of the Relationship Property. Relationship Properties are unique across the model and each belongs to one Thing only.

There are additional pieces of information about these Relationship Properties, such as whether they are symmetric, transitive and so on. The use and interpretation of these refinements to Relationship Properties are beyond the scope of this explanatory sub-section.

#### **6.3.3.5 Logical Unions**

Logical unions indicate that any individual which is a member of any of the classes of 'Thing' of which the union is a union, are members of that union.

The Union is shown as a box on the diagrams, similar to the boxes used for classes of 'Thing' but without the coloring given for archetypes (no Union has an archetype), that is these have the default gold box appearance of an OWL Class.

Membership of the union is indicated by a purple relationship similar in appearance to the Parent / 'is a' relationship. The Union (set) shown at the top of the arrow is thereby indicated as being a logical union of all the sets indicated as classes of Thing at the bottom of the purple arrows.

Relationship Properties may refer to unions in the same way that they refer to other classes of Thing.

#### **6.3.3.6 Mutually Exclusive sets**

Given that each thing is a set of potential members defined by their properties (facts), it is possible for any one thing in the world to be defined as being a member of more than one set, if the properties asserted for one set are not related to the properties asserted for another set.

Where membership of one set necessarily precludes membership of another set (that is, where a set is defined such as to specifically exclude members of another set), this is shown by a red line on the diagrams, labeled 'mutually exclusive'.

Where classes of 'Thing' are not indicated as being mutually exclusive (or have parents which belong to classes of Thing which are mutually exclusive), then any individual in the domain of discourse (the world) may belong to both sets.

This is formally known as a 'disjoint' relationship.

#### **6.3.3.7 Relationship Properties hierarchies**

Relationship Properties are themselves disposed in a hierarchy similar to that given for the classes of 'Thing'. These are indicated on more advanced diagrams by a green upward pointing line in the same style as the Parent relationship line. The Relationship Property to which the arrow points represents a more general meaning, of which the Relationship Property at the bottom of the relationship represents a narrower definition of the same meaning.

The narrowing of these meanings frequently occurs in conjunction with the narrowing of the meanings of classes of 'Thing' in the taxonomy. For example, types of bond are classified (a narrowing or specialization of the meaning of

'bond') according to, among other things, a narrowing of the relationship 'issued by' with the latter relationships being distinguished from one another by the nature of the kind of party which is the issuer.

This is formally known as a "sub property of relationship".

### 6.3.3.8 Inverse relationships

These are only shown on diagrams that show the Relationship Properties with their boxes, i.e. diagrams that show relationships between relationships.

Relationship Properties in the model are all one-directional, by virtue of their being framed as 'subject-verb-object' triples. In the business domain, meaningful terms and definitions may exist in either direction between one class of thing and another (for example, a bank has a customer versus a person has an account at the bank).

These are indicated as a red dotted arrowed line between one relationship and the relationship to which it is the inverse.

In theoretical terms, this relationship only applies between relationships which are known as 'functional' relationships. An explanation of this is beyond the scope of this sub-section.

### 6.3.3.9 Selection Lists

A list of possible entries for a simple type is displayed as a box on the diagrams, with a list of the possible entries. These are displayed as text, and generally refer to lists of possible textual values for the Simple Property.

It should be noted that these do not or should not represent lists of kinds of 'Thing' - those would be represented as a taxonomy of actual things. This is an important difference between this and a data model, since many data models have similar selection lists, called 'enumerations' in the data modeling world, which may represent kinds of thing or classifications of the thing which has these as a property.

### 6.3.3.10 Selections of Things

This is a class or set of things of which the members are explicitly listed (in theoretical terms, an extensional definition of the class).

These are not used at present in the model but are provided for in the modeling notation.

### 6.3.3.11 Restrictions

A restriction is a way of describing a set of things based on their having specific classes of thing participating in a nominated property (identified by an "on property" relation). The restriction may be based on how many of that class of thing they must have for the property (known as "cardinality"), for example "at least two of something participate in the relationship *involved party*" and optionally on the type of those things (for example "at least two of something participate in the relationship *involved party* and these may only be taken from *legal person*").

Alternatively, the restriction may be framed in terms of whether all participants in the relationship must be a certain type of thing (labeled as "with only"); or in terms of whether out of all such relationships, there must be some (one or more) which are of a certain type of thing (labelled as "with some"). For example the restriction "there must be at least one thing in the relationship *involved party* that is a *Corporation*" would be framed using a "with some" restriction.

A restriction is applied to a type of thing in one of two ways:

- The restriction is necessary to qualify for membership of the type. For example the type *Foo Corporation* could have a necessary restriction on property *executive officer* such that there must be at least two things participating in that relationship which are of the type *Natural Person*. This is not sufficient though – many other types of entity could also have executive officers that are natural persons. This is depicted using "subclass".
- The restriction is sufficient to qualify for membership of the type. For example the type Shareholder could have a sufficient restriction on property *assets owned* such that there must be at least one thing in this relationship which is of type *Corporate Equity*. That means that mere possession of an equity instrument is enough to qualify as a Shareholder. Sufficient does also imply necessary. This is depicted using "equivalent to".

There is a special case of the “cardinality” type of restriction - “at least 0” - which is used to indicate that the set of things is expected to make use of the property but there is no requirement for it to be there.

Finally, a restriction itself represents a set, or type of thing, so it can itself be further restricted. For example if we wanted to ensure that the executive officers for *Foo Corporation* have a masters degree we might recast the restriction above to be a restriction on property *has executive officer* such that there must be at least two occurrences of this relationship which themselves are subject to another restriction, which is: {the restriction on property *has degree* so that it has at least one occurrence where it is of the type *Masters Degree*}.

# **7      Introduction**

## **7.1      Audiences**

Readers are encouraged to read Section 6.1 on the different intended audiences for this standard.

### **7.1.1    Audience for this Section**

The audience for this section is anyone who wishes to understand this standard, whether from a business or technical standpoint.

### **7.1.2    Reading this Standard**

Technical audiences (in both conventional and semantic technology) are directed at the “Architecture” section (Section 8).

Business audiences (financial industry participants, regulators and others) are directed at this Introduction and at Annex A on interpreting model content (Annex B).

The business content defined in this standard is intended to be presented both in a business-facing format and in a complete, technical format. The latter is intended for consumption by technical and standards audiences only. This specification defines the content of the standard and the ways in which it is to be presented to business readers.

## **7.2      Specification Overview**

### **7.2.1    Non Technical Overview**

**Audience:** Business.

This specification provides a model of business entities terms, definitions and relationships. The model contains no technical design content and is a representation of the business entities concepts. This specification describes the technical arrangements by which this has been brought about, the requirements to be placed upon semantic modelers who are to extend this content locally or to propose updates to the model, and the requirements by which the content of this and future extensions are to be presented to business domain participants, so that they may understand and review the model content without the need for any formal technical training.

### **7.2.2    Technical Overview**

**Audience:** Technical architects.

The model content is developed and maintained using the Unified Modeling Language as a modeling tool framework, but with all model content built using the formal constructs of the Web Ontology Language (OWL). This is achieved using the OMG's Ontology Definition Metamodel (ODM) specification.

The use of the ODM specification in this specification is limited to a specific sub-set of OWL constructs, and is also limited to the range of UML base classes that is allowed for each of the OWL constructs that are used, as defined in the FIBO [Foundations] specification.

The model content is made available as serialized ODM UML in the form of XMI files (“ODM XMI”, as serialized UML in the form of XMI files (“UML XMI”) and as OWL files in the RDF/XML syntax. The deliverables are listed in Annex A.

## **7.4 Business Usage Scenarios**

### **7.4.1 Business Entities Usage Scenarios**

A number of business scenarios will be supported by this RFC. These include:

- Legal Entity Identification
  - The ownership and control hierarchies which complement the (dumb) LEI will be maintained somewhere; the FIBO for Business Entities contains the semantics of these relationships and would form a conceptual model from which to build this supporting utility
- Transaction tracking
- Counterparty Credit Risk

# 8      Architecture

**Intended Audiences:** Technologists, Semantic Technologists, Standards Implementers.

## 8.1   Overview

The architecture of FIBO is described in the FIBO [Foundations] specification.

Please also refer to the Scope section (Section 1) and the Definitions (Section 4) for detailed treatment of the terms and concepts referred to.

## 8.2   The Foundations Models

This specification makes reference to specific sets of terms in the FIBO [Foundations] specification.

As a consequence of the modeling principles, the model requires ontologies of things which are not specific to business entities. These include legal concepts like contracts, business concepts such as service provision, as well as an extensive set of concepts for times, dates, mathematical constructs, events and activities, and so on.

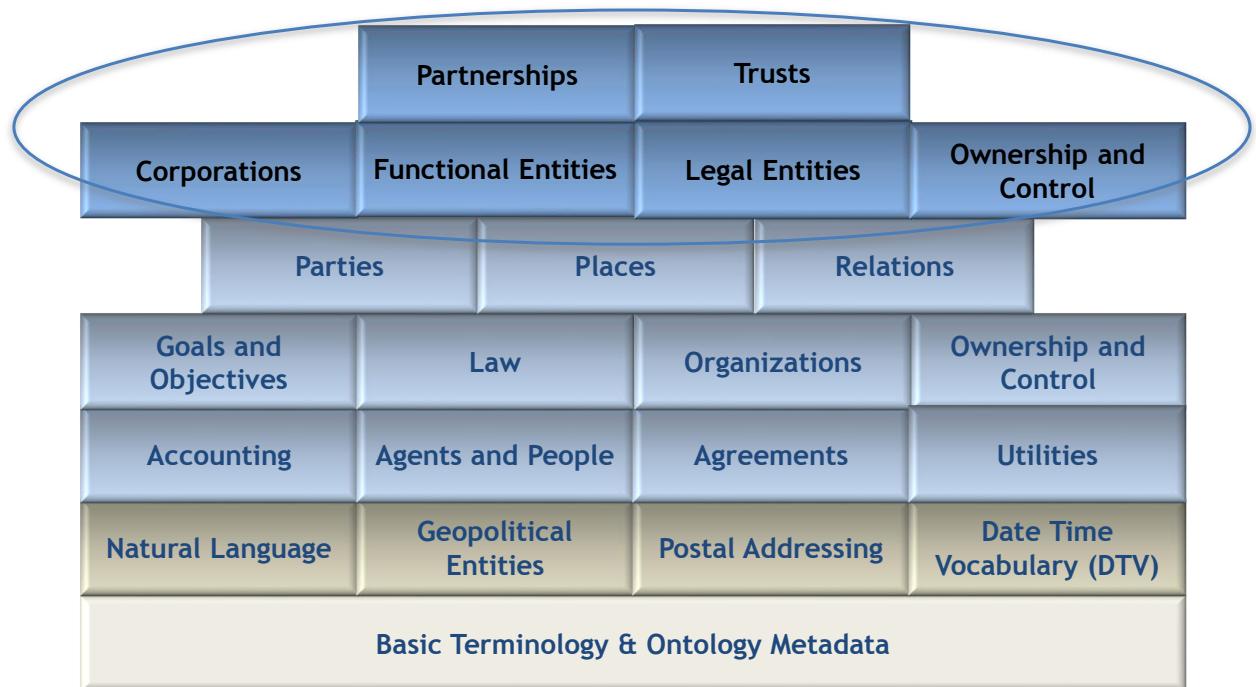
These terms are maintained in the "Foundations" material described in the FIBO [Foundations] specification.

## 8.3   Ontology Architecture and Namespaces

As described in the FIBO Foundations specification in section 8.2, the ontology architecture for FIBO is designed to facilitate reuse and ontology evolution to the degree possible. An approach to the foundational terminology, including basic terminology describing business entities, that provides very high-level, abstract conceptual knowledge designed to facilitate mapping is an important design goal. The basic building blocks for the Business Entities (BE) Ontology, building on the architecture provided in Foundations, are shown in Figure 8-1, below.

As shown in the diagram, the BE ontologies are divided up into a number of *modules*. These include: Corporations, Legal Entities, Ownership and Control, Partnerships, and Trusts.

The BE modules will ultimately depend on (1) Basic Terminology and Ontology Metadata (in light gray in the figure), (2) Foundations, and (3) a number of external modules, representing concepts for Natural Language, Geopolitical Entities (for example ISO 3166 Country codes, regional and municipal designations), Postal Addressing (from standards such as US Publication 28), and concepts defining dates, times, calendars, and schedules. A sample set of these anticipated external resources are given in the dark gray layer in the figure.



**Figure 8-1. Business Entities Ontology Architecture**

The namespaces and their well-known prefixes corresponding to external elements required for use of FIBO Business Entities include all of those listed in the FIBO Foundations specification, as well as those required for the use of Foundations itself. Table 8-2 lists those prefixes and namespaces considered external to Foundations. Table 8-3 provides those required for use of Foundations (repeated here for convenience).

**Table 8-2. Prefix and Namespaces for referenced/external vocabularies**

Namespace Prefix	Namespace
<b>rdf</b>	<a href="http://www.w3.org/1999/02/22-rdf-syntax-ns#">http://www.w3.org/1999/02/22-rdf-syntax-ns#</a>
<b>rdfs</b>	<a href="http://www.w3.org/2000/01/rdf-schema#">http://www.w3.org/2000/01/rdf-schema#</a>
<b>owl</b>	<a href="http://www.w3.org/2002/07/owl#">http://www.w3.org/2002/07/owl#</a>
<b>xsd</b>	<a href="http://www.w3.org/2001/XMLSchema#">http://www.w3.org/2001/XMLSchema#</a>
<b>dct</b>	<a href="http://purl.org/dc/terms/">http://purl.org/dc/terms/</a>
<b>skos</b>	<a href="http://www.w3.org/2004/02/skos/core#">http://www.w3.org/2004/02/skos/core#</a>
<b>sm</b>	<a href="http://www.omg.org/techprocess/ab/SpecificationMetadata/">http://www.omg.org/techprocess/ab/SpecificationMetadata/</a>

**Table 8-3. Prefix and Namespaces for FIBO Foundations**

Namespace Prefix	Namespace
<b>fibo-fnd-acc-aeq</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Accounting/AccountingEquity/">http://www.omg.org/spec/EDMC-FIBO/FND/Accounting/AccountingEquity/</a>
<b>fibo-fnd-acc-cur</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Accounting/CurrencyAmount/">http://www.omg.org/spec/EDMC-FIBO/FND/Accounting/CurrencyAmount/</a>
<b>fibo-fnd-aap-agt</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/AgentsAndPeople/Agents/">http://www.omg.org/spec/EDMC-FIBO/FND/AgentsAndPeople/Agents/</a>
<b>fibo-fnd-aap-ppl</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/AgentsAndPeople/People/">http://www.omg.org/spec/EDMC-FIBO/FND/AgentsAndPeople/People/</a>
<b>fibo-fnd-agr-agr</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Agreements/Agreements/">http://www.omg.org/spec/EDMC-FIBO/FND/Agreements/Agreements/</a>
<b>fibo-fnd-agr-ctr</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Agreements/Contracts/">http://www.omg.org/spec/EDMC-FIBO/FND/Agreements/Contracts/</a>
<b>fibo-fnd-gao-gl</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/GoalsAndObjectives/Goals/">http://www.omg.org/spec/EDMC-FIBO/FND/GoalsAndObjectives/Goals/</a>
<b>fibo-fnd-gao-obj</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/GoalsAndObjectives/Objectives/">http://www.omg.org/spec/EDMC-FIBO/FND/GoalsAndObjectives/Objectives/</a>
<b>fibo-fnd-law-jur</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Law/Jurisdiction/">http://www.omg.org/spec/EDMC-FIBO/FND/Law/Jurisdiction/</a>
<b>fibo-fnd-law-lcap</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Law/LegalCapacity/">http://www.omg.org/spec/EDMC-FIBO/FND/Law/LegalCapacity/</a>
<b>fibo-fnd-law-cor</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Law/LegalCore/">http://www.omg.org/spec/EDMC-FIBO/FND/Law/LegalCore/</a>
<b>fibo-fnd-org-fm</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Organizations/FormalOrganizations/">http://www.omg.org/spec/EDMC-FIBO/FND/Organizations/FormalOrganizations/</a>
<b>fibo-fnd-org-lg</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Organizations/LegitimateOrganizations/">http://www.omg.org/spec/EDMC-FIBO/FND/Organizations/LegitimateOrganizations/</a>
<b>fibo-fnd-org-org</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Organizations/Organizations/">http://www.omg.org/spec/EDMC-FIBO/FND/Organizations/Organizations/</a>
<b>fibo-fnd-oac-ctl</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/OwnershipAndControl/Control/">http://www.omg.org/spec/EDMC-FIBO/FND/OwnershipAndControl/Control/</a>
<b>fibo-fnd-oac-own</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/OwnershipAndControl/Ownership/">http://www.omg.org/spec/EDMC-FIBO/FND/OwnershipAndControl/Ownership/</a>
<b>fibo-fnd-pty-pty</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Parties/Parties/">http://www.omg.org/spec/EDMC-FIBO/FND/Parties/Parties/</a>
<b>fibo-fnd-pty-rl</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Parties/Roles/">http://www.omg.org/spec/EDMC-FIBO/FND/Parties/Roles/</a>

<b>fibo-fnd-plc-adr</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Places/Addresses/">http://www.omg.org/spec/EDMC-FIBO/FND/Places/Addresses/</a>
<b>fibo-fnd-plc-cty</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Places/Countries/">http://www.omg.org/spec/EDMC-FIBO/FND/Places/Countries/</a>
<b>fibo-fnd-plc-loc</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Places/Locations/">http://www.omg.org/spec/EDMC-FIBO/FND/Places/Locations/</a>
<b>fibo-fnd-rel-rel</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Relations/Relations/">http://www.omg.org/spec/EDMC-FIBO/FND/Relations/Relations/</a>
<b>fibo-fnd-utl-av</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Utilities/AnnotationVocabulary/">http://www.omg.org/spec/EDMC-FIBO/FND/Utilities/AnnotationVocabulary/</a>
<b>fibo-fnd-utl-bt</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/FND/Utilities/BusinessFacingTypes/">http://www.omg.org/spec/EDMC-FIBO/FND/Utilities/BusinessFacingTypes/</a>

As described in the [Foundations] specification, the namespace approach taken for FIBO is based on OMG guidelines and is constructed as follows:

- A standard prefix <http://www.omg.org/spec/>
- The family name, EDMC-FIBO
- The abbreviation for the specification: in this case BE
- The module name
- The ontology name

Note that the URI/IRI strategy for the ontologies in FIBO takes a “slash” rather than “hash” approach, in order to accommodate server-side applications. Though not technically necessary, this specification does mandate namespace prefixes to be used. These are constructed as follows with the components separate by “-“:

- The specification family name fibo
- The specification abbreviation: be
- An abbreviation for the module name
- An abbreviation for the ontology name

The namespaces and prefixes corresponding to FIBO Business Entities ontologies are summarized in Table 8-4 for convenience. These are given in alphabetical order, by module, rather than with any intent to show imports relationships.

**Table 8-4. Prefix and Namespaces for FIBO Business Entities**

Namespace Prefix	Namespace
<b>fibo-be-oac-cpty</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/</a>
<b>fibo-be-le-cb</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/</a>
<b>fibo-be-oac-cctl</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/</a>

<b>fibo-be-oac-cown</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateOwnership/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateOwnership/</a>
<b>fibo-be-corp-corp</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/Corporations/Corporations/">http://www.omg.org/spec/EDMC-FIBO/BE/Corporations/Corporations/</a>
<b>fibo-be-le-fbo</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a>
<b>fibo-be-oac-exec</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/Executives/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/Executives/</a>
<b>fibo-be-fct-fct</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/FunctionalEntities/FunctionalEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/FunctionalEntities/FunctionalEntities/</a>
<b>fibo-be-le-lp</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a>
<b>fibo-be-le-lei</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/</a>
<b>fibo-be-oac-opty</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/</a>
<b>fibo-be-ptr-ptr</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/Partnerships/Partnerships/">http://www.omg.org/spec/EDMC-FIBO/BE/Partnerships/Partnerships/</a>
<b>fibo-be-tr-tr</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/Trusts/Trusts/">http://www.omg.org/spec/EDMC-FIBO/BE/Trusts/Trusts/</a>

# 9 Model Content Reports

## 9.1 Overview

This section lists all the terms, definitions and relationships in the Business Entities models defined in this specification.

Please note that this section is not intended to be read by business subject matter experts; for this purpose, tabular reports or spreadsheets should be produced for this audience as described elsewhere in this specification.

### 9.1.1 Interpreting This Section

This section shows each of the components of the model with their OWL construct names where applicable. These are:

Construct Name	Description
<b>Module:</b>	A grouping of ontologies with some common theme. These also share a namespace fragment in the corresponding OWL files.
<b>Ontology</b>	A single OWL ontology.
<b>Class of Thing</b>	An OWL Class, that is a set theoretic construct representing a common set of properties, possession of which would make any individual a member of this set.
<b>Relationship property</b>	The Class named as “Range” for the relationship represents something in terms of which the meaning of the relationship is framed.  Known as “object property” in OWL.
<b>Parent</b>	“is a” relationships - these have no definition. This relationship indicates that the Class is a sub-class of the Class to which the relationship is pointing.
<b>Simple property</b>	Some property framed in terms of some simple type of information such as text or a “yes or no” value.  Known as “datatype property” in OWL.
<b>Datatype Property Range</b>	The type of information in which the OWL Datatype Property is framed  Known as “Type” in the tables, where one column combines types of simple properties, and related things (ranges) of relationship properties

<b>Construct Name</b>	<b>Description</b>
	NOTE: for some simple properties, the range is a DataEnumeration (see below).
<b>Data Enumeration</b>	These item represent a selection of possible values, which are intended to be taken as literal (e.g. textual) values. A “Simple property” (OWL Datatype Property) may identify one of these as the Simple property Type; this means that any one of the values in the list may be a possible value for this property.
<b>Logical Union</b>	A logical union of Classes. The membership of the union is shown in this report in the “Related thing or type” column.
<b>Mutually exclusive</b>	Identifies two sets of which no one individual may be a member of both.  Known as “disjoint” in OWL.
<b>Definition</b>	The SKOS Definition annotation, giving the formal definition of the item
<b>Explanatory Note</b>	An annotation giving more detailed business facing explanations for concepts.
<b>Editorial Note</b>	The SKOS Editorial Note annotation, giving additional editorial narrative about the term and definition.
<b>Term Origin</b>	The origin of the concept in some external source, which was directly used as a point of reference in deriving the concept indicated.
<b>Definition Origin</b>	The origin of the written definition for the concept in some external source, which was directly used as a point of reference in deriving the concept indicated.
<b>Restriction</b>	A set theoretic construct representing the re-use or refinement of an existing relationship property. The restriction represents a set of things in the business domain, the set being everything which has the stated relationship restricted as shown. Restrictions may be a super-class of some class of thing (representing a necessary condition for membership of that class) or they may be shown as “equivalent to” that class of thing, meaning that the restriction represents necessary and sufficient conditions for membership of that class.

## 9.2. Module: Legal Entities

**Table 9-1. Legal Entities Module Metadata**

Metadata Term	Value
<code>sm:moduleName</code>	Legal Entities
<code>sm:moduleAbbreviation</code>	FIBO-BE-LE
<code>sm:moduleVersion</code>	1.0
<code>sm:moduleAbstract</code>	<p>This module contains ontologies which define the basis for legal personhood and business entities generally. They include definition of the formal semantics of types of entities including those considered "Legal Entity" in the sense of the ISO Legal Entity Identifier (LEI) effort, relationships between entities, parts of organizations, membership, classification, address relations and so on.</p> <p>It depends on and extends a number of the FIBO Foundations modules, particularly those describing formal organizations, ownership, and control relationships, and therefore on the ontologies that they depend on, either directly or indirectly.</p>

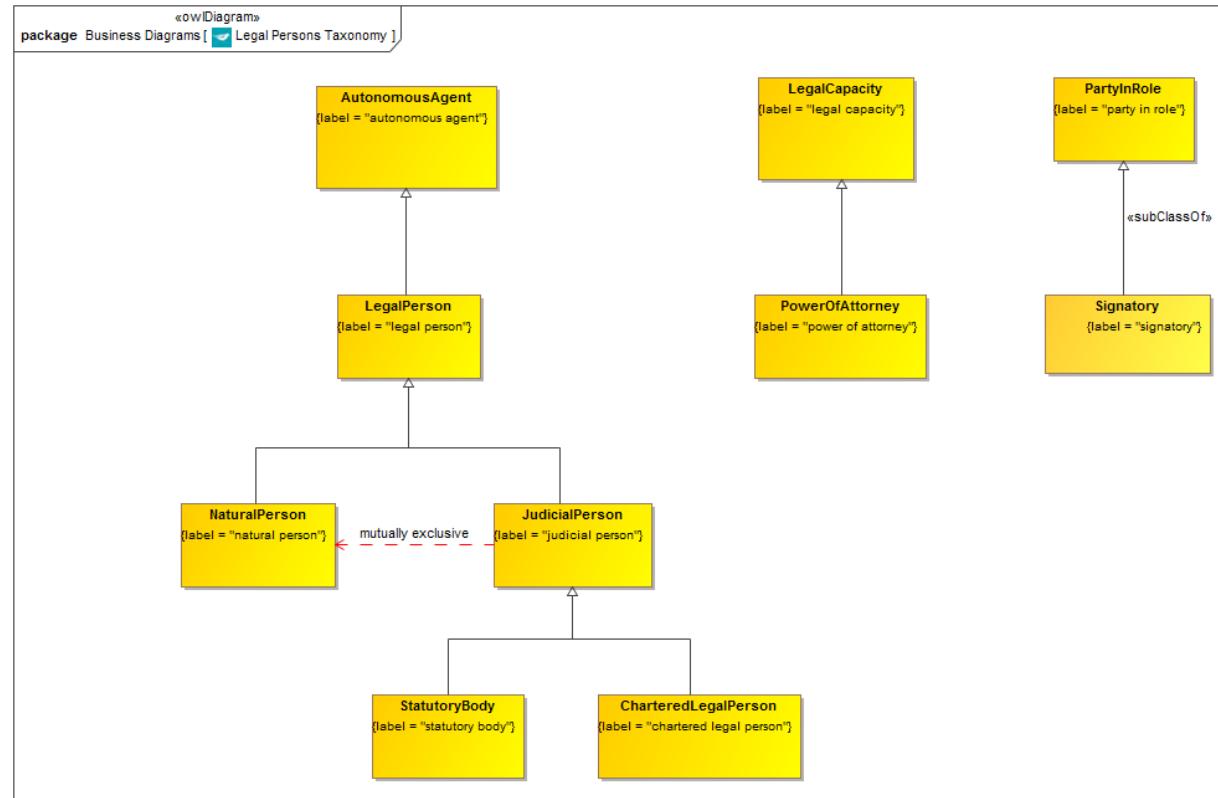
### 9.2.1 Ontology: Legal Persons

This ontology defines legal personhood concepts. A legal person as defined here is any natural person or organization which is capable of accruing liability on its own part.

**Table 9-2. Legal Persons Ontology Metadata**

Metadata Term	Value
<code>sm:filename</code>	Legal Persons Ontology
<code>sm:fileAbbreviation</code>	fibo-be-le-lp

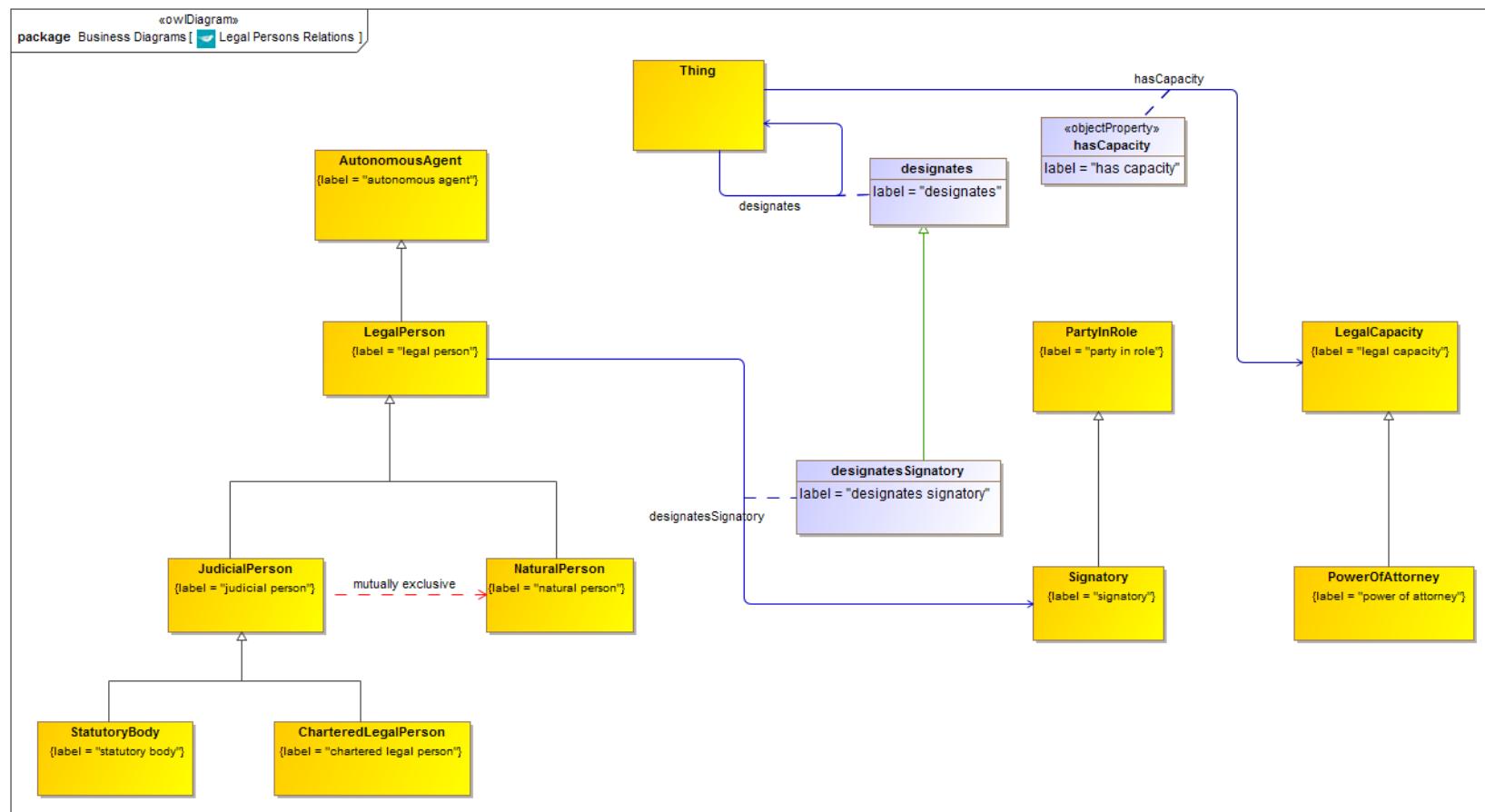
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/20131101/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/20131101/LegalEntities/LegalPersons/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/techprocess/ab/SpecificationMetadata/">http://www.omg.org/techprocess/ab/SpecificationMetadata/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/FND/">http://www.omg.org/spec/EDMC-FIBO/FND/</a>



**Figure 9.2.1.1      Legal Persons Taxonomy**

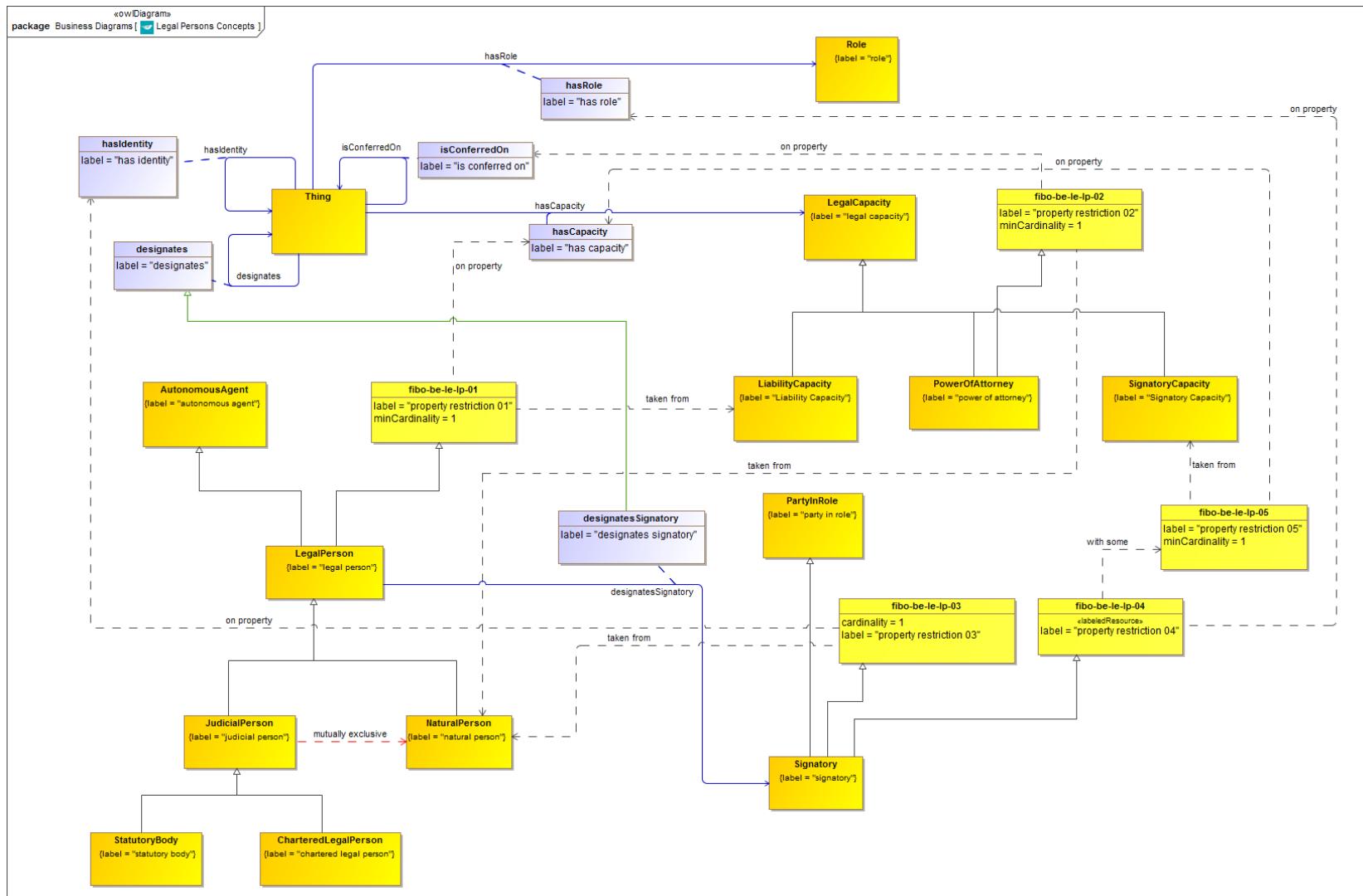
Financial Industry Business Ontology - Business Entities

This is the taxonomy of classes of “Thing” in the Legal Persons ontology along with the more general concepts of which they are a specialization.



**Figure 9.2.1.2      Legal Persons with Relationship Properties**

Properties in this ontology and elsewhere which are refined and reused by property restrictions, as shown in the complete diagram which follows. The property “hasCapacity” is not a part of this ontology but is included in this diagram since it is one of the more important properties which are refined in the definition of legal persons.



**Figure 9.2.1.3 Legal Persons Ontology (full diagram)**

This shows the completed ontology for Legal Persons. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to Legal Persons and their related concepts.

**Table 9-3. Legal Persons Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	CharteredLegalPerson	chartered legal person		a legal person created by a royal charter or decree	judicial person					In a monarchy or principality, the monarch typically vests the power to create such bodies, in an entity called (for example) the Privy Council.			
Class	JudicialPerson	judicial person		Legal persons (lat. persona iuris) are of two kinds: natural persons (people) and judicial persons (also called juristic or artificial or fictitious persons, lat. personae fictae), i.e., groups of people, such as corporations, which are treated by law as if they were persons. While people acquire legal personhood when they are born, judicial persons do so when they are incorporated (registered) in accordance with law.	formal organization legal person	natural person							
Class	LegalPerson	legal person		any entity which can incur legal obligation and can be sued at law	property restriction 01 autonomous agent					To have legal personality means to be capable of having legal rights and duties within a certain legal system, such as to enter into contracts, sue, and be sued. Legal personality is a prerequisite to legal capacity, the ability of any legal person to amend (enter into, transfer, etc.) rights and obligations.			
Relationship Property	designatesSignatory	legal person	designates signatory	designates a party able to sign contracts on the part of the legal person	designates		signatory						
Class	NaturalPerson	natural person		A person of maturity who in the eyes of the law is able to assume obligations.	adult legal person	judicial person incapacitated adult							
Class	PowerOfAttorney	power of attorney		Written legal authority given by one party (the principal) to another (the agent or attorney-in-fact) to act on the principals	property restriction 02 legal capacity								<a href="http://www.businessdictionary.com/definition/power-of-attorney.html">http://www.businessdictionary.com/definition/power-of-attorney.html</a>

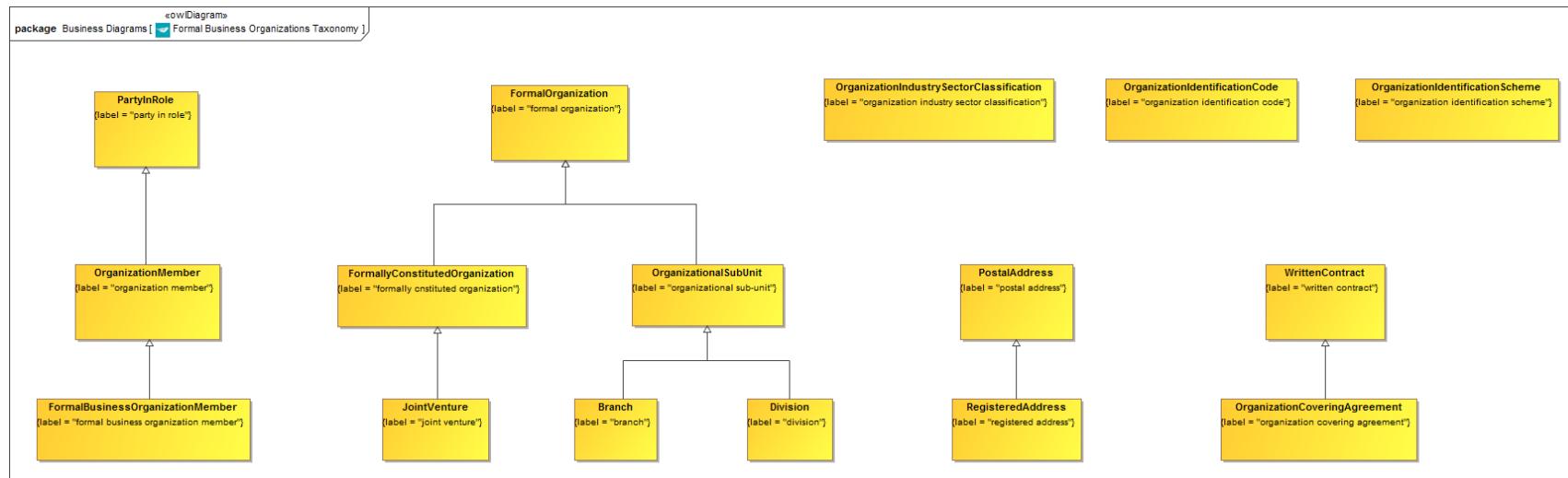
Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				behalf. It may be a (1) General power Of attorney that authorizes the agent to act generally on behalf of the principal, or (2) Special power of attorney that is limited to a specific act or situation. Decisions made and actions taken by an attorney in fact (within the scope of his or her authority) are legally binding on the principal. A power of attorney can remain in force only so long as the principal is alive and does not become disabled or incapacitated. Although it is often conferred on the principals attorney, one does not need to be an attorney at law to be an attorney-in-fact.									
Class	Signatory	signatory		Some agent who has the capacity to sign contracts on the part of some legal person	party in role property restriction 03 property restriction 04								
Class	StatutoryBody	statutory body		A legal person which is created and given legal personhood by act of statute.	judicial person								
Property Restriction	fibo-be-le-lp-01	property restriction 01	has capacity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			Liability Capacity		min 1				
Property Restriction	fibo-be-le-lp-02	property restriction 02	is conferred on	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			natural person		min 1				
Property Restriction	fibo-be-le-lp-03	property restriction 03	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			natural person		exactly 1				
Property Restriction	fibo-be-le-lp-04	property restriction 04	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 05		must be some				
Property Restriction	fibo-be-le-lp-05	property restriction 05	has capacity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			Signatory Capacity		min 1				

### **9.2.2 Ontology: Formal Business Organizations**

This ontology defines formal business organizations and related concepts. The ontology covers parts of organizations, membership, classification, address relations and other properties which are applicable to formal business organizations generally. The concept of a formal business organization forms the basis for articulation of types of organization, both incorporated and non-incorporated, in other FIBO-BE ontologies.

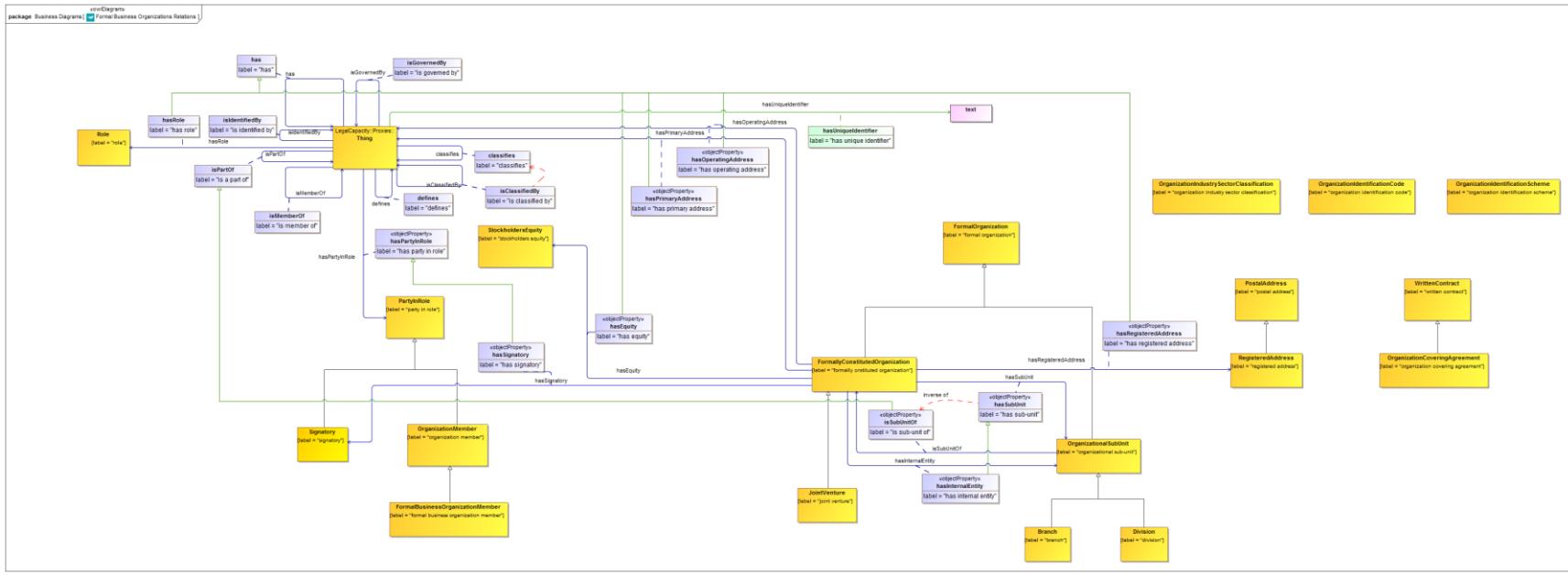
**Table 9-4. Formal Business Organizations Ontology Metadata**

Metadata Term	Value
<b>sm:filename</b>	Formal Business Organizations Ontology
<b>sm:fileAbbreviation</b>	fibo-be-le-fbo
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/LegalEntities/FormalBusinessOrganizations/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a>



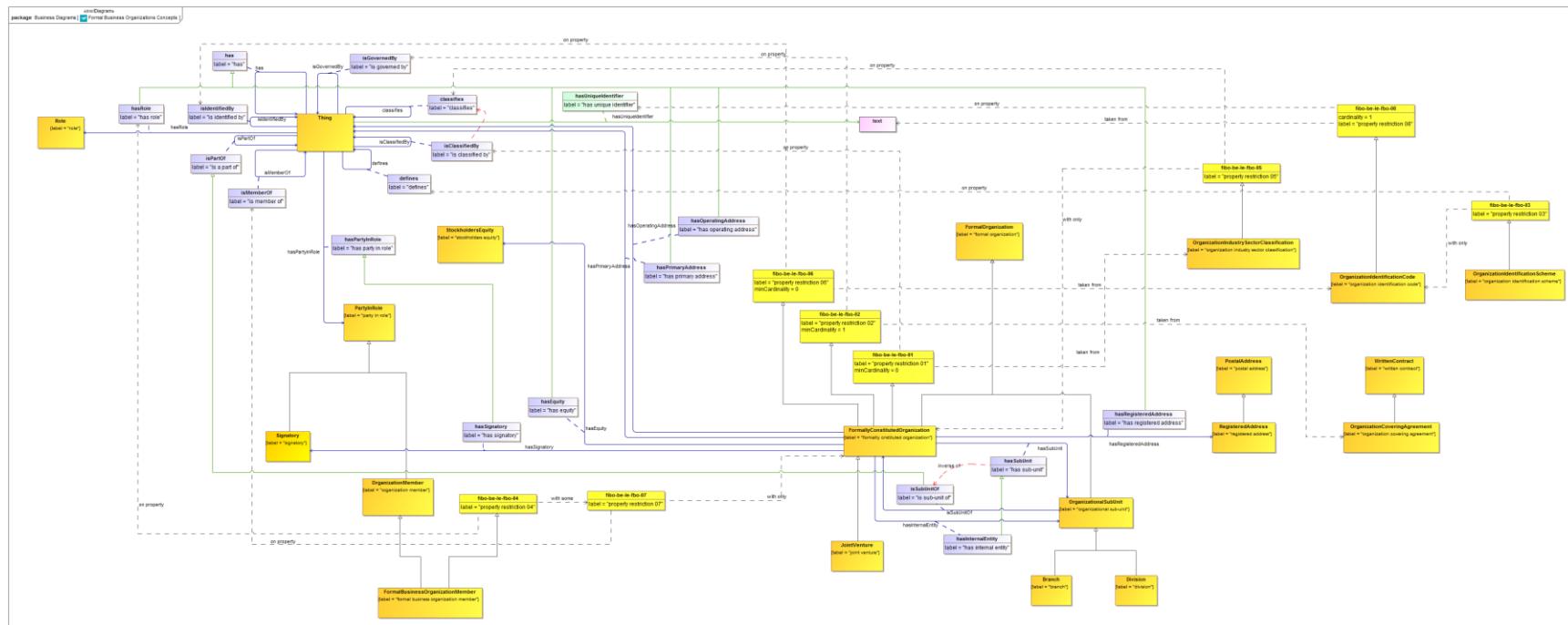
**Figure 9.2.2.1      Formal Business Organizations Taxonomy**

This is the taxonomy of classes of “Thing” in the Formal Business Organizations ontology along with the more general concepts of which they are a specialization.



## Figure 9.2.2.2 Formal Business Organizations with Relationship Properties

Properties in this ontology and elsewhere which are refined and reused by property restrictions, as shown in the complete diagram which follows.



**Figure 9.2.2.3 Formal Business Organizations Ontology (full diagram)**

This shows the completed ontology for Formal Business Organizations. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to Formal Business Organizations and their related concepts.

**Table 9-5. Formal Business Organizations Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	Branch	branch		A part of a business organization or company, identified as a branch.	organizationa l sub-unit					This is not a separate legal entity in its own right, but a functional part of the entity.			
Class	Division	division		a part of a company, such as a line of business, that may have separate accounting or reporting requirements	organizationa l sub-unit								
Class	FormalBusinessOrganizat ionMember	formal business organization		A member of some formal business organization.	organization member property					This party may hold some equity in the formal			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
		member			restriction 04					business organization and may or may not have some responsibilities or potential liability in resect of the activities of that organization. Terms setting out the position of the member in these and other matters are defined in the organization covering agreement, to which the member may be a signatory.			
Class	FormallyCoInstitutedOrganization	formally constituted organization		Any organization with some formal contractual agreement among its principals	property restriction 01 property restriction 02 formal organization property restriction 06								
Relationship Property	hasEquity	formally constituted organization	has equity	the formal business organization has some form of stockholders equity	has		stockholders equity						
Relationship Property	hasInternalEntity	formally constituted organization	has internal entity	the organization has some part which is formally defined as an Internal Entity, for example for reporting, management or accounting purposes	has sub-unit		organizationa l sub-unit						
Relationship Property	hasOperatingAddress	formally constituted organization	has operating address	address at which the organization carries out its operations	has								
Relationship Property	hasPrimaryAddress	formally constituted organization	has primary address	The main address at which communications to the organization may be addressed; its headquarters address.	has								
Relationship Property	hasRegisteredAddress	formally constituted organization	has registered address	The organization has an address which it is registered and at which legal papers may be served on it.	has		registered address						
Relationship Property	hasSignatory	formally constituted organization	has signatory	has a party which is authorized to sign contracts on the party of the entity.	has party in role		signatory						
Relationship Property	hasSubUnit	formally constituted organization	has sub-unit	The company has a branch, which is part of that company. This may be in another country or in the country in which that	has part		organizationa l sub-unit	is sub-unit of					

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source	
				company is registered (incorporated).										
Class	JointVenture	joint venture		A formal venture between two or more business entities	formally constituted organization					Detailed properties still to be modeled. This will be similar to Partnership in that it will have two or more venture partners (need to determine best label for these), and some formal standing. Also to research: whether JVs are only instituted via mutual share ownership and therefore may only be between limited companies (or may only be a limited company but may have other types of legal person and/or legal entity as venture partners).				
Class	Organization CoveringAgreement	organization covering agreement		A formal agreement between the principals in a formal organization which covers the relationship between the principals, and between the principals and the entity.	written contract					Also covers the aims and purposes of the Entity.				
Class	Organization IdentificationCode	organization identification code		A textual code which uniquely identifies a formal organization; Further Notes: Things which may be identified by this kind of code include but are not restricted to Legal Entity. At this most general level, this may be the identifier for a Fund, for a Legal Entity, for a Trust, or for the LEI scope of Artificial Person plus Trust.	property restriction 08									
Class	Organization IdentificationScheme	organization identification scheme		A formal scheme defining identification codes for a business entity.	property restriction 03									
Class	Organization IndustrySectorClassification	organization industry sector classification		The classification of an organization in terms of the industry sector in which it carries out business.	property restriction 05									

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	Organization alSubUnit	organization al sub-unit		an organization that is part of a larger formal organization and only has full recognition within the context of that formal organization; In other words, it is not a legal entity in its own right.	formal organization								
Relationship Property	isSubUnitOf	organizationa l sub-unit	is sub-unit of	The organization is a sub-unit of a formal business organization and has the role and function of being a formal part of that organization, such as a branch.	is a part of		formally constituted organization	has sub-unit					
Class	RegisteredA ddress	registered address		The address at which an entity is registered and at which legal papers may be served.	postal address					This usually has to not be a postal address (except in some jurisdictions). So there should be a common superclass.			
Property Restriction	fibo-be-le-fbo-01	property restriction 01	is classified by	Set of things that may have the property shown, taken from the type of thing indicated.			organization industry sector classification		min 0				
Property Restriction	fibo-be-le-fbo-02	property restriction 02	is governed by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			organization covering agreement		min 1				
Property Restriction	fibo-be-le-fbo-03	property restriction 03	defines	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			organization identification code		may only be				
Property Restriction	fibo-be-le-fbo-04	property restriction 04	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 07		must be some				
Property Restriction	fibo-be-le-fbo-05	property restriction 05	classifies	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fibo-be-le-fbo-06	property restriction 06	is identified by	Set of things that may have the property shown, taken from the type of thing indicated.			organization identification code		min 0				
Property Restriction	fibo-be-le-fbo-07	property restriction 07	is member of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				

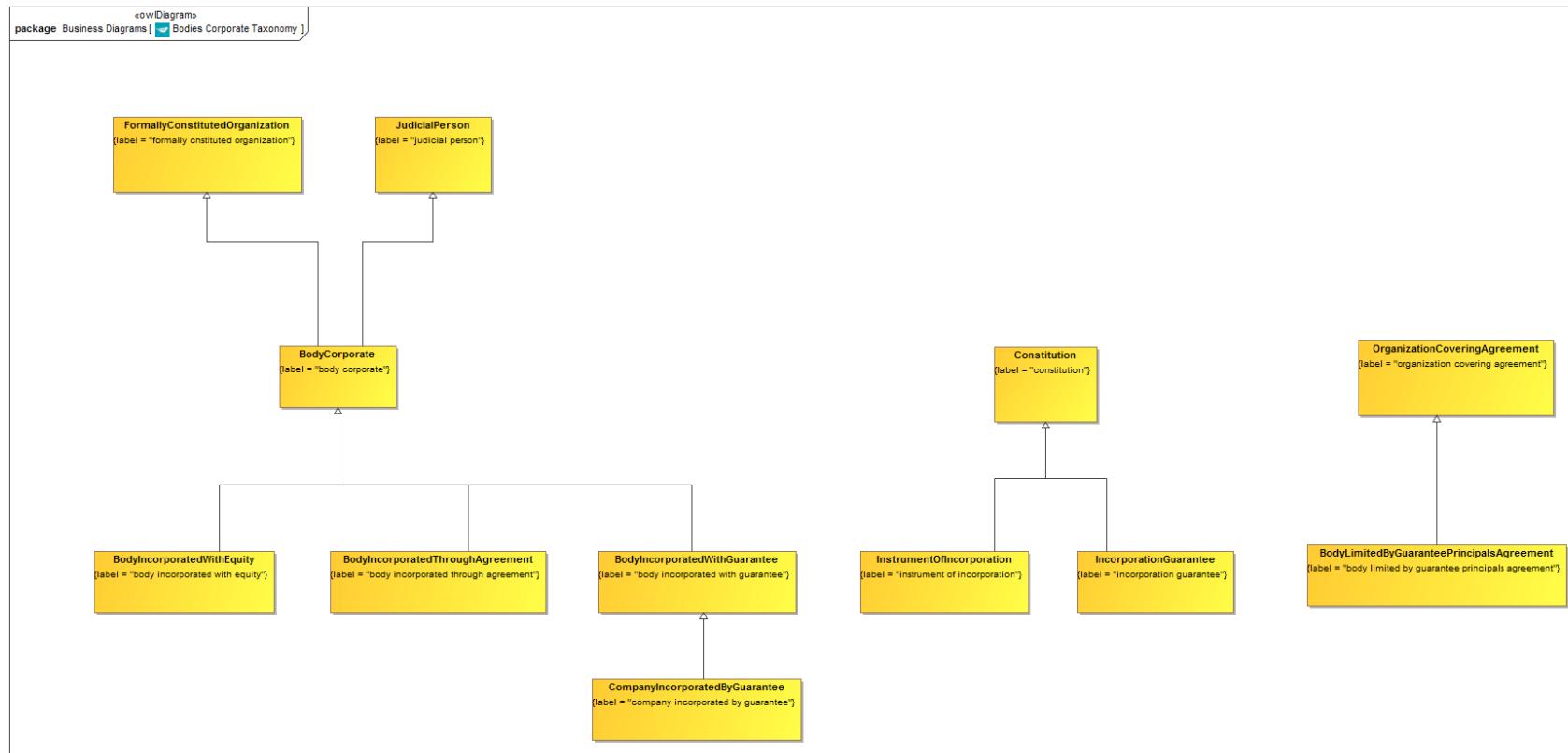
Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Property Restriction	fibo-be-le-fbo-08	property restriction 08	has unique identifier	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			text		exactly 1				

### 9.2.3 Ontology: Corporate Bodies

This ontology defines the basic mechanisms that establish legal personhood for judicial or artificial persons, specifically those that are corporate bodies, including bodies incorporated by equity, by guarantee, and by agreement.

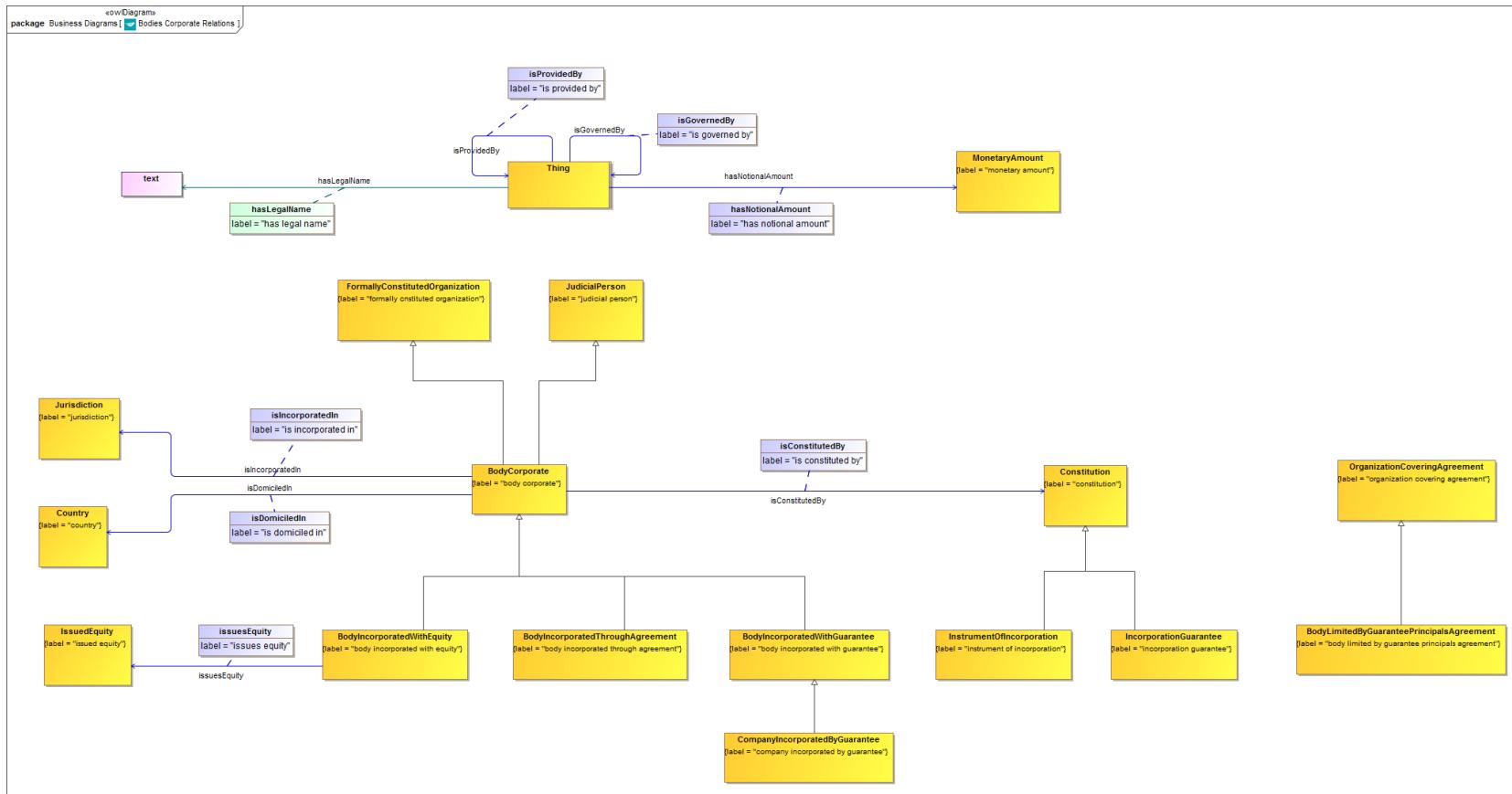
**Table 9-6. Corporate Bodies Ontology Metadata**

Metadata Term	Value
<b>sm:filename</b>	Corporate Bodies Ontology
<b>sm:fileAbbreviation</b>	fibo-be-le-cb
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/LegalEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/LegalEntities/CorporateBodies/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a>



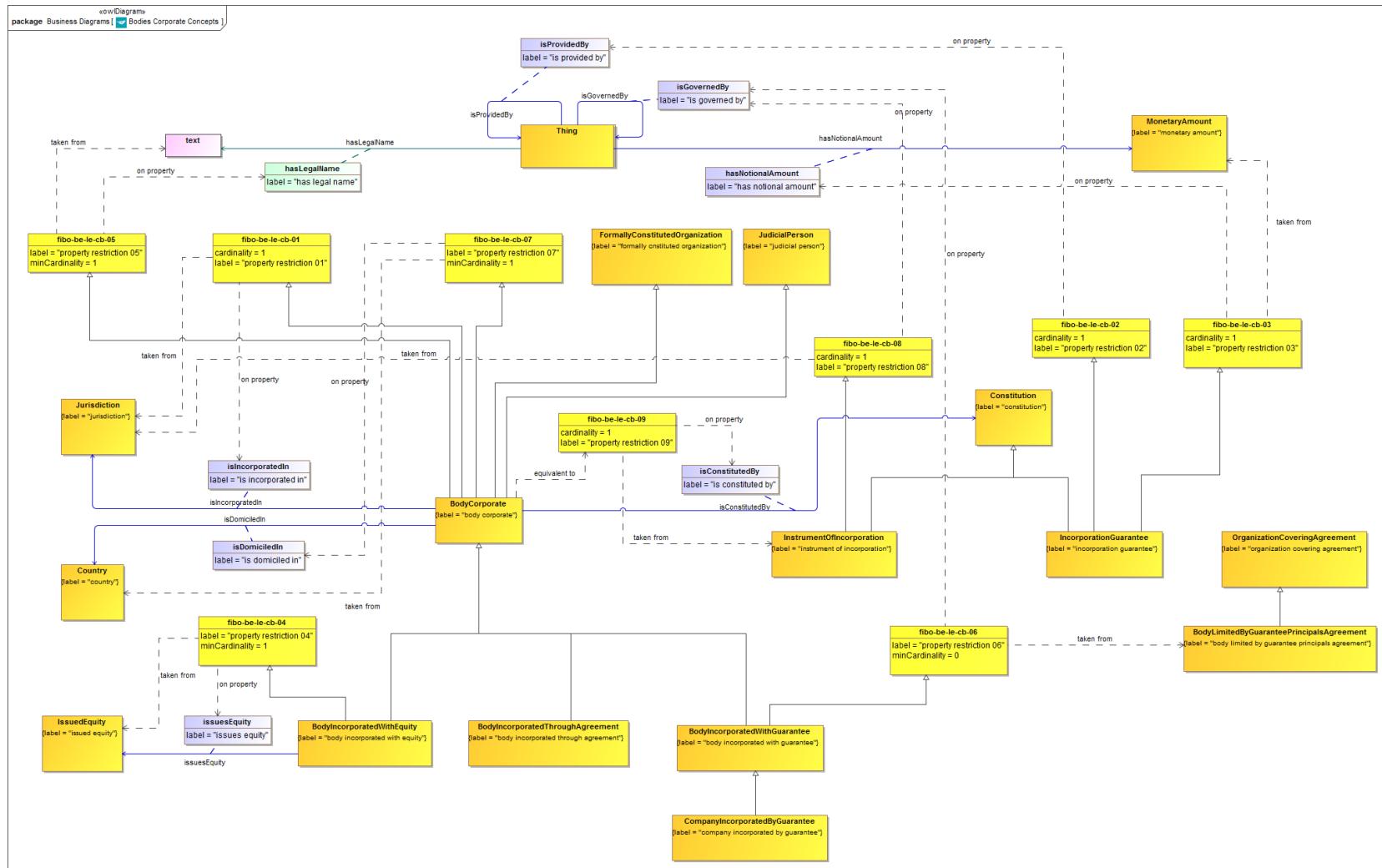
**Figure 9.2.3.1      Bodies Corporate Taxonomy**

This is the taxonomy of classes of “Thing” in the Corporations ontology along with the more general concepts of which they are a specialization.



**Figure 9.2.3.2      Bodies Corporate Concepts and Relationship Properties**

This shows the taxonomy of concepts along with the relationships used in this ontology or adapted and refined by it.



**Figure 9.2.3.3      Bodies Corporate Ontology (full diagram)**

This shows the completed ontology for Corporate Bodies. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to bodies corporate and their related concepts.

**Table 9-7. Corporate Bodies Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source	
Class	BodyCorporate	body corporate		A body corporate has a legal name and has certain rights, protections, privileges, responsibilities, and liabilities under law, similar to those of a natural person. The concept is pertinent to the philosophy of law, as it is essential to laws affecting a corporation (corporations law) (the law of business associations).	property restriction 01 judicial person property restriction 05 property restriction 07 formally constituted organization					This is an artificial legal person, that is something with legal personhood but which has been created artificially. It is also a formal organization (unlike for example artificial legal persons created by statute or by royal charter). Bodies Corporate, and all non-natural legal persons, are generally created by some legal act and supported by some instrument such as the issuance of shares or guarantees. These are what give the entity a separate legal standing in the jurisdiction in which they are defined, and that jurisdiction will have created the laws which allow and cause this kind of entity to exist.				
Relationship Property	isConstitutedBy	body corporate	is constituted by	the instrument by which an entity is incorporated			constitution							
Relationship Property	isDomiciledIn	body corporate	is domiciled in	the country in which the body corporate is officially domiciled			country			This would normally be the country corresponding to the jurisdiction in which the body corporate is incorporated. For some primarily federal countries, the domicile is the country that makes up the federation while the jurisdiction under which the entity is				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										registered would be that of some state in that federation.			
Relationship Property	isIncorporatedIn	body corporate	is incorporated in	the legal jurisdiction under which the legal entity is incorporated			jurisdiction			It is the laws of this jurisdiction that cause and allow the legal entity to exist and to incur debt and be sued at law as a legal entity.			
Class	BodyIncorporatedThroughAgreement	body incorporated through agreement		A body with legal personhood, incorporated through some agreement among the principals, and without equity or guarantee instruments which would isolate the principals from liability.	body corporate					An LLP (in the UK) is an example of this, and is also a partnership. There, the LLP Document is the legal document which effectively constitutes the Partnership.			
Class	BodyIncorporatedWithEquity	body incorporated with equity		A body corporate which is incorporated by means of the issuance of equity.	body corporate property restriction 04								
Relationship Property	issuesEquity	body incorporated with equity	issues equity	A body incorporated by equity is incorporated through the issuance of some issued equity, which is a form of stockholders equity.			issued equity						
Class	BodyIncorporatedWithGuarantee	body incorporated with guarantee		Incorporated entity without share capital, and in which the liability of its members is limited to the amount each one of them undertakes to contribute at the time the firm is wound up.	body corporate property restriction 06					The profit motive is not the prime objective of the organization.			
Class	BodyLimitedByGuaranteesPrincipalsAgreement	body limited by guarantee principals agreement		The formal agreement between the principals of a body limited by guarantee.	organization covering agreement								
Class	CompanyIncorporatedByGuarantee	company incorporated by guarantee			body incorporated with guarantee								www.investorwords.com
Class	IncorporationGuarantee	incorporation guarantee		A guarantee which is part of the means by which some incorporated entity is incorporated by guarantee.	property restriction 02 property restriction 03 constitution								
Class	InstrumentOfIncorporation	instrument of incorporation		Some legal instrument by which some legal entity which is not a natural person is made to exist.	property restriction 08 constitution					This may be the issuance of shares, the existence of some agreement, guarantees and so on.			

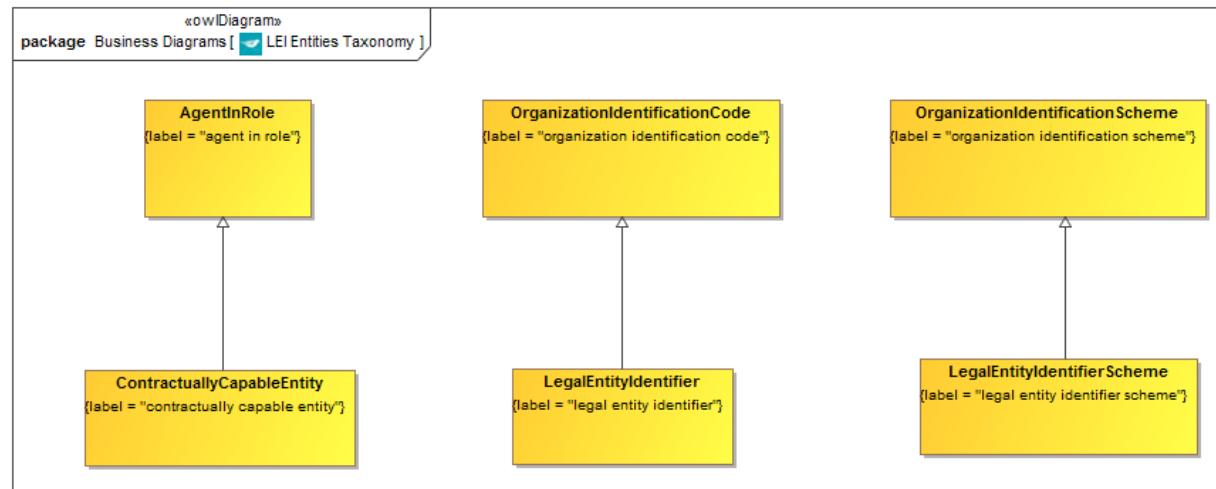
Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Property Restriction	fibo-be-le-cb-01	property restriction 01	is incorporated in	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			jurisdiction		exactly 1				
Property Restriction	fibo-be-le-cb-02	property restriction 02	is provided by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			Anything		exactly 1				
Property Restriction	fibo-be-le-cb-03	property restriction 03	has notional amount	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			monetary amount		exactly 1				
Property Restriction	fibo-be-le-cb-04	property restriction 04	issues equity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			issued equity		min 1				
Property Restriction	fibo-be-le-cb-05	property restriction 05	has legal name	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			text		min 1				
Property Restriction	fibo-be-le-cb-06	property restriction 06	is governed by	Set of things that may have the property shown, taken from the type of thing indicated.			body limited by guarantee principals agreement		min 0				
Property Restriction	fibo-be-le-cb-07	property restriction 07	is domiciled in	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			country		min 1				
Property Restriction	fibo-be-le-cb-08	property restriction 08	is governed by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			jurisdiction		exactly 1				
Property Restriction	fibo-be-le-cb-09	property restriction 09	is constituted by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			instrument of incorporation		exactly 1				

#### 9.2.4 Ontology: LEI Related Entities

This ontology defines concepts around contractually capable business entities. The terms defined here are those which are relevant to the Legal Entity Identifier (LEI) work. The term known as legal entity in that work is identified as a formal organization which is recognized in some jurisdiction as being capable of incurring some liability, whether or not it is a legal person as understood by the legal community. This is labeled as contractually capable entity, to avoid confusion with the accepted legal term for Legal Entity. Such entities are recognized as requiring an LEI, but the identifier itself is allocated to the formal organization which is recognized as being contractually capable.

**Table 9-8. LEI Related Entities Ontology Metadata**

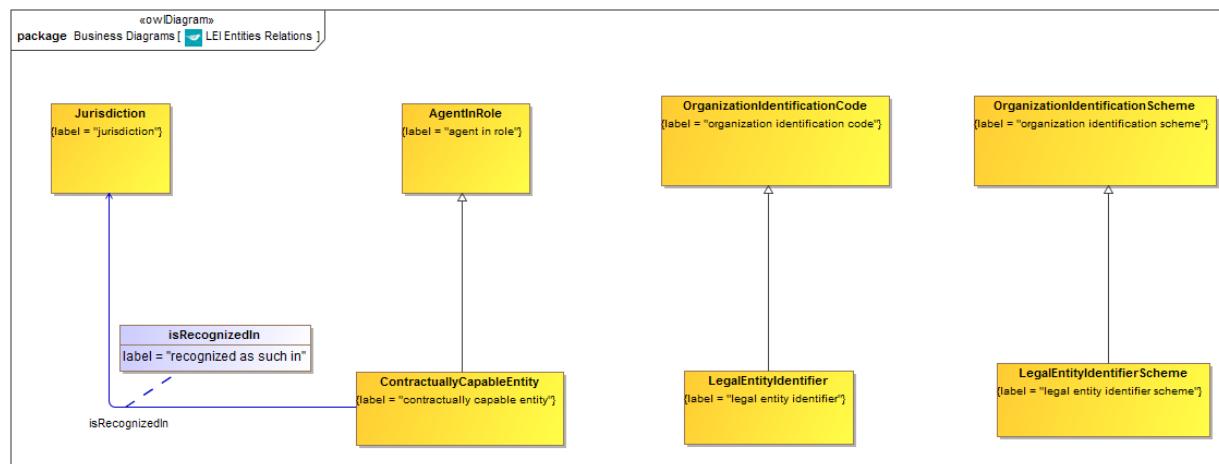
Metadata Term	Value
<b>sm:filename</b>	LEI Entities Ontology
<b>sm:fileAbbreviation</b>	fibo-be-lei
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/LegalEntities/LEIEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/LegalEntities/LEIEntities/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a>



**Figure 9.2.4.1**

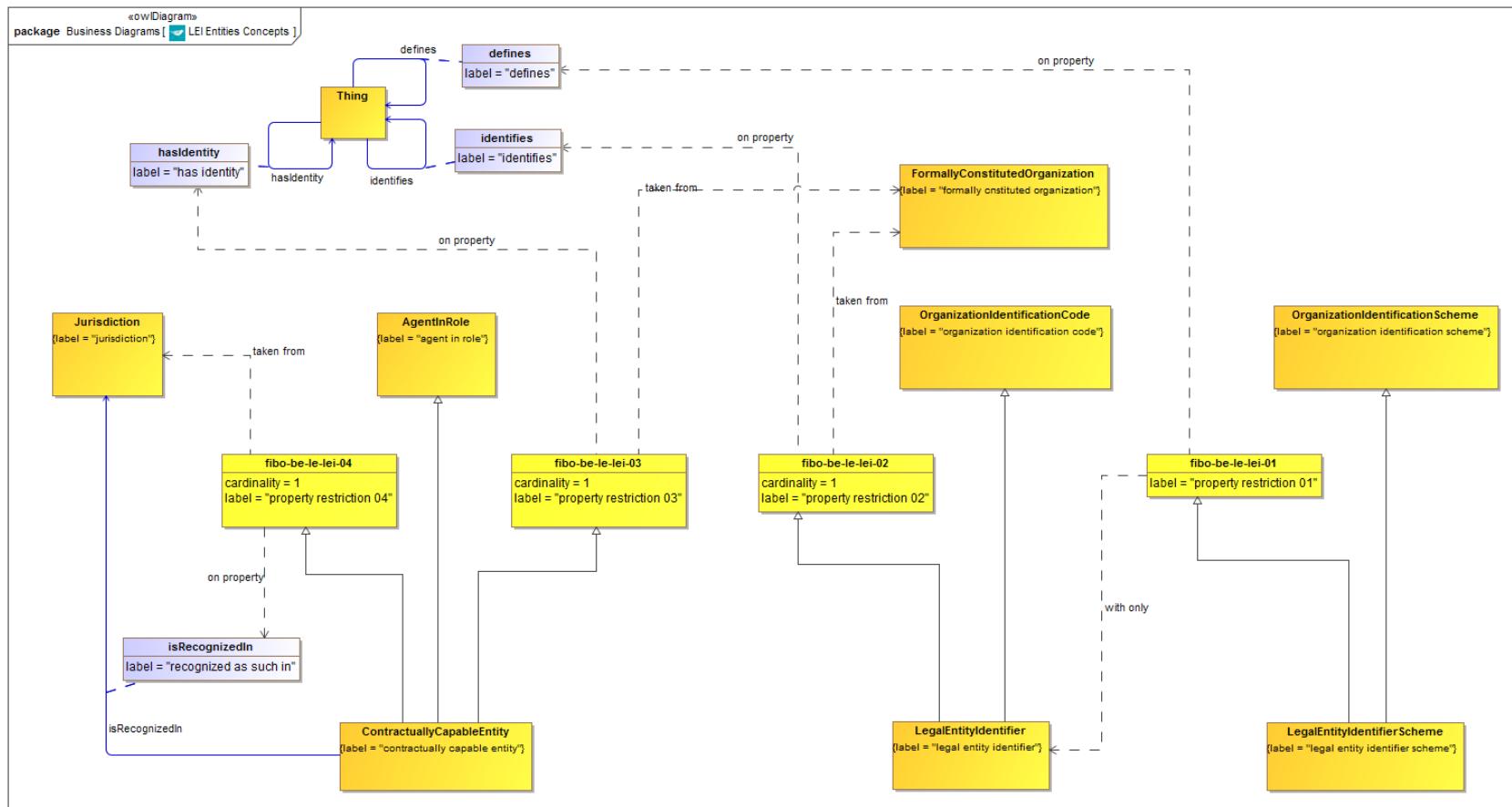
**Taxonomy of LEI Related Concepts**

This is the taxonomy of classes of “Thing” in the LEI Entities ontology along with the more general concepts of which they are a specialization.



**Figure 9.2.4.2 LEI Entities Ontology with Relationship Properties**

Classes of Thing and the properties defined for them in this ontology. Note that other properties exist which are refined and reused by property restrictions, as shown in the complete diagram which follows. These are omitted here for clarity.



**Figure 9.2.4.3 LEI Entities Ontology (full diagram)**

This shows the completed ontology for LEI related concepts. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to LEI and related concepts.

**Table 9-9. LEI Related Entities Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	ContractuallyCapableEnt	contractually capable		A unique entity that is legally or financially	agent in role property								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
	entity	entity		responsible for the performance of financial transactions, or has the legal right in its jurisdiction to enter independently into legal contracts, regardless of whether it is incorporated or constituted in some other way (e.g. trust, partnership, contractual). This excludes natural persons, but includes governmental organizations and supranationals.	restriction 03 property restriction 04								
Relationship Property	isRecognizedIn	contractually capable entity	recognized as such in	The concept of what is considered legal, with respect to a legal entity, is a function of the jurisdiction in which it is recognized.			jurisdiction						
Class	LegalEntityIdentifierScheme	legal entity identifier scheme		The scheme under which the LEI code is defined.	organization identification scheme property restriction 01								
Class	LegalEntityIdentifier	legal entity identifier		A code which uniquely identifies a formal business organization and is allocated to it as a result of it being recognized as being a contractually capable entity (ISO 17442 Legal Entity).	property restriction 02 organization identification code					This is at variance with the name of this identifier type, but is in line with the stated aim of the LEI initiative to which this identification code refers.			
Property Restriction	fibo-be-le-lei-01	property restriction 01	defines	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			legal entity identifier		may only be				
Property Restriction	fibo-be-le-lei-02	property restriction 02	identifies	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			formally constituted organization		exactly 1				
Property Restriction	fibo-be-le-lei-03	property restriction 03	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			formally constituted organization		exactly 1				
Property Restriction	fibo-be-le-lei-04	property restriction 04	recognized as such in	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			jurisdiction		exactly 1				

## 9.3. Module: Corporations

**Table 9-10. Corporations Module Metadata**

Metadata Term	Value
<b>sm:moduleName</b>	Corporations
<b>sm:moduleAbbreviation</b>	FIBO-BE-CORP
<b>sm:moduleVersion</b>	1.0
<b>sm:moduleAbstract</b>	This module includes ontologies describing the essential features of companies incorporated by the issuance of shares. The terms in these ontologies build on terms about incorporated bodies more generally, and include terms about shareholding, which form the basis of relationships of ownership and control of or among these kinds of entities.

### 9.3.1 Ontology: Corporations

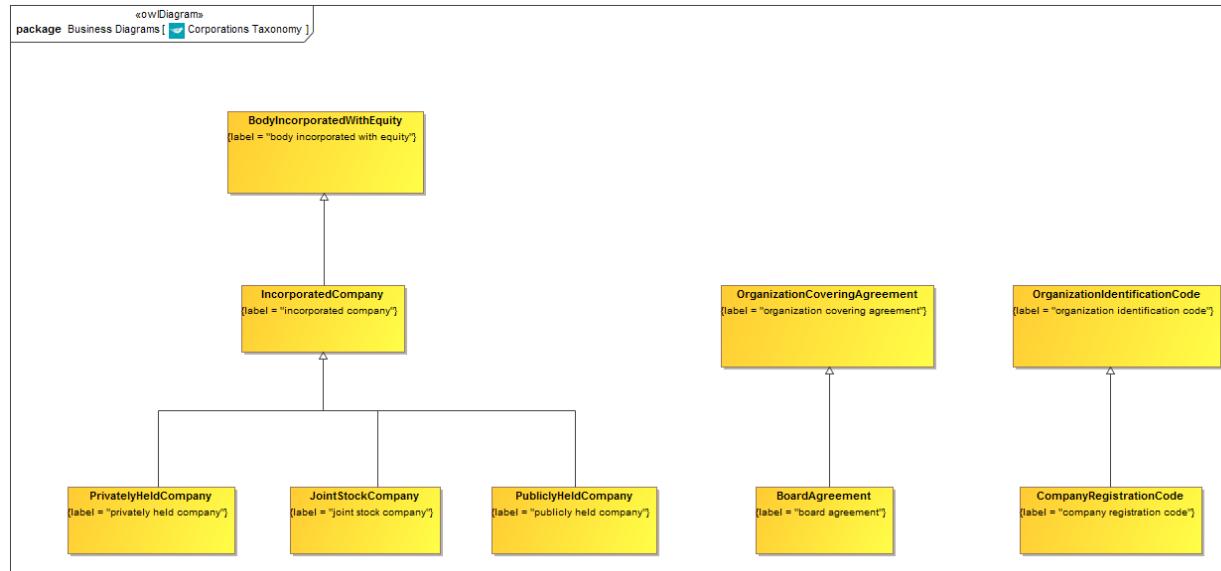
This ontology defines the fundamental concepts for companies incorporated by the issuance of shares. Terms defined in this ontology are those which are applicable to all such entities. Many of these concepts form the basis of the relationships of ownership and control which obtain between entities of this type.

**Table 9-11. Corporations Ontology Metadata**

Metadata Term	Value
<b>sm:filename</b>	Corporations Ontology
<b>sm:fileAbbreviation</b>	fibo-be-corp-corp
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/Corporations/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/Corporations/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/20131101/BusinessEntities/Corporations/">http://www.omg.org/spec/EDMC-FIBO/20131101/BusinessEntities/Corporations/</a>

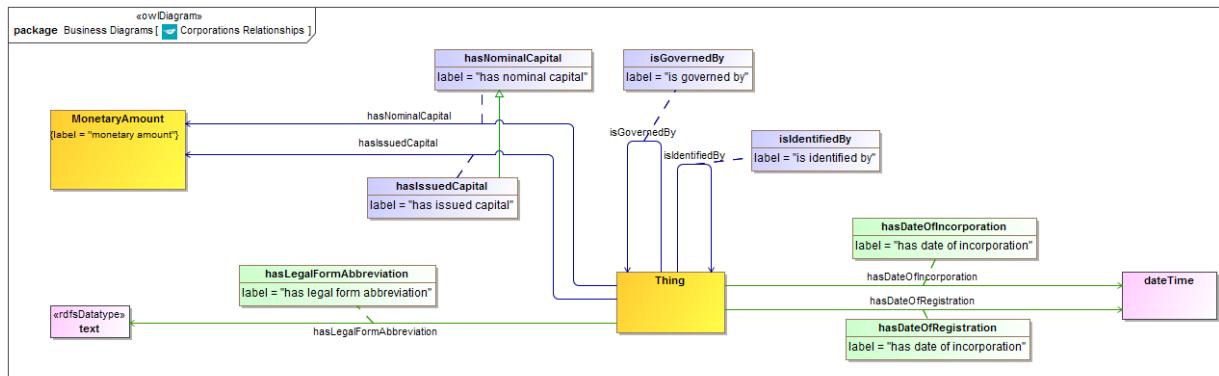
**sm:dependsOn**

- <http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/>
- <http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/>
- <http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/>



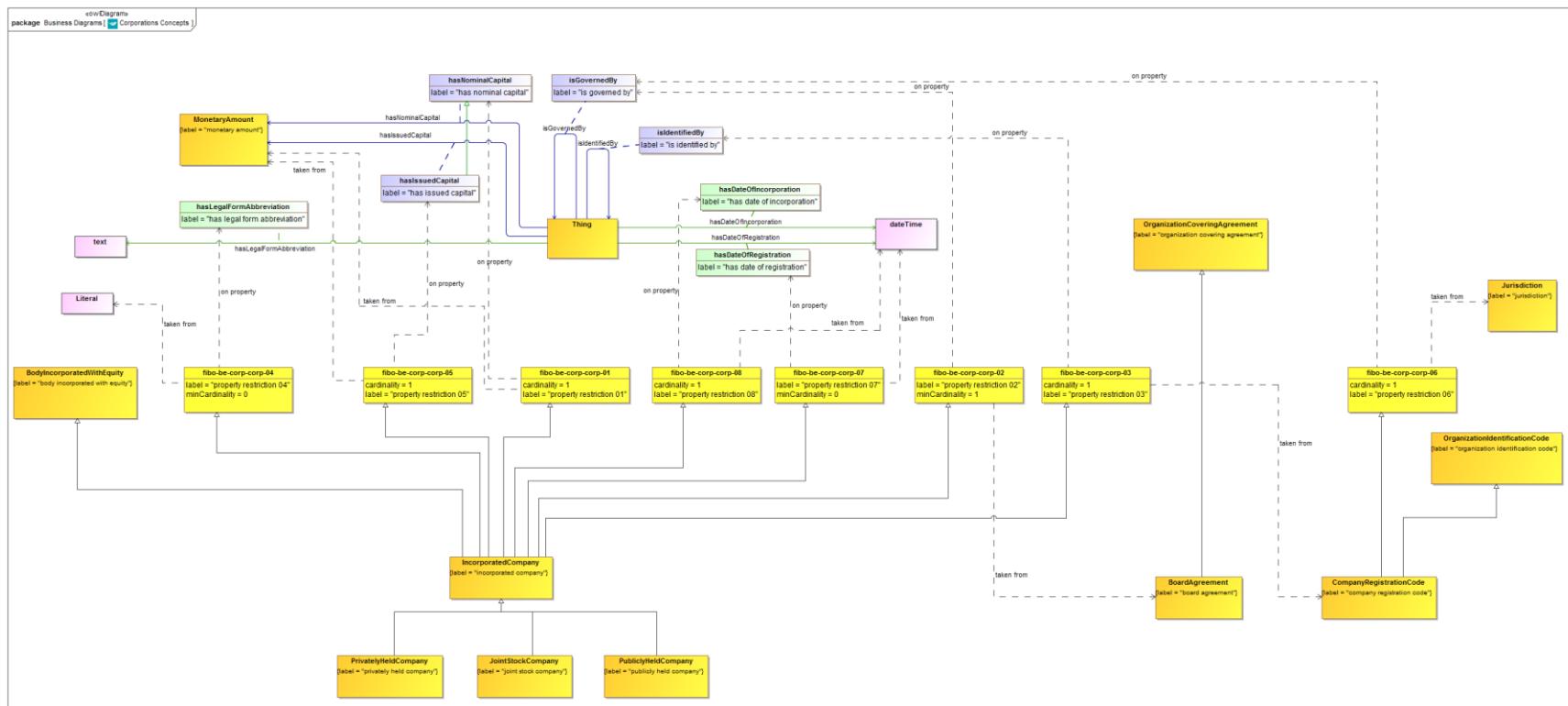
**Figure 9.3.1.1      Corporations Taxonomy**

This is the taxonomy of classes of “Thing” in the Corporations ontology along with the more general concepts of which they are a specialization.



**Figure 9.3.1.2      Corporations Relationship Properties**

These properties are refined and reused by property restrictions, as shown in the complete diagram which follows.



**Figure 9.3.1.3      Corporations Concepts (full diagram)**

This shows the completed ontology for Corporations. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to corporations and their related concepts.

**Table 9-12. Corporations Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Simple Property	hasDateOfRegistration	Anything	has date of incorporation	Date at which the corporation is registered in some jurisdiction for regulatory and / or for tax purposes. Further Notes: This is analogous to a person registering for paying taxes somewhere, regardless of their birth, citizenship and so on.			xsd:dateTime						
Simple Property	hasDateOfIncorporation	Anything	has date of incorporation	The date of formation of the company. This is identified as the formal date of registration in company registration documents. Further Notes: Generally known as Date of Incorporation.			xsd:dateTime						
Relationship Property	hasIssuedCapital	Anything	has issued capital	The total of a companies shares that are held by shareholders. A company can, at any time, issue new shares up to the full amount of authorized share capital.	has nominal capital		monetary amount						
Simple Property	hasLegalFormAbbreviation	Anything	has legal form abbreviation	The precise form of the incorporated company abbreviation as defined in the jurisdiction in which it is registered, for example LLC, LLP, Ltd, PLC, Corp.			text						
Relationship Property	hasNominalCapital	Anything	has nominal capital	Nominal capital is an alternate term for authorized share capital. The maximum value of securities that a company can legally issue. This number is specified in the memorandum of association (or articles of incorporation in the US) when a company is incorporated, but can be changed later with shareholders approval. Authorized share capital may be divided into (1) Issued capital - par value of the shares actually issued, (2) Paid up capital - money received from the shareholders in exchange for shares, and (3) Uncalled capital - money remaining unpaid by the shareholders for the shares they have bought.	has		monetary amount						

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	BoardAgreement	board agreement		The agreement between members of the Board of the Company.	organization covering agreement								
Class	CompanyRegistrationCode	company registration code		A code which is officially allocated under a jurisdiction in which a company is incorporated, and which is used within that jurisdiction to identify the company. This usually has to be included in official stationary and must always be publicly available.	organization identification code property restriction 06								
Class	Incorporated Company	incorporated company		a company incorporated by the issuance of shares	body incorporated with equity property restriction 01 property restriction 02 property restriction 03 property restriction 04 property restriction 05 property restriction 07 property restriction 08								
Class	JointStockCompany	joint stock company		1. In the UK, the original (17th century) name for a corporation in which the liability of the owners is limited to the nominal value of the stock (shares) held by them. 2. In the US, a corporation with unlimited liability for the shareholders. Investors in a US joint stock company receive stock (shares) which can be transferred, and can elect a board of directors, but are jointly-and severally liable for company's debts and obligations. A US joint stock company cannot hold title to a real property.	incorporated company					There are two kinds of joint stock company. The private company kind and the open market. The shares are usually only held by the directors and Company Secretary.			<a href="http://www.businessdictionary.com/definition/joint-stock-company.html">http://www.businessdictionary.com/definition/joint-stock-company.html</a>
Class	PrivatelyHeldCompany	privately held company		A firm whose issued shares are all held by a family or a small group of investors and, therefore, cannot be bought by the public.	incorporated company					Wikipedia: definition for British or Commonwealth version: A private company limited by shares is a type of company incorporated under the laws of			<a href="http://www.businessdictionary.com/definition/closed-corporation.html">http://www.businessdictionary.com/definition/closed-corporation.html</a>

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										England and Wales, Scotland, that of certain Commonwealth countries and the Republic of Ireland. It has shareholders with limited liability and its shares may not be offered to the general public, unlike those of public limited companies. Additional notes from Wikipedia: Limited by shares means that the company has shareholders, and that the liability of the shareholders to creditors of the company is limited to the capital originally invested, i.e. the nominal value of the shares and any premium paid in return for the issue of the shares by the company. A shareholders personal assets are thereby protected in the event of the companys insolvency, but money invested in the company will be lost. A limited company may be private or public. A private limited companys disclosure requirements are lighter, but for this reason its shares may not be offered to the general public (and therefore cannot be traded on a public stock exchange). This			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										is the major distinguishing feature between a private limited company and a public limited company. Most companies, particularly small companies, are private. Private companies limited by shares are required to have the suffix Limited (often written Ltd or Ltd.) or Incorporated (Inc.) as part of their name, though the latter cannot be used in the UK or the Republic of Ireland. In the Republic of Ireland, Tuarant (Teo.) may be used instead, largely by Gaeltacht companies. Cyfngedig (Cyt.) may be used by Welsh companies in a similar fashion.			
Class	PubliclyHeld Company	publicly held company		a company whose shares are traded and held publicly.	incorporated company								
Property Restriction	fibo-be-corp-corp-01	property restriction 01	has nominal capital	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			monetary amount		exactly 1				
Property Restriction	fibo-be-corp-corp-02	property restriction 02	is governed by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			board agreement		min 1				
Property Restriction	fibo-be-corp-corp-03	property restriction 03	is identified by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			company registration code		exactly 1				
Property Restriction	fibo-be-corp-corp-04	property restriction 04	has legal form abbreviation	Set of things that may have the property shown, taken from the type of thing indicated.			literal		min 0				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Property Restriction	fibo-be-corp-corp-05	property restriction 05	has issued capital	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			monetary amount		exactly 1				
Property Restriction	fibo-be-corp-corp-06	property restriction 06	is governed by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			jurisdiction		exactly 1				
Property Restriction	fibo-be-corp-corp-07	property restriction 07	hasDateOfRegistration	Set of things that may have the property shown, taken from the type of thing indicated.			dateTime		min 0				
Property Restriction	fibo-be-corp-corp-08	property restriction 08	has date of incorporation	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			dateTime		exactly 1				

## 9.4. Module: Partnerships

**Table 9-13. Partnerships Module Metadata**

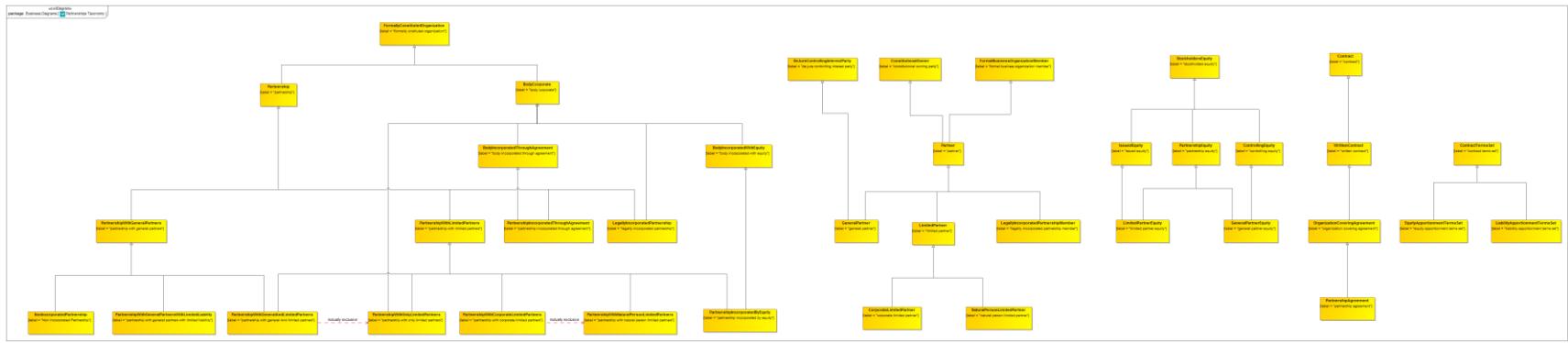
Metadata Term	Value
<b>sm:moduleName</b>	Partnerships
<b>sm:moduleAbbreviation</b>	FIBO-BE-PTR
<b>sm:moduleVersion</b>	1.0
<b>sm:moduleAbstract</b>	This module contains ontologies that define concepts relating to types of partnerships, including incorporated and non-incorporated organizations. Partnerships are defined without reference to jurisdiction-specific legal forms. The abstractions distinguish between types of partnerships and related formation characteristics, as well as kinds of partners and types of partnership equity.

#### 9.4.1 Ontology: Partnerships

This ontology defines partnerships and related concepts. The concepts distinguish general from limited partners, as well as the types of equity that they hold. Included are abstract definitions of partnership types based on whether they have general, limited or both kinds of partners. Both legally incorporated and non incorporated forms of partnerships are covered.

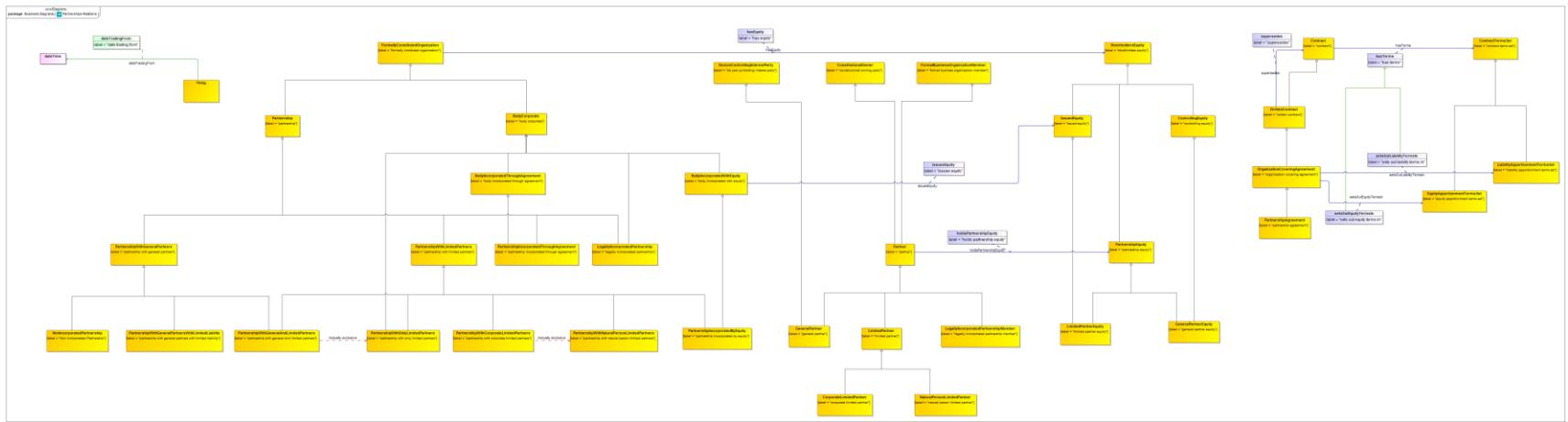
**Table 9-14. Partnerships Ontology Metadata**

Metadata Term	Value
<b>sm:filename</b>	Partnerships Ontology
<b>sm:fileAbbreviation</b>	fibo-be-ptr-ptr
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/Partnerships/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/Partnerships/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/Partnerships/20131101">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/Partnerships/20131101</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/FormalBusinessOrganizations/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/CorporateBodies/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/LEIEntities/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/LEIEntities/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/OwnershipAndControl/OwnershipParties/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/OwnershipAndControl/ControlParties/">http://www.omg.org/spec/EDMC-FIBO/BusinessEntities/OwnershipAndControl/ControlParties/</a>



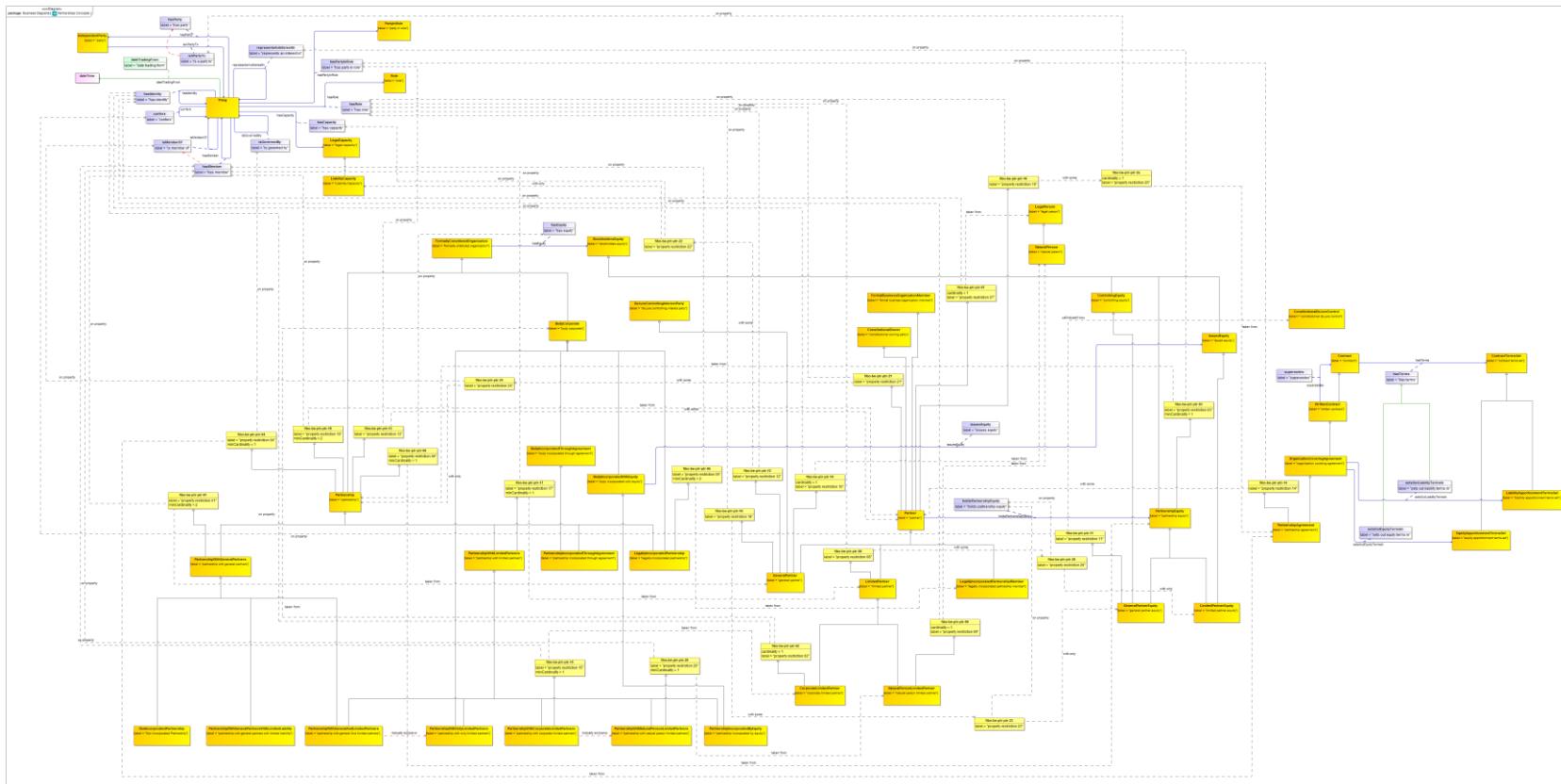
**Figure 9.4.1.1      Partnerships Taxonomy**

This is the taxonomy of classes of “Thing” in the Partnerships ontology along with the more general concepts of which they are a specialization.



**Figure 9.4.1.2      Partnerships Relationship Properties**

These properties are refined and reused by property restrictions, as shown in the complete diagram which follows.



**Figure 9.4.1.3      Partnerships Ontology (full diagram)**

This shows the completed ontology for Partnerships. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to Partnerships and their related concepts.

**Table 9-15. Partnerships Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Simple Property	dateTradingFrom	Anything	date trading from	date on which the partnership started trading			xsd:dateTime						
Relationship Property	setsOutEquityTermsIn	organization covering agreement	sets out equity terms in	has terms setting out the apportionment of equity in some formal business organization	has terms		equity apportionment terms set						

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Relationship Property	setsOutLiabilityTermsIn	organization covering agreement	sets out liability terms in	has terms setting out the apportionment of liabilities for debts or other liabilities accrued by some formal business organization	has terms		liability apportionment terms set						
Class	CorporateLimitedPartner	corporate limited partner		A limited partner in a partnership, who is and may only be a Corporate Legal Person (i.e., not a natural person)	property restriction 02 limited partner								
Class	EquityApportionmentTermsSet	equity apportionment terms set		Terms setting out the apportionment of equity in some formal business organization.	contract terms set								
Class	GeneralPartnerEquity	general partner equity		Equity in a partnership held by general partners; this is typically accompanied by full liability capability on the part of the holders of the equity.	controlling equity property restriction 11 partnership equity					For a typical non incorporated partnership, this is the only equity in the entity. Other typically incorporated partnerships may have additional limited equity in addition to or instead of this.			
Class	GeneralPartner	general partner		a partner in a partnership, who holds some part of the general partner equity and typically is jointly and severally liable with the other partners for the liabilities incurred by that partnership	property restriction 10 property restriction 12 partner de jure controlling interest party property restriction 18								
Class	LegallyIncorporatedPartnershipMember	legally incorporated partnership member		A party which is a member or partner in a Legally Incorporated Partnership such as an LLC or LLP.	partner								
Class	LegallyIncorporatedPartnership	legally incorporated partnership		Any partnership which is defined as a legal person within a given jurisdiction, for example a limited liability partnership (if that is a legal person).	property restriction 05 body corporate partnership					The precise details and definition of these may vary from one jurisdiction to another. This type of entity is defined by being a legal person in its own right, as distinct from the usual type of partnership where the partners remain jointly and severally liable for debts.			
Class	LiabilityApportionmentTermsSet	liability apportionment terms set		Terms setting out the apportionment of liabilities for debts or other liabilities	contract terms set								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				accrued by some formal business organization.									
Class	LimitedPartnerEquity	limited partner equity		equity in a partnership held by limited partners; this is not accompanied by any liability capability on the part of the holders of this equity.	partnership equity issued equity								
Class	LimitedPartner	limited partner		A partner in a partnership whose liabilities are limited to the extent of their equity holding or guarantees	property restriction 08 partner								
Class	NaturalPersonLimitedPartner	natural person limited partner		A limited partner in a partnership, who is and may only be a Natural Person i.e. a human being.	property restriction 09 limited partner								
Class	NonIncorporatedPartnership	Non Incorporated Partnership		A partnership in the usual sense of the term, that is a partnership in which the partners are jointly and severally liable for liabilities incurred by the entity.	partnership with general partners								
Class	Partner	partner		Individual who is a member of a partnership.	property restriction 07 formal business organization member property restriction 16 constitutional owning party property restriction 21								<a href="http://www.investorwords.com/3608/partner.html">http://www.investorwords.com/3608/partner.html</a>
Relationship Property	holdsPartnershipEquity	partner	holds partnership equity	the equity held by the partner in the partnership	owns		partnership equity						
Class	Partnership Agreement	partnership agreement		a document setting up a partnership, giving the details of the business and the amount each partner is contributing to it.	property restriction 14 organization covering agreement								<a href="http://www.investorguide.com/definition/partnership-agreement.html">http://www.investorguide.com/definition/partnership-agreement.html</a>
Class	Partnership Equity	partnership equity		Equity in some Partnership.	property restriction 03 stockholders equity								
Class	PartnershipIncorporatedByEquity	partnership incorporated by equity		partnership which is incorporated by the issuance of equity	body incorporated with equity partnership with limited partners								
Class	PartnershipIncorporatedThroughAgreement	partnership incorporated through agreement		a partnership which has legal personhood, but for which there is not some issuance of limited partner equity	partnership body incorporated through agreement					An LLP (in the UK) is an example of this - in this case, the LLP document is the legal document which			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										effectively constitutes the partnership			
Class	Partnership WithCorporateLimitedPartners	partnership with corporate limited partners		A partnership with limited partners (partners whose liability is limited) and where those partners are necessarily non natural persons (i.e. cannot be individuals).	partnership with limited partners property restriction 15	partnership with natural person limited partners							
Class	Partnership WithGeneral AndLimited Partners	partnership with general And limited partners		A partnership having both limited partners and general partners.	partnership with limited partners partnership with general partners	partnership with only limited partners							
Class	Partnership WithGeneral PartnersWithLimitedLiability	partnership with general partners with limited liability		A partnership that has general partners, but where those general partners have limited liability.	partnership with general partners								
Class	Partnership WithGeneral Partners	partnership with general partners		A partnership which has two or more General Partners.	property restriction 01 partnership					The partnership may or may not also have Limited Partners. In a typical non incorporated partnership, it does not. General Partners of a partnership must be natural persons.			
Class	Partnership WithLimited Partners	partnership with limited partners		A partnership having Limited Partners, that is partners whose liabilities are limited to the extent of their equity or guarantees.	partnership property restriction 17					Possibly but not necessarily a Legal Person. If there are only Limited Partners then this is of necessity a Legal Person (no-one else has liability in this structure).			
Class	Partnership WithNatural PersonLimitedPartners	partnership with natural person limited partners		A partnership with limited partners (partners whose liability is limited) and where those partners are necessarily natural persons (i.e. cannot be corporates).	partnership with limited partners property restriction 20	partnership with corporate limited partners							
Class	Partnership WithOnlyLimitedPartners	partnership with only limited partners		A Partnership having limited partners but no general partners.	partnership with limited partners body corporate	partnership with general And limited partners							
Class	Partnership	partnership		Venture in which two or more legal entities carry out some business activities under a common identity.	property restriction 04 property restriction 06 property restriction 13 formally					If the partnership doesn't limit the liability of the partners then the party to the contract is a natural person. If			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				constituted organization property restriction 19						it does, then it's an artificial legal person (Body Corporate) - see Legally Incorporated Partnerships. Scope Note: This term of Partnership in the most general sense is ancestral to both of those.			
Property Restriction	fib0-be-ptr-ptr-01	property restriction 01	has member	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			general partner		min 2				
Property Restriction	fib0-be-ptr-ptr-02	property restriction 02	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			body corporate		exactly 1				
Property Restriction	fib0-be-ptr-ptr-03	property restriction 03	represents an interest in	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			partnership		min 1				
Property Restriction	fib0-be-ptr-ptr-04	property restriction 04	is governed by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			partnership agreement		min 1				
Property Restriction	fib0-be-ptr-ptr-05	property restriction 05	has member	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			legally incorporated partnership member		min 2				
Property Restriction	fib0-be-ptr-ptr-06	property restriction 06	has equity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			partnership equity		min 1				
Property Restriction	fib0-be-ptr-ptr-07	property restriction 07	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			legal person		exactly 1				
Property Restriction	fib0-be-ptr-ptr-08	property restriction 08	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 26		must be some				
Property Restriction	fib0-be-ptr-ptr-09	property restriction 09	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			natural person		exactly 1				
Property Restriction	fib0-be-ptr-ptr-10	property restriction 10	has identity	Set of things that have the property shown, in the			natural person		exactly 1				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				multiples given, taken from the type of thing indicated.									
Property Restriction	fib0-be-ptr-ptr-11	property restriction 11	confers	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			constitutional de jure control		may only be				
Property Restriction	fib0-be-ptr-ptr-12	property restriction 12	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 22		must be some				
Property Restriction	fib0-be-ptr-ptr-13	property restriction 13	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			partner		must be some				
Property Restriction	fib0-be-ptr-ptr-14	property restriction 14	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			partner		must be some				
Property Restriction	fib0-be-ptr-ptr-15	property restriction 15	has member	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			corporate limited partner		min 1				
Property Restriction	fib0-be-ptr-ptr-16	property restriction 16	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 25		must be some				
Property Restriction	fib0-be-ptr-ptr-17	property restriction 17	has member	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			limited partner		min 1				
Property Restriction	fib0-be-ptr-ptr-18	property restriction 18	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 23		must be some				
Property Restriction	fib0-be-ptr-ptr-19	property restriction 19	has member	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			partner		min 2				
Property Restriction	fib0-be-ptr-ptr-20	property restriction 20	has member	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			natural person limited partner		min 1				
Property Restriction	fib0-be-ptr-ptr-21	property restriction 21	has role	Set of things with the property shown, where at			property restriction 24		must be some				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				least one participant in that relationship must be taken from the type of thing indicated.									
Property Restriction	fib0-be-ptr-ptr-22	property restriction 22	has capacity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			Liability Capacity		may only be				
Property Restriction	fib0-be-ptr-ptr-23	property restriction 23	holds partnership equity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			general partner equity		may only be				
Property Restriction	fib0-be-ptr-ptr-24	property restriction 24	is member of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			partnership		may only be				
Property Restriction	fib0-be-ptr-ptr-25	property restriction 25	is a party to	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			partnership agreement		exactly 1				
Property Restriction	fib0-be-ptr-ptr-26	property restriction 26	holds partnership equity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			limited partner equity		may only be				

## 9.5 Module: Trusts

**Table 9-16. Trusts Module Metadata**

Metadata Term	Value
<code>sm:moduleName</code>	Trusts
<code>sm:moduleAbbreviation</code>	FIBO-BE-TR
<code>sm:moduleVersion</code>	1.0
<code>sm:moduleAbstract</code>	This module contains ontologies which define types of trust and the facts about them. Trusts are defined as a kind of formally constituted organization with specific parties as set down in law for trusts (trustor, trustee and beneficiary), each of these being signatories to a trust agreement. Types of trusts include trusts as used for trust funds, which when modeled, will belong in this module.
	It depends on and extends a number of the FIBO Foundations modules, particularly those describing formal organizations, ownership, and control relationships, and therefore on the ontologies that they depend on, either directly or indirectly.

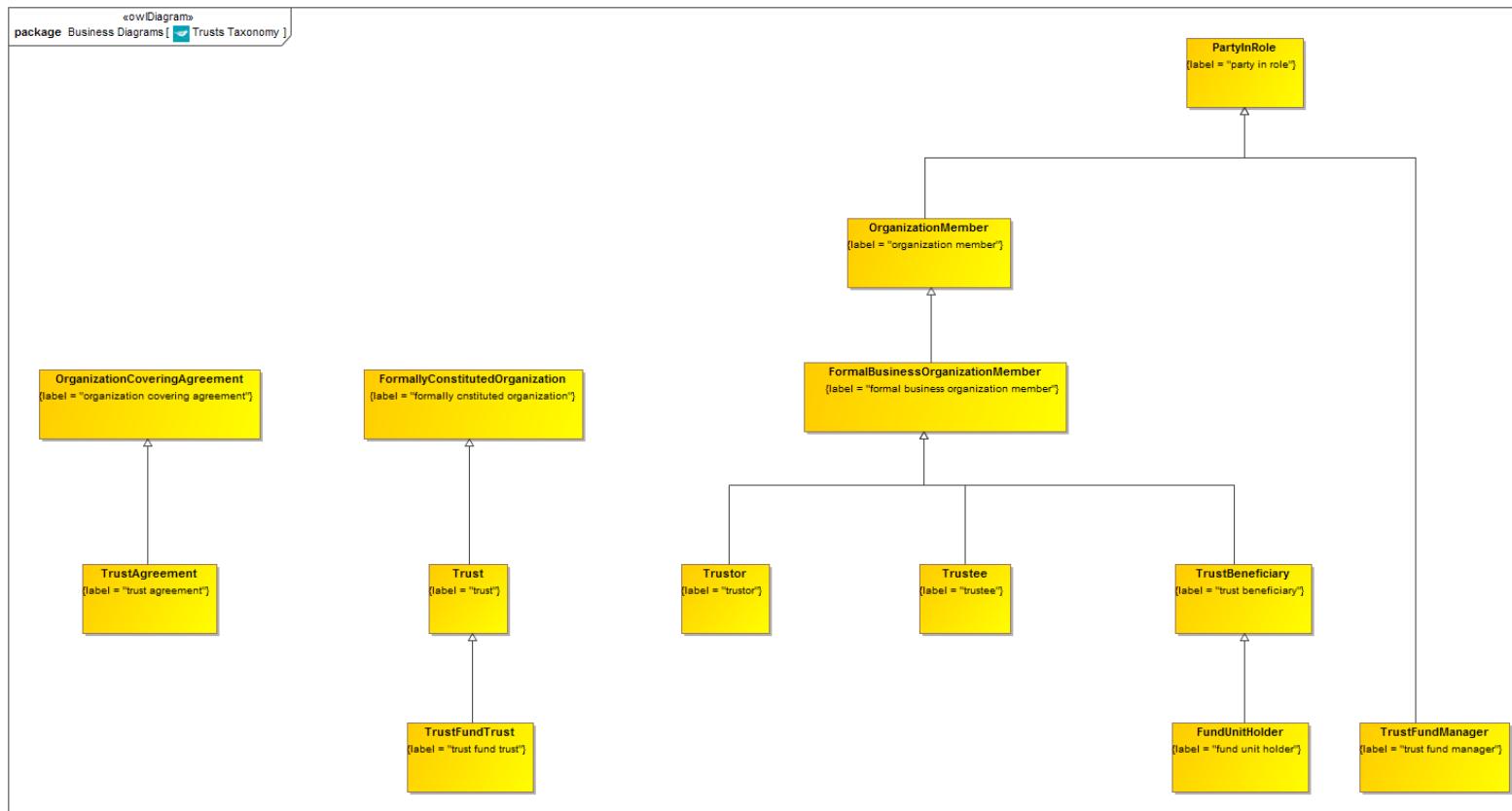
### 9.5.1 Ontology: Trusts

This ontology defines the fundamental common terms for trusts. Trusts are entities set up in terms of the applicable local statutes governing trusts, and have as a minimum three specific, defined parties, known in many jurisdictions as trustor (sometimes sponsor), trustee and beneficiary. The terms in this ontology may be extended as necessary to represent specific types of trust, for example in the funds arena.

**Table 9-17. Trusts Ontology Metadata**

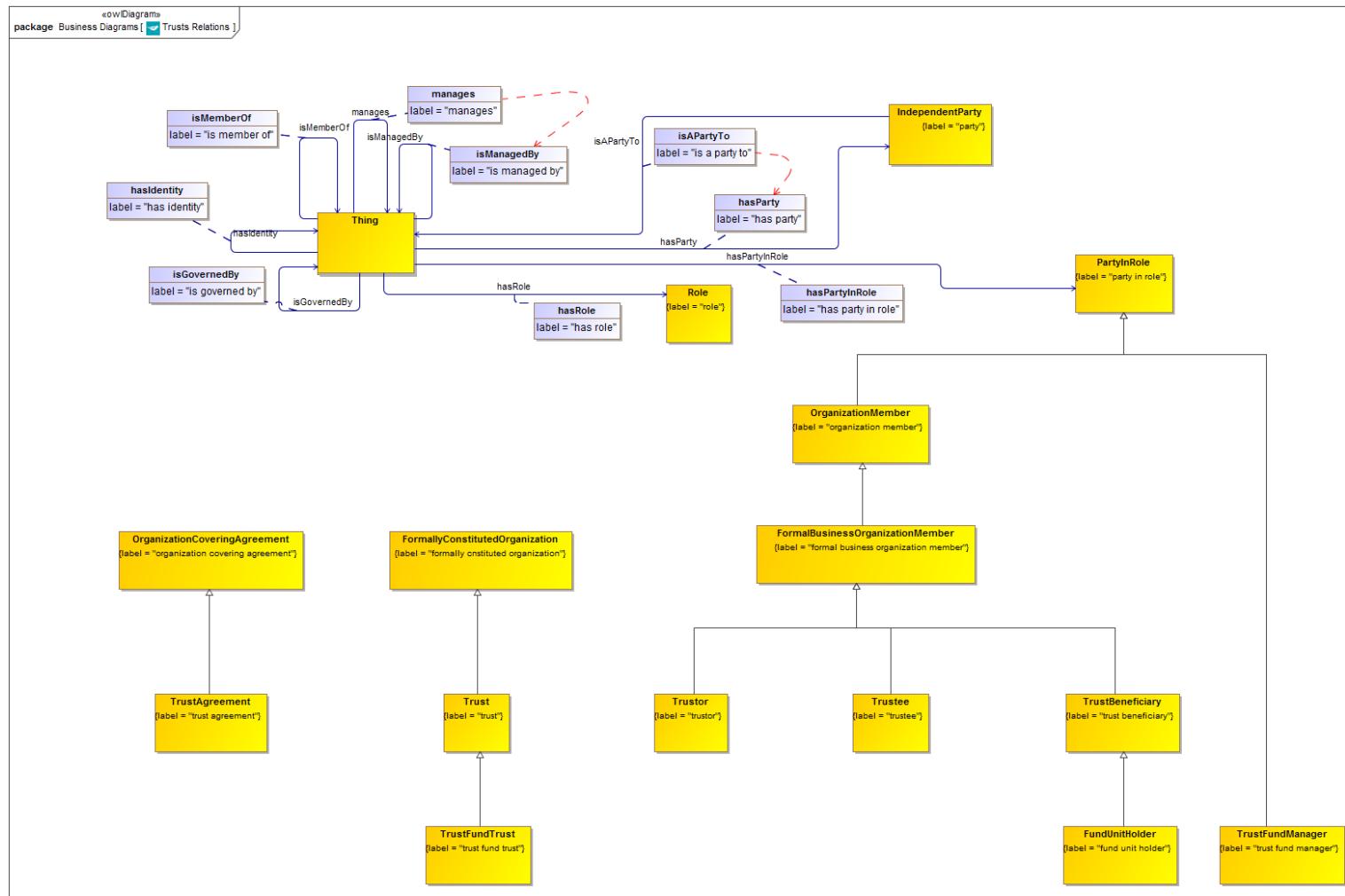
Metadata Term	Value
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<b>sm:filename</b>	Trusts Ontology
<b>sm:fileAbbreviation</b>	fibo-be-tr-tr
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/Trusts/Trusts/">http://www.omg.org/spec/EDMC-FIBO/BE/Trusts/Trusts/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/Trusts/Trusts/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/Trusts/Trusts/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/</a>



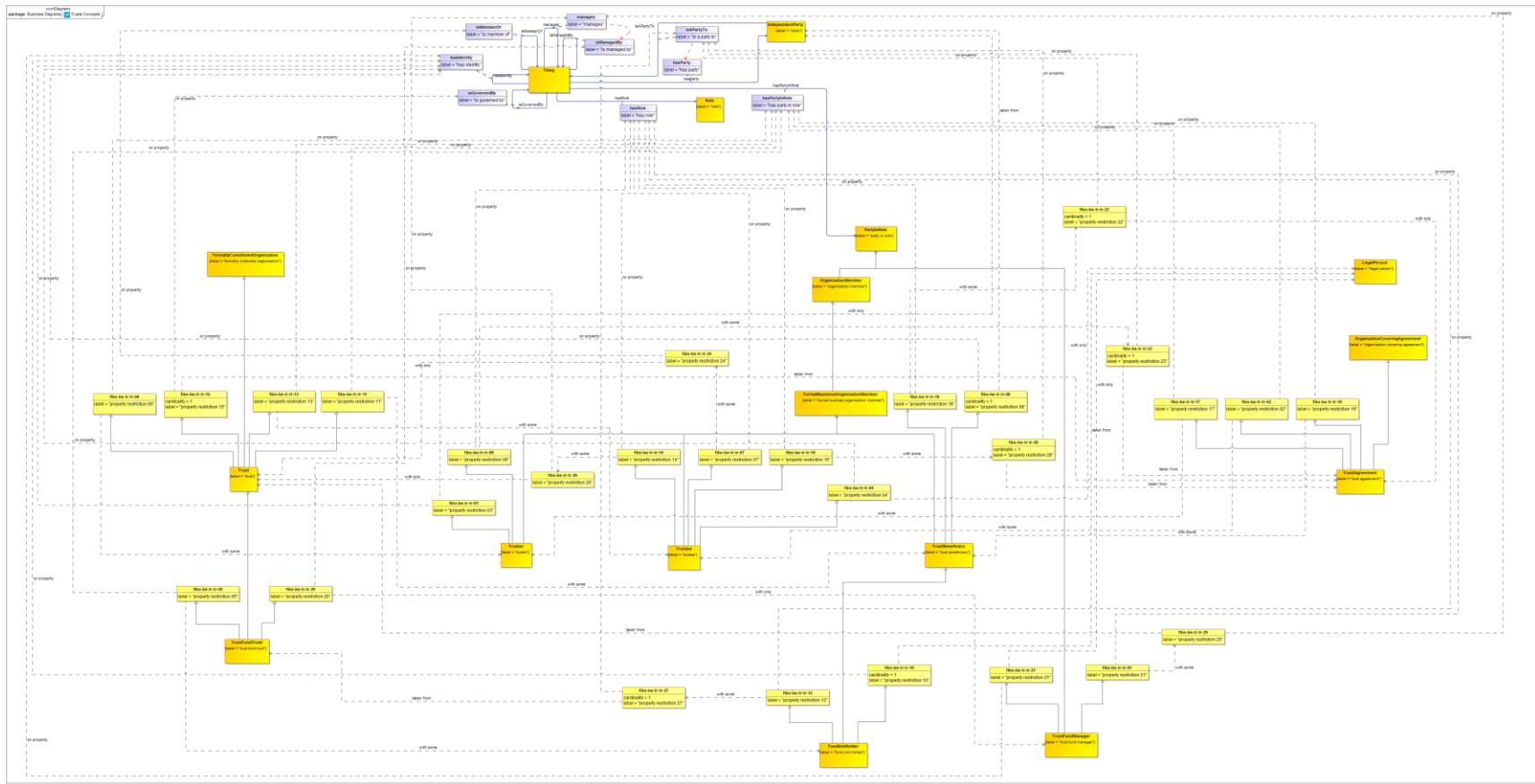
**Figure 9.5.1.1      Trusts Taxonomy**

This is the taxonomy of classes of “Thing” in the Trusts ontology along with the more general concepts of which they are a specialization.



**Figure 9.5.1.2      Trusts with Relationship Properties**

Properties in from elsewhere in these ontologies, which are refined and reused by property restrictions, as shown in the complete diagram which follows. There are no new relationships introduced in this ontology.



**Figure 9.5.1.3      Trusts Ontology (full diagram)**

This shows the completed ontology for Trusts. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to Trusts and their related concepts.

**Table 9-18. Trusts Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				property restriction 12									
Class	TrustAgreement	trust agreement		Formal agreement through which a trustor vests the ownership rights (title) to one or more assets to one or more trustees for conservation and protection on behalf of one or more beneficiaries of the trust. It normally states the (1) purpose for which the trust was established and fulfillment of which will terminate the trust, (2) details of the assets placed in the trust, (3) powers and limitations of the trustees, their reporting requirements, and other associated provisions, and (4) may also specify the trustees' compensation, if any. A trust agreement involving real estate requires its exact description and the trustor's express, written consent to create the trust to be valid. A will admitted to probate may also act like a trust agreement.	property restriction 02 organization covering agreement property restriction 17 property restriction 19					See also Deed. These are distinct from Contracts in that they impose obligations but without necessarily reciprocating rights.			<a href="http://www.businessdictionary.com/definition/trust-agreement.html">http://www.businessdictionary.com/definition/trust-agreement.html</a>
Class	TrustBeneficiary	trust beneficiary		Person or organization for whose present or future interest (benefit) an annuity, assignment (such as a letter of credit), contract, insurance policy, judgment, promise, trust, will, etc., is made	property restriction 08 property restriction 18 formal business organization member								<a href="http://www.businessdictionary.com/definition/beneficiary.html">http://www.businessdictionary.com/definition/beneficiary.html</a>
Class	TrustFundManager	trust fund manager		A trust fund manager acts on behalf of the Trustee to manage the assets of the Trust.	property restriction 01 party in role property restriction 21								
Class	TrustFundTrust	trust fund trust		A trust which forms the basis for a fund.	property restriction 05 trust property restriction 20					The fund is identified as being a kind of Trust Fund.			
Class	Trust	trust		A fiduciary relationship in which one party, known as a trustor, gives another party, the trustee, the right to hold title to property or assets for the benefit of a third party, the beneficiary.	property restriction 06 property restriction 11 property restriction 13 property restriction 15 formally constituted organization					This is a legal agreement between parties that someone owns, and is thereby an asset that they own. They can be taxed on this as any other asset. There are			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										generally accepted things such as the source of funds that will determine who the revenue agency will go after. Definition reference URL: <a href="http://www.investopedia.com/terms/t/trust.asp">http://www.investopedia.com/terms/t/trust.asp</a>			
Class	Trustee	trustee		An individual or organization which holds or manages and invests assets for the benefit of another. The trustee is legally obliged to make all trust-related decisions with the beneficiary's interests in mind, and may be liable for damages in the event of not doing so. Trustees may be entitled to a payment for their services, if specified in the trust deed. In the specific case of the bond market, a trustee administers a bond issue for a borrower, and ensures that the issuer meets all the terms and conditions associated with the borrowing.	property restriction 04 property restriction 07 property restriction 14 property restriction 16 formal business organization member								<a href="http://www.investorwords.com/5086/trustee.html">http://www.investorwords.com/5086/trustee.html</a>
Class	Trustor	trustor		Entity that establishes a trust and place property under the protection and management of one or more trustees for the immediate or eventual benefit of ascertainable one or more beneficiaries. It is not always necessary to identify the trustor who may be also be a trustee and/or one of the beneficiaries. In legal parlance, a trustor is called a settlor in the UK and a grantor in the US, whereas in common usage he or she may also be called a creator, donor, initiator, owner, or Trust maker.	property restriction 03 formal business organization member property restriction 09								<a href="http://www.businessdictionary.com/definition/trustor.html">http://www.businessdictionary.com/definition/trustor.html</a>
Property Restriction	fibo-be-tr-tr-01	property restriction 01	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 25		must be some				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Property Restriction	fibo-be-tr-tr-02	property restriction 02	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			trustee		must be some				
Property Restriction	fibo-be-tr-tr-03	property restriction 03	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			party		may only be				
Property Restriction	fibo-be-tr-tr-04	property restriction 04	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			legal person		may only be				
Property Restriction	fibo-be-tr-tr-05	property restriction 05	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			fund unit holder		must be some				
Property Restriction	fibo-be-tr-tr-06	property restriction 06	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			trustor		must be some				
Property Restriction	fibo-be-tr-tr-07	property restriction 07	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 24		must be some				
Property Restriction	fibo-be-tr-tr-08	property restriction 08	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			party		exactly 1				
Property Restriction	fibo-be-tr-tr-09	property restriction 09	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 23		must be some				
Property Restriction	fibo-be-tr-tr-10	property restriction 10	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			legal person		exactly 1				
Property Restriction	fibo-be-tr-tr-11	property restriction 11	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			trust beneficiary		must be some				
Property Restriction	fibo-be-tr-tr-12	property restriction 12	has role	Set of things with the property shown, where at least one participant in that			property restriction 27		must be some				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				relationship must be taken from the type of thing indicated.									
Property Restriction	fibo-be-tr-tr-13	property restriction 13	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			trustee		must be some				
Property Restriction	fibo-be-tr-tr-14	property restriction 14	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 26		must be some				
Property Restriction	fibo-be-tr-tr-15	property restriction 15	is governed by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			trust agreement		exactly 1				
Property Restriction	fibo-be-tr-tr-16	property restriction 16	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 28		must be some				
Property Restriction	fibo-be-tr-tr-17	property restriction 17	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			trustor		must be some				
Property Restriction	fibo-be-tr-tr-18	property restriction 18	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 22		must be some				
Property Restriction	fibo-be-tr-tr-19	property restriction 19	has party in role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			trust beneficiary		must be some				
Property Restriction	fibo-be-tr-tr-20	property restriction 20	is managed by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			trust fund manager		may only be				
Property Restriction	fibo-be-tr-tr-21	property restriction 21	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			legal person		may only be				
Property Restriction	fibo-be-tr-tr-22	property restriction 22	is a party to	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			trust agreement		exactly 1				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Property Restriction	fibo-be-tr-tr-23	property restriction 23	is a party to	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			trust agreement		exactly 1				
Property Restriction	fibo-be-tr-tr-24	property restriction 24	is member of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			trust		may only be				
Property Restriction	fibo-be-tr-tr-25	property restriction 25	manages				trust		undefined				
Property Restriction	fibo-be-tr-tr-26	property restriction 26	manages	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			trust		may only be				
Property Restriction	fibo-be-tr-tr-27	property restriction 27	is a party to	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			trust fund trust		exactly 1				
Property Restriction	fibo-be-tr-tr-28	property restriction 28	is a party to	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			trust agreement		exactly 1				

## 9.6. Module: Ownership and Control

*Table 9-19. Ownership and Control Module Metadata*

Metadata Term	Value
<b>sm:moduleName</b>	Ownership and Control
<b>sm:moduleAbbreviation</b>	FIBO-BE-OAC
<b>sm:moduleVersion</b>	1.0
<b>sm:moduleAbstract</b>	This module contains ontologies that define various types and aspects of ownership and control as they apply among and between business entities. The ontologies in this module include the definition of

types of party as defined in the roles of ownership and control along with the capacities which define those parties, and separately the relationships of ownership and control directly between organizations, which arise from the existence of those roles. Specific types of ownership and control relationships that are unique to incorporated companies are defined in addition to the more general terms to which these relate. Also included is an ontology of the types of control relationships that exist by virtue of the powers conferred upon corporate officers, board members and other executive roles.

### 9.6.1 Ontology: Ownership Parties

This ontology defines concepts relating to types of organization owning parties. The concepts defined here are party in role concepts, which define the nature of some entity such as an organization or a legal person, in some role such as that of owning equity in the entity. These roles are defined in terms of the ownership enjoyed by the party, with distinctions between constitutional ownership i.e. ownership defined in terms of stockholder equity, and investment ownership more generally.

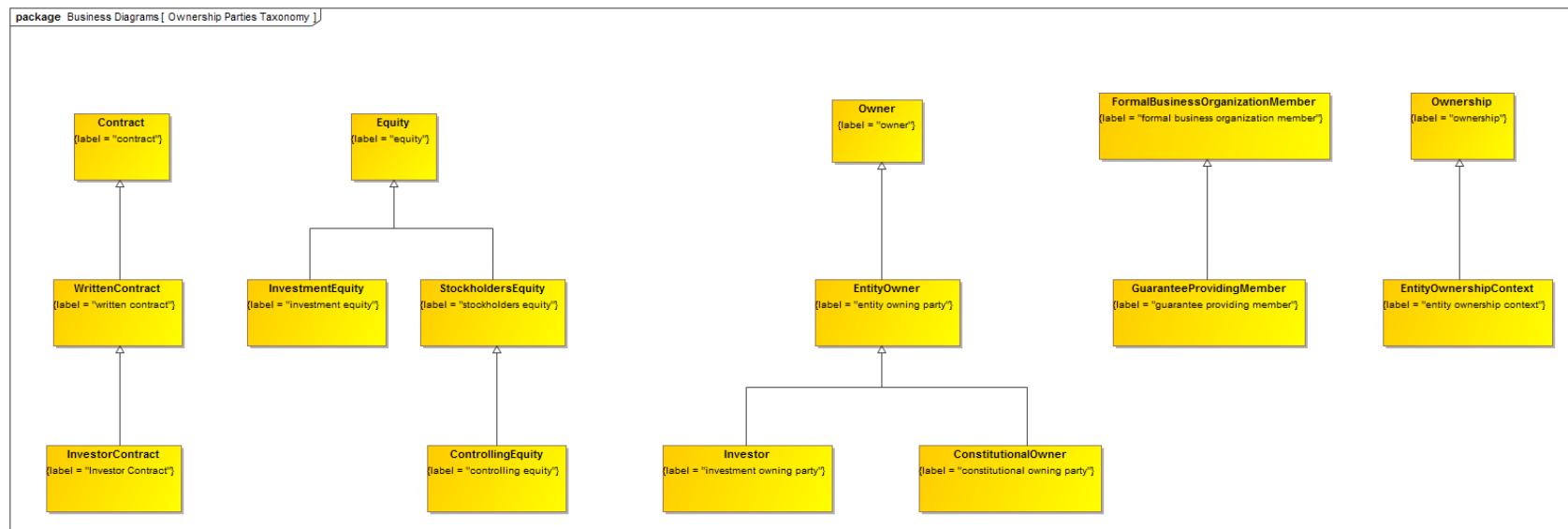
**Table 9-20. Ownership Parties Ontology Metadata**

Metadata Term	Value
<b>sm:filename</b>	Ownership Parties Ontology
<b>sm:fileAbbreviation</b>	fibo-be-oac-opty
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/OwnershipParties/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/</a>

FIBO/BE/LegalEntities/FormalBusinessOrganizations/

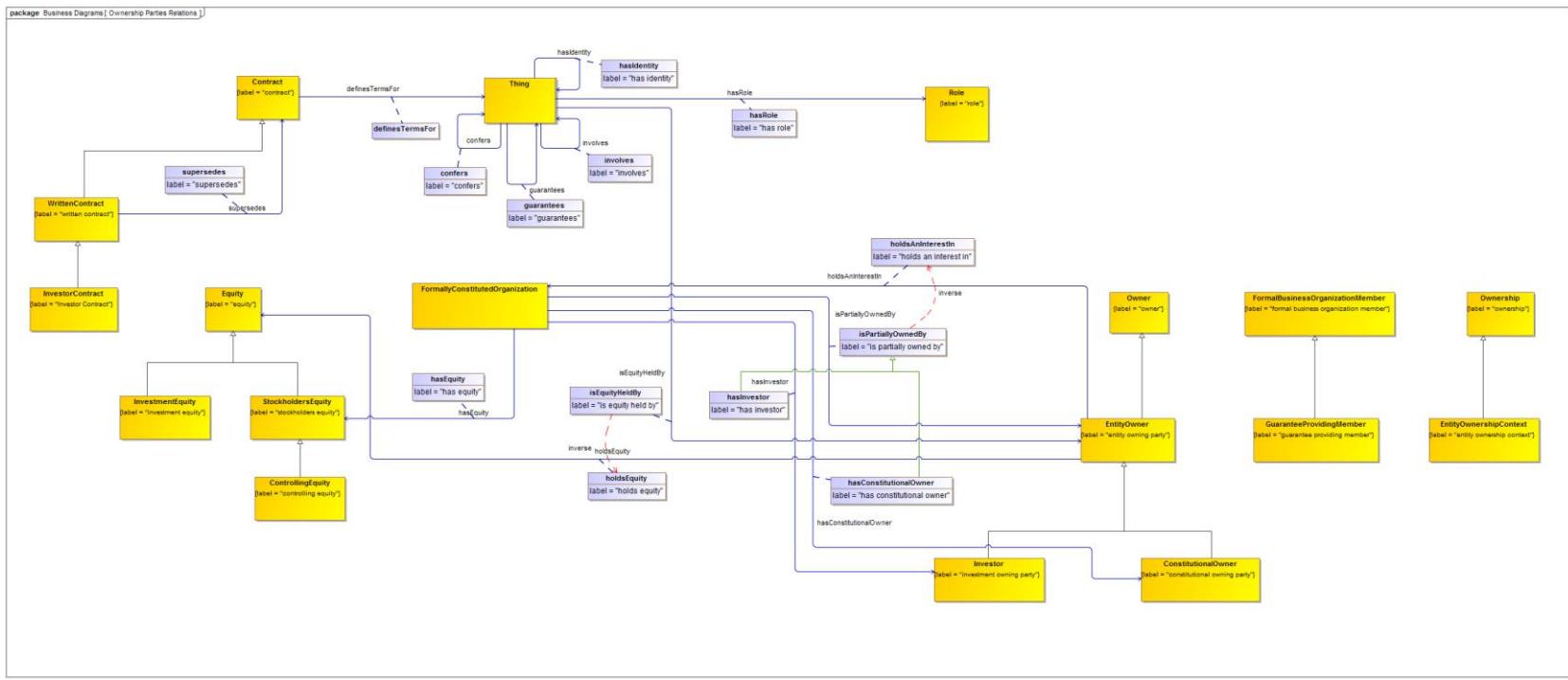
<http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/>

<http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/>



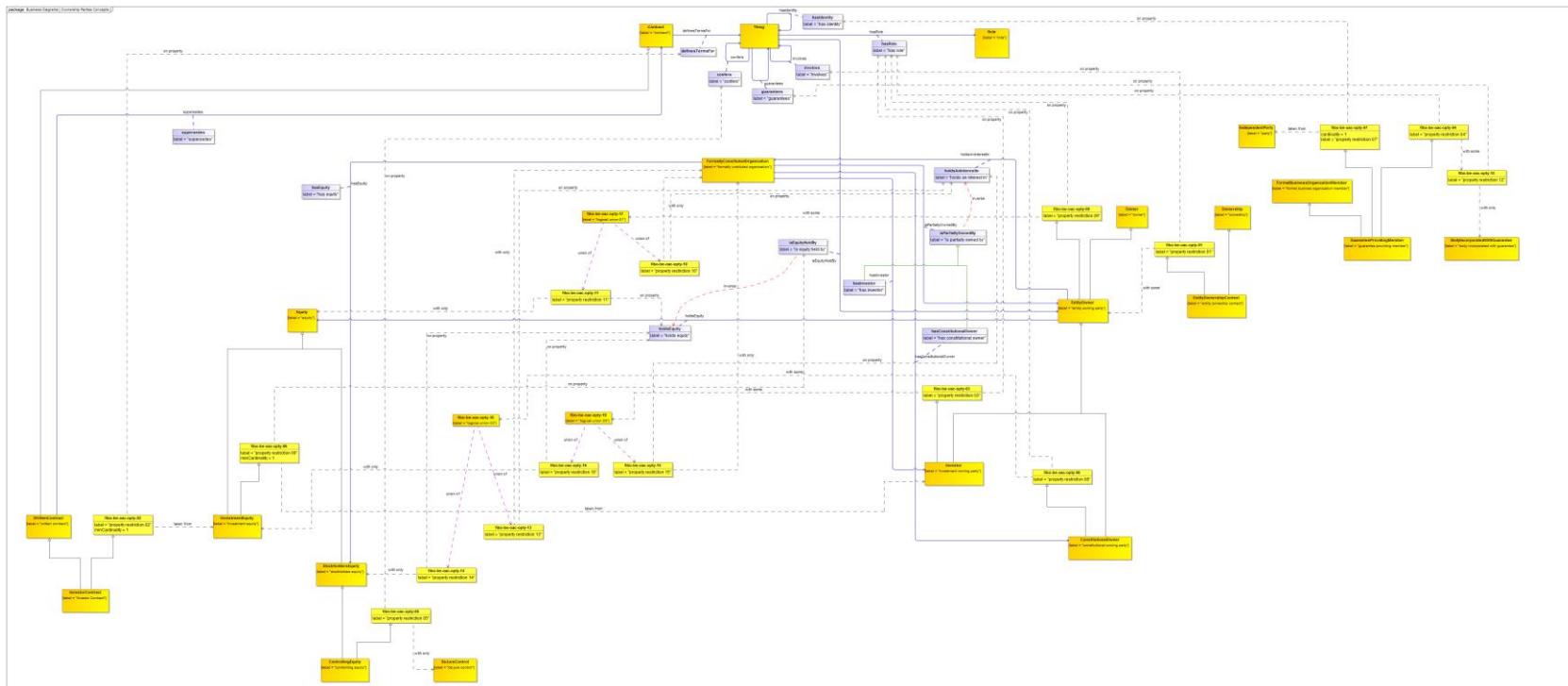
**Figure 9.6.1.1      Ownership Parties Taxonomy**

This is the taxonomy of classes of “Thing” in the Ownership Parties ontology along with the more general concepts of which they are a specialization.



**Figure 9.6.1.2      Ownership Parties with Relationship Properties**

Properties in this ontology and elsewhere which are refined and reused by property restrictions, as shown in the complete diagram which follows.



**Figure 9.6.1.3      Ownership Parties Ontology (full diagram)**

This shows the completed ontology for Ownership Parties. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to Ownership Parties and their related concepts.

**Table 9-21. Ownership Parties Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Relationship Property	guarantees	Anything	guarantees	provide a formal assurance or promise, esp. that certain conditions shall be fulfilled relating to a product, service, or transaction									
Relationship Property	hasConstitutionalOwner	Anything	has constitutional owner	links a constitutional interest/position in something (e.g., a formal business organization) to the party that holds or owns it, in whole or in part	is partially owned by		constitutional owning party						

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Relationship Property	hasInvestor	Anything	has investor	links an investment interest in something (e.g., a formal business organization) to the party that holds or owns it, in whole or in part	is partially owned by		investment owning party						
Relationship Property	isEquityHeldBy	Anything	is equity held by	links some equity to the party that holds it	is owned by		entity owning party	holds equity					
Relationship Property	isPartiallyOwnedBy	Anything	is partially owned by	links an interest/position in something (e.g., a formal business organization) to the party that holds or owns it, in whole or in part	is owned by		entity owning party	holds an interest in					
Class	ConstitutionalOwner	constitutional owning party		A party which owns some equity stake in some entity, which is some part of the formal equity make-up of that entity, such as shares or general partner equity. Some party which has some degree of ownership in the organization, that ownership being reflected in some formal part of the constitutive documentation of the organization.	entity owning party property restriction 08					Typically this would be share ownership or the holding of partnership equity. Ownership in this "constitutional" sense means that the owner is in some way a member of the organization, as distinct from some outside investor.			
Class	ControllingEquity	controlling equity		Equity which brings with it some form of de jure control over the entity in which it represents an interest.	stockholders equity property restriction 05								
Class	EntityOwnershipContext	entity ownership context		the context of ownership by some party of an interest in some formal organization.	property restriction 01 ownership								
Class	EntityOwner	entity owning party		A party having some ownership in some entity.	owner property restriction 09					This is not the same meaning as being some owner of some asset. Rather, this is some party which partakes in the ownership of some kind of entity (a business entity or a legal entity for example) via some mechanism such as the ownership of equity in that entity.			
Relationship Property	holdsAnInterestIn	entity owning party	holds an interest in	links a party to some organization it holds an interest in	owns		formally constituted organization	is partially owned by					
Relationship Property	holdsEquity	entity owning party	holds equity	links a party to some equity it holds	owns		equity	is equity held by					

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	GuaranteeProvidingMember	guarantee providing member		An entity which has issued some Guarantee for a body incorporated by the issuance of Guarantees.	property restriction 04 property restriction 07 formal business organization member					This can be any contractually capable entity.			
Class	InvestmentEquity	investment equity		Equity which represents investment in some entity, but may or may not take the form of stockholders equity.	equity property restriction 06					Typically an investment in some entity may take the form of shares (issued or privately held), stockholders equity (e.g., partnership equity), or it may take the form of some capital amount which is not reflected in stockholders equity. In each case, there would typically be a contractual basis for the investment setting out what controls or other benefits accrue to the investor.			
Class	Investor	investment owning party		A party which owns some stake in some organization by way of investment.	entity owning party property restriction 03					This is regardless of whether or not the investor is also a constitutional owner (e.g. shareholder) in the entity.			
Class	InvestorContract	Investor Contract		Contract setting out the terms under which some investor invests in the entity and setting out the rights which are conferred on that investor.	written contract property restriction 02								
Logical Union	fibo-be-oac-opty-17	logical union 01	union of	Logical union of the types of thing identified in the column "Related Thing or Type".				property restriction 10 property restriction 11					
Logical Union	fibo-be-oac-opty-18	logical union 02	union of	Logical union of the types of thing identified in the column "Related Thing or Type".				property restriction 13 property restriction 14					
Logical Union	fibo-be-oac-opty-19	logical union 03	union of	Logical union of the types of thing identified in the column "Related Thing or Type".				property restriction 15 property restriction 16					
Property Restriction	fibo-be-oac-opty-01	property restriction 01	involves	Set of things with the property shown, where at				entity owning party	must be some				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				least one participant in that relationship must be taken from the type of thing indicated.									
Property Restriction	fibo-be-oac-opty-02	property restriction 02	definesTerms For	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			investment equity		min 1				
Property Restriction	fibo-be-oac-opty-03	property restriction 03	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 03		must be some				
Property Restriction	fibo-be-oac-opty-04	property restriction 04	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 12		must be some				
Property Restriction	fibo-be-oac-opty-05	property restriction 05	confers	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			de jure control		may only be				
Property Restriction	fibo-be-oac-opty-06	property restriction 06	is equity held by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			investment owning party		min 1				
Property Restriction	fibo-be-oac-opty-07	property restriction 07	has identity	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			party		exactly 1				
Property Restriction	fibo-be-oac-opty-08	property restriction 08	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 02		must be some				
Property Restriction	fibo-be-oac-opty-09	property restriction 09	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 01		must be some				
Property Restriction	fibo-be-oac-opty-10	property restriction 10	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fibo-be-oac-opty-11	property restriction 11	holds equity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			equity		may only be				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Property Restriction	fibo-be-oac-opty-12	property restriction 12	guarantees	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			body incorporated with guaranteee		may only be				
Property Restriction	fibo-be-oac-opty-13	property restriction 13	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fibo-be-oac-opty-14	property restriction 14	holds equity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			stockholders equity		may only be				
Property Restriction	fibo-be-oac-opty-15	property restriction 15	holds an interest in	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 03		must be some				
Property Restriction	fibo-be-oac-opty-16	property restriction 16	holds equity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			investment equity		may only be				

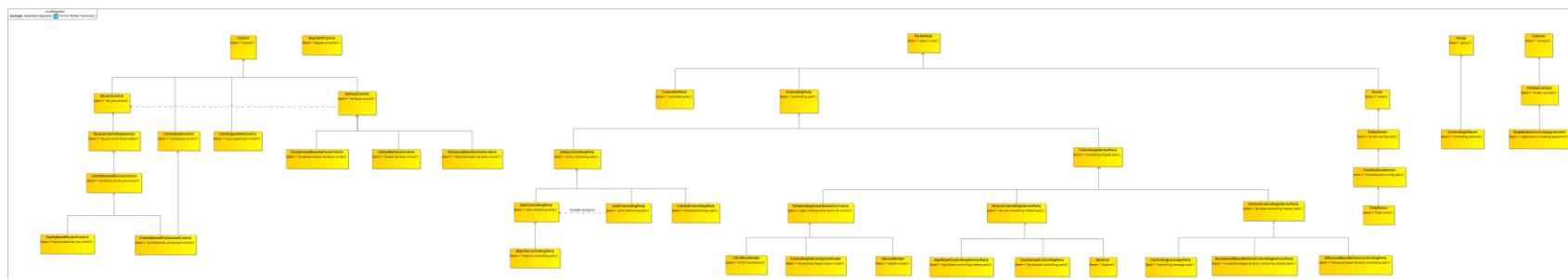
## 9.6.2 Ontology: Control Parties

This ontology defines concepts relating to types of controlling parties. The concepts defined here are party in role concepts, which define the nature of some entity such as an organization or a legal person, in some role such as that of owning a controlling interest in the entity or of controlling that entity. These roles are defined in terms of the types of control enjoyed by the party, for example de facto or de jure control. An important feature of this ontology is the distinction between the holding of a controlling interest (such as voting shares), and the de facto existence of control of one body by another as asserted in company filings or as a conclusion drawn from computational analysis of controlling interests.

**Table 9-22. Control Parties Ontology Metadata**

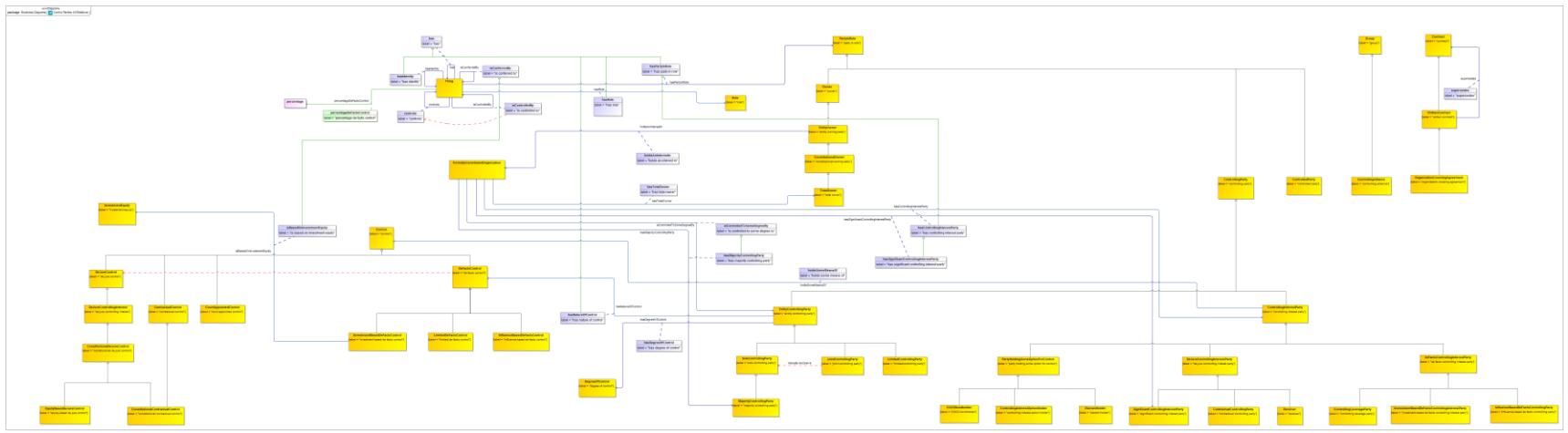
Metadata Term	Value
<b>sm:filename</b>	Control Parties Ontology
<b>sm:fileAbbreviation</b>	fibo-be-oac-cpty

<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/ControlParties/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/ControlParties/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/</a>



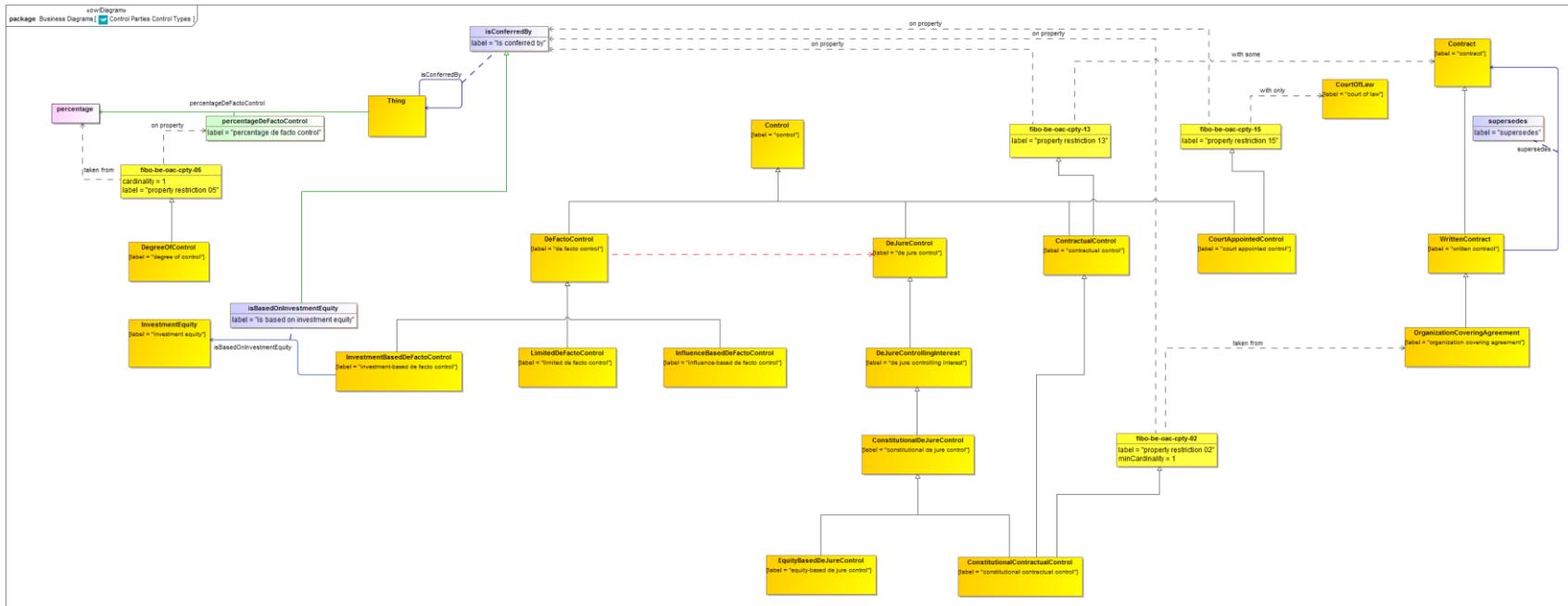
## **Figure 9.6.2.1 Control Parties Taxonomy**

This is the taxonomy of classes of “Thing” in the Control Parties ontology along with the more general concepts of which they are a specialization.



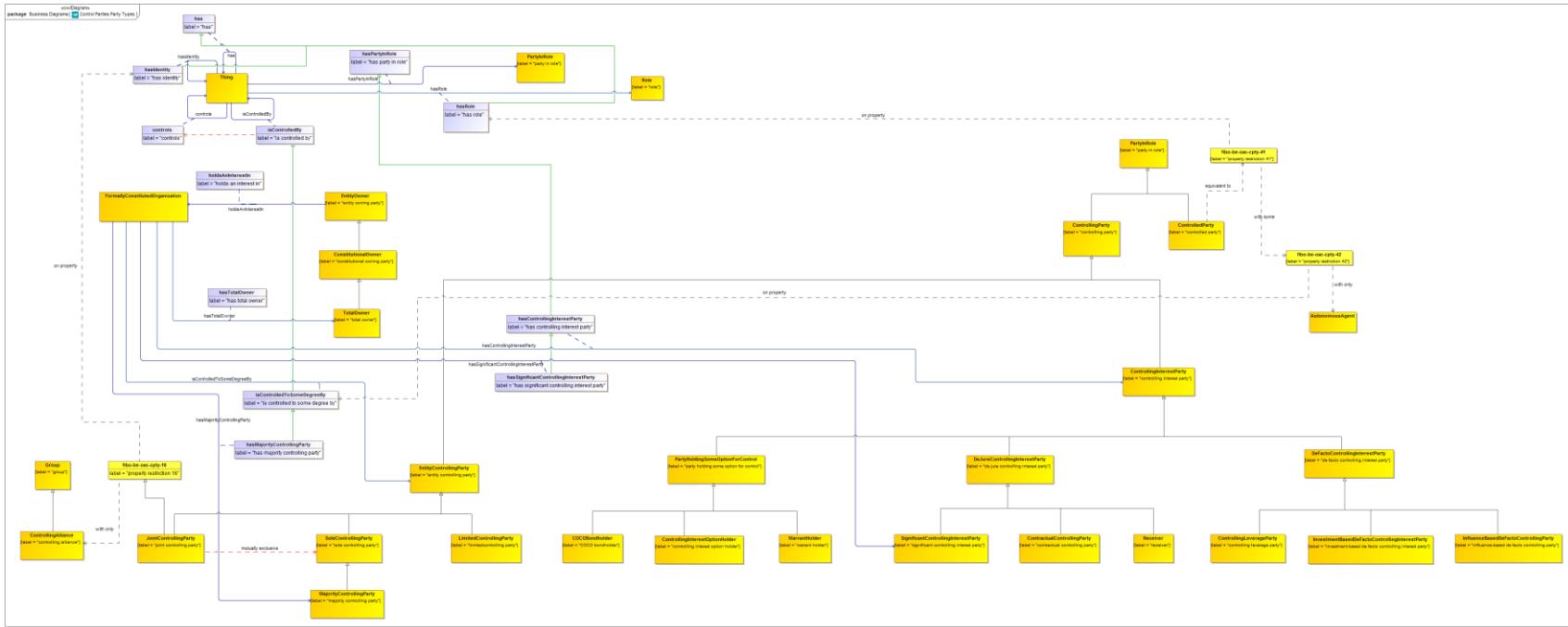
**Figure 9.6.2.2 Control Parties Relationship Properties – All Classes and Relations**

These properties are refined and reused by property restrictions, as shown in the complete diagram which follows.



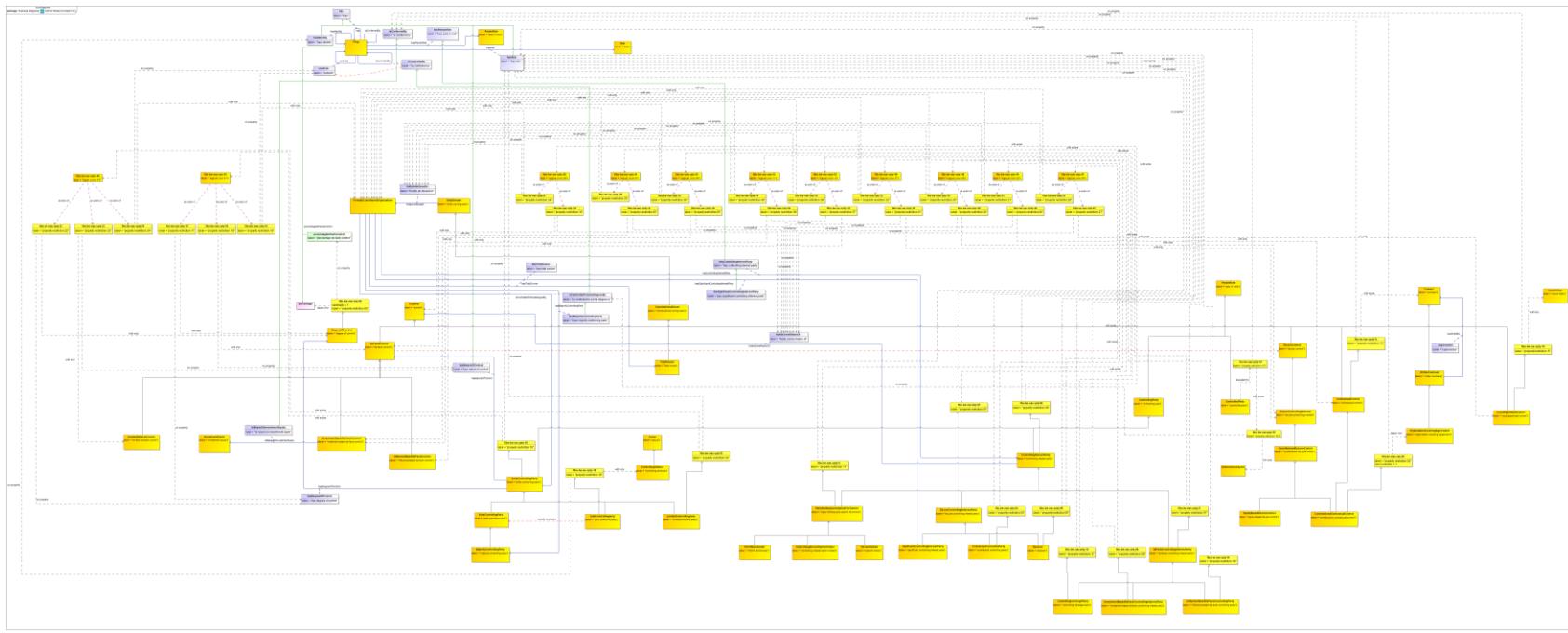
### **Figure 9.6.2.3 Control Parties: Types of Control**

Partial view of the concepts in the Control Parties ontology, showing different types of control.



**Figure 9.6.2.4: Control Parties: Types of Party with Control**

Partial view of the concepts in the Control Parties ontology, showing types of party which are defined in terms of the types of control which they hold or are able to exercise.



**Figure 9.6.2.5 Control Parties Ontology (full diagram)**

This shows the completed ontology for Control Parties. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to control parties and their related concepts.

**Table 9-23. Control Parties Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Simple Property	percentageDeFactoControl	Anything	percentage de facto control				percentage						
proxy	FormallyCo nstitutedOrg anization	Formally Constituted Organization		Proxy for the class, in order that properties or restrictions may be added locally.									
Relationship Property	hasControllin gInterestParty	Formally Constituted Organization	has controlling interest party	indicates an entity that has the ability to exercise some control over a formal business organization	has party in role		controlling interest party						
Relationship Property	hasMajorityC ontrollingPart y	Formally Constituted Organization	has majority controlling party	The parent of the company, if there is one.	is controlled to some degree by		majority controlling party			This is usually (but not necessarily) any entity which			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										owns a controlling stake (50 percent plus one voting share or above, or equivalent) in this company, if it is a limited company.			
Relationship Property	hasSignificantControllingInterestParty	Formally Constituted Organization	has significant controlling interest party	identifies an entity that owns a significant percentage of the equity in this company, but less than 50 percent	has controlling interest party		significant controlling interest party			This is a relationship for any ownership between a lower threshold (defined in AML regulations locally) and 50 percent. It is the inverse of the Affiliate (AKA Associate) relationship.			
Relationship Property	hasTotalOwner	Formally Constituted Organization	has total owner	indicates the party that wholly controls the organization, i.e., one that owns 100 percent interest	has constitutional owner		total owner			This may be any entity which is capable of exercising ownership. Scope Note: By virtue of holding 100 percent of the equity ownership, the Total Owner also holds 100 percent of the controlling equity, if there is a difference. Therefore it is both a total owner and a total controlling party. For this reason it is included among the control relationships and is a specialization of the has majority controlling party relationships.			
Relationship Property	isControlledToSomeDegreeBy	Formally Constituted Organization	is controlled to some degree by	identifies a party that has some degree of control over a formal business organization	is controlled by		entity controlling party			Control by this type of party is either asserted to be the case by the entity itself or some other party, or is determined through some analysis or calculation based			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										on the available information about controlling interests.			
Class	COCOBond holder	COCO bondholder		Holder of bank bonds which convert to equity holdings in a bank.	party holding some option for control					These equity holdings, when they exist, will confer upon the holder some de jure controlling interest in the issuing entity.			
Class	ConstitutionalContractualControl	constitutional contractual control		Some control set out in some contract among the principals of an organization.	contractual control property restriction 02 constitutional de jure control					This distinguishes this control from control conferred by contracts with third parties, for example in relation to third party guarantees or similar. This combines all forms of constitutional control in one set of terms under Constitutional De Jure Control.			
Class	ConstitutionalDeJureControl	constitutional de jure control		Control which is based in some instrument which has constitutional standing (is constitutive of the entity) such as voting shares, general partner equity etc.	de jure controlling interest								
Class	Contractual Control	contractual control		Control vested in an entity by virtue of the terms in some contract between that entity and others.	property restriction 13 control					See SME REview note of 16 Jan 2013: Percentage mechanism (in contracts etc.) would be factored in. Hence percentages as contractual terms. For instance an option to exercise which would give another 5 percent control. So there is percentage control with or without share ownership. Example: In a partnership this might be in the Partnership Agreement, which would			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										identify beneficial ownership and control as potentially 2 distinct things. Contract can say anything. Implications: This means that there are percentages of de jure control based in contract, similar to those based in constitutional instruments (shares, General Partner equity). The concepts of Parent, Significant Part Owner etc. can then potentially be defined in terms of the percentages of all applicable instruments by which control may be formally defined.			
Class	Contractual ControllingParty	contractual controlling party		A party which exercises some control which is set out in some contract.	property restriction 04 de jure controlling interest party					This is as distinct from control set out in some constitutional instrument e.g. voting shares ownership or general partner equity.			
Class	ControlledParty	controlled party		Some party which is controlled in some way and to some degree by some other party.	party in role					Scope Note: Parties, since they stand in roles, will have relationships among them which correspond to the reciprocals of the roles they stand in. In this case, controls and controlled by.			
Class	ControllingAlliance	controlling alliance		Some group of entities which have formed some alliance or agreement in terms of which they jointly exercise control over some entity.	group					The types of entity which may enter into such an alliance are the same types of entity as may exercise control			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										in their own right, i.e. independent parties (that is a logical union of natural persons, legal persons and formal organizations).			
Class	ControllingInterestOptionHolder	controlling interest option holder		A party which holds some option which may be exercised to confer on that party some de jure controlling interest at some time in the future and at the discretion of that holder.	party holding some option for control								
Class	ControllingInterestParty	controlling interest party		Some party which holds some form of controlling interest in some other party in some context.	controlling party property restriction 06					This controlling interest inevitably means that the party exercises some form of control, however the precise degree and nature of that control is dependent on many factors, and so is defined as a separate party role (which may and usually is fulfilled by the same entity).			
Relationship Property	holdsSomeMeansOf	controlling interest party	holds some means of	Some means of control held by the party.	holds		control						
Class	ControllingLeverageParty	controlling leverage party		A party which exercises control as a result of some investment in an equity.	property restriction 12 de facto controlling interest party					Any large investor may have some degree of de facto control.			
Class	CourtAppointedControl	court appointed control		Control conferred on some entity by act of some court, for example in the context of receivership.	control property restriction 15								
Class	DeFactoControllingInterestParty	de facto controlling interest party		A party which exercises some control over an entity other than via some constitutional instrument such as shares.	property restriction 07 controlling interest party								
Class	DeJureControllingInterestParty	de jure controlling interest party		An entity that may exercise de jure controlling interest	property restriction 01 controlling interest party								
Class	DeJureControllingInterest	de jure controlling interest		controlling interest that is formalized by some formal legal construct	de jure control								
Class	DegreeOfControl	degree of control		the degree of control one entity has over another	05								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	EntityControllingParty	entity controlling party		Some party which is able to direct the activities of some business entity.	property restriction 10 controlling party					This type of party is either asserted to be the case by the entity itself or some other party, or is determined through some analysis or calculation based on the available information about controlling interests.			
Relationship Property	hasDegreeOfControl	entity controlling party	has degree of control	has degree of control, (partial, majority, or complete) either alone or with other parties, with respect to some activity			degree of control						
Relationship Property	hasNatureOfControl	entity controlling party	has nature of control	has nature or kind of control, de facto or limited de facto control	has		de facto control						
Class	EquityBasedDeJureControl	equity-based de jure control		De Jure controlling interest in an entity which is based on the holding of some form of equity in that entity.	constitutional de jure control								
Class	InfluenceBasedDeFactoControl	influence-based de facto control		Some influence and control over some entity other than by means of investment in that entity.	de facto control								
Class	InfluenceBasedDeFactoControllingParty	influence-based de facto controlling party		A party which exercises some influence and control over the entity other than by means of investment.	de facto controlling interest party property restriction 14					Regulatory or jurisdictional control would fall under this control. Court appointed control is de jure control BUT the scenario in which a government takes over something and then hands it over to some new de jure controller i.e. administrator - in the meantime this is de facto control by e.g. the government.			
Class	InvestmentBasedDeFactoControl	investment-based de facto control		Control which arises through some investment in some entity, other than as the holding of "constitutional" equity (shares etc.) in that entity.	de facto control								
Relationship Property	isBasedOnInvestmentEquity	investment-based de facto control	is based on investment equity	indicates investment-based de facto control, which is based on the holding of some investment equity by some party	is conferred by		investment equity						

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	InvestmentBasedDeFactoControllingInterestParty	investment-based de facto controlling interest party		A party which exercises some degree of de facto control based on some investment which they hold in the entity.	property restriction 08 investment owning party de facto controlling interest party								
Class	JointControllingParty	joint controlling party		Some group of entities which collectively are able to direct the affairs of some business organization	entity controlling party property restriction 16	sole controlling party							
Class	LimitedDeFactoControl	limited de facto control		The ability to direct the affairs of some entity within prescribed limits. Those limits are described in terms of activities which the entity holding such control may cause the controlled entity to carry out.	de facto control								
Class	LimitedControllingParty	limitedcontrolling party		Some individual entity which is able to direct the affairs of some business organization to a specific degree.	property restriction 03 entity controlling party					The degree to which the party has control of (is able to direct the activities of) the organization in question is defined as a percentage value where one hundred percent would equate to control without the involvement of others. The percentage of control is a calculated, determined or asserted value, and not necessarily a percentage of some controlling interest, though in the absence of other factors the determination of percentage of control would equate to the percentage of controlling interest e.g. voting shares held.			
Class	MajorityControllingParty	majority controlling party			sole controlling party								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	PartyHoldin gSomeOptio nForControl	party holding some option for control		Some party holding the option to exercise some de jure controlling interest	property restriction 11 controlling interest party					This will result in some potential change at a future time, in the conclusions about actual control.			
Class	Receiver	receiver		A party appointed by some court for the purposes of winding up the affairs of some entity which is no longer solvent.	property restriction 09 de jure controlling interest party								
Class	SignificantControllingInterestParty	significant controlling interest party		A person which owns a significant voting stake in this entity between some lower significant threshold and 50 percent, but not 50 percent or more.	de jure controlling interest party								
Class	SoleControllingParty	sole controlling party		an individual entity that directs the affairs of some formal business organization	entity controlling party	joint controlling party							
Class	TotalOwner	total owner		Entity having 100 percent ownership in the entity so owned.	constitutional owning party					By virtue of holding 100 percent of the equity ownership, the Total Owner also holds 100 percent of the controlling equity, if there is a difference. Therefore it is both a total owner and a total controlling party.			
Class	WarrantHolder	warrant holder		A holder of some warrant which when exercised would confer upon that party some de jure controlling interest in some entity.	party holding some option for control								
Logical Union	fibo-be-oac-ctpy-43	logical union 01	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 17 property restriction 18 property restriction 19						
Logical Union	fibo-be-oac-ctpy-44	logical union 02	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 20 property restriction 21						
Logical Union	fibo-be-oac-ctpy-45	logical union 03	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 22 property restriction 23 property restriction 24						
Logical Union	fibo-be-oac-ctpy-46	logical union 04	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 25 property restriction 26						

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Logical Union	fib0-be-oac- cpty-47	logical union 05	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 27 property restriction 28						
Logical Union	fib0-be-oac- cpty-48	logical union 06	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 29 property restriction 30						
Logical Union	fib0-be-oac- cpty-49	logical union 07	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 31 property restriction 32						
Logical Union	fib0-be-oac- cpty-50	logical union 08	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 33 property restriction 34						
Logical Union	fib0-be-oac- cpty-51	logical union 09	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 35 property restriction 36						
Logical Union	fib0-be-oac- cpty-52	logical union 10	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 37 property restriction 38						
Logical Union	fib0-be-oac- cpty-53	logical union 11	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 39 property restriction 40						
Property Restriction	fib0-be-oac- cpty-01	property restriction 01	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 07		must be some				
Property Restriction	fib0-be-oac- cpty-02	property restriction 02	is conferred by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			organization covering agreement		min 2				
Property Restriction	fib0-be-oac- cpty-03	property restriction 03	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 03		must be some				
Property Restriction	fib0-be-oac- cpty-04	property restriction 04	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 02		must be some				
Property Restriction	fib0-be-oac- cpty-05	property restriction 05	percentage de facto control	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			percentage		exactly 1				
Property Restriction	fib0-be-oac- cpty-06	property restriction 06	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 08		must be some				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				indicated.									
Property Restriction	fib0-be-oac- cpty-07	property restriction 07	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 04		must be some				
Property Restriction	fib0-be-oac- cpty-08	property restriction 08	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 11		must be some				
Property Restriction	fib0-be-oac- cpty-09	property restriction 09	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 05		must be some				
Property Restriction	fib0-be-oac- cpty-10	property restriction 10	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 01		must be some				
Property Restriction	fib0-be-oac- cpty-11	property restriction 11	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 06		must be some				
Property Restriction	fib0-be-oac- cpty-12	property restriction 12	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 09		must be some				
Property Restriction	fib0-be-oac- cpty-13	property restriction 13	is conferred by	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			contract		must be some				
Property Restriction	fib0-be-oac- cpty-14	property restriction 14	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 10		must be some				
Property Restriction	fib0-be-oac- cpty-15	property restriction 15	is conferred by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			court of law		may only be				
Property Restriction	fib0-be-oac- cpty-16	property restriction 16	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			controlling alliance		may only be				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				indicated.									
Property Restriction	fib0-be-oac- cpty-17	property restriction 17	has degree of control	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			degree of control		may only be				
Property Restriction	fib0-be-oac- cpty-18	property restriction 18	has nature of control	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			de facto control		may only be				
Property Restriction	fib0-be-oac- cpty-19	property restriction 19	controls	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac- cpty-20	property restriction 20	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			contractual control		may only be				
Property Restriction	fib0-be-oac- cpty-21	property restriction 21	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac- cpty-22	property restriction 22	has degree of control	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			degree of control		may only be				
Property Restriction	fib0-be-oac- cpty-23	property restriction 23	has nature of control	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			limited de facto control		may only be				
Property Restriction	fib0-be-oac- cpty-24	property restriction 24	controls	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac- cpty-25	property restriction 25	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			de facto control		may only be				
Property Restriction	fib0-be-oac- cpty-26	property restriction 26	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				indicated.									
Property Restriction	fib0-be-oac- cpty-27	property restriction 27	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			court appointed control		may only be				
Property Restriction	fib0-be-oac- cpty-28	property restriction 28	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac- cpty-29	property restriction 29	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			de jure controlling interest		may only be				
Property Restriction	fib0-be-oac- cpty-30	property restriction 30	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac- cpty-31	property restriction 31	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			de jure controlling interest		may only be				
Property Restriction	fib0-be-oac- cpty-32	property restriction 32	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac- cpty-33	property restriction 33	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			control		may only be				
Property Restriction	fib0-be-oac- cpty-34	property restriction 34	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac- cpty-35	property restriction 35	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			investment-based de facto control		may only be				
Property Restriction	fib0-be-oac- cpty-36	property restriction 36	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				indicated.									
Property Restriction	fibo-be-oac-cpty-37	property restriction 37	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			influence-based de facto control		may only be				
Property Restriction	fibo-be-oac-cpty-38	property restriction 38	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fibo-be-oac-cpty-39	property restriction 39	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			investment-based de facto control		may only be				
Property Restriction	fibo-be-oac-cpty-40	property restriction 40	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fibo-be-oac-cpty-41	property restriction 41	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 42		must be some				
Property Restriction	fibo-be-oac-cpty-42	property restriction 42	is controlled to some degree by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			autonomous agent		may only be				

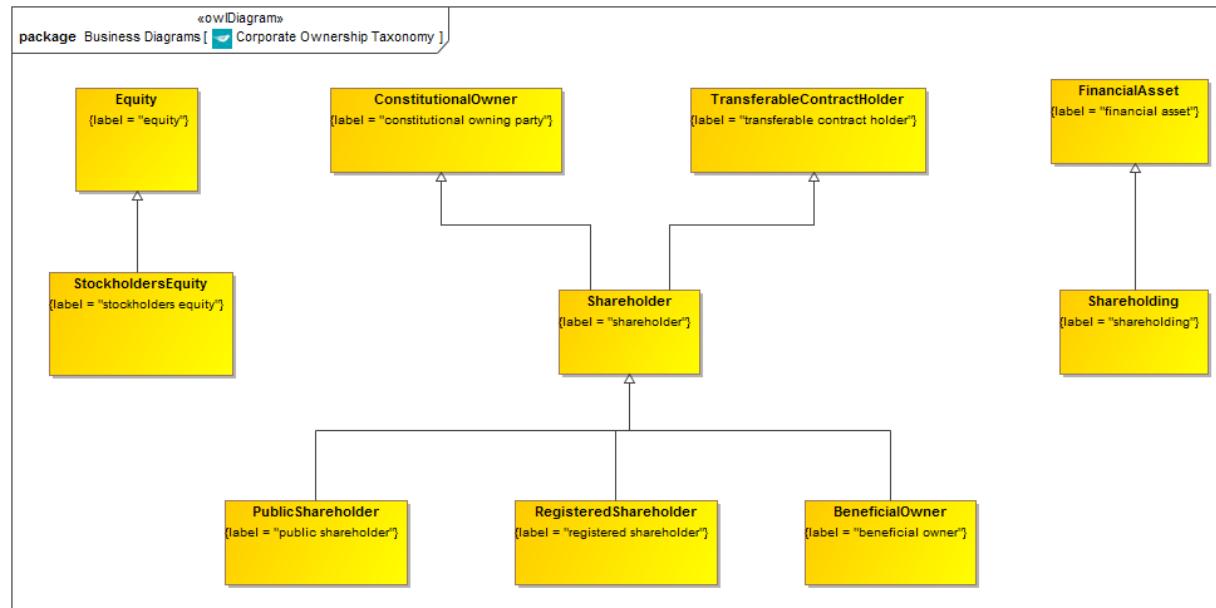
### 9.6.3 Ontology: Corporate Ownership

This ontology defines concepts relating to corporation-specific ownership. Roles are defined in terms of the ownership enjoyed by the party, and are the specific examples of these concepts as they apply to companies incorporated by the issuance of shares.

**Table 9-24. Corporate Ownership Ontology Metadata**

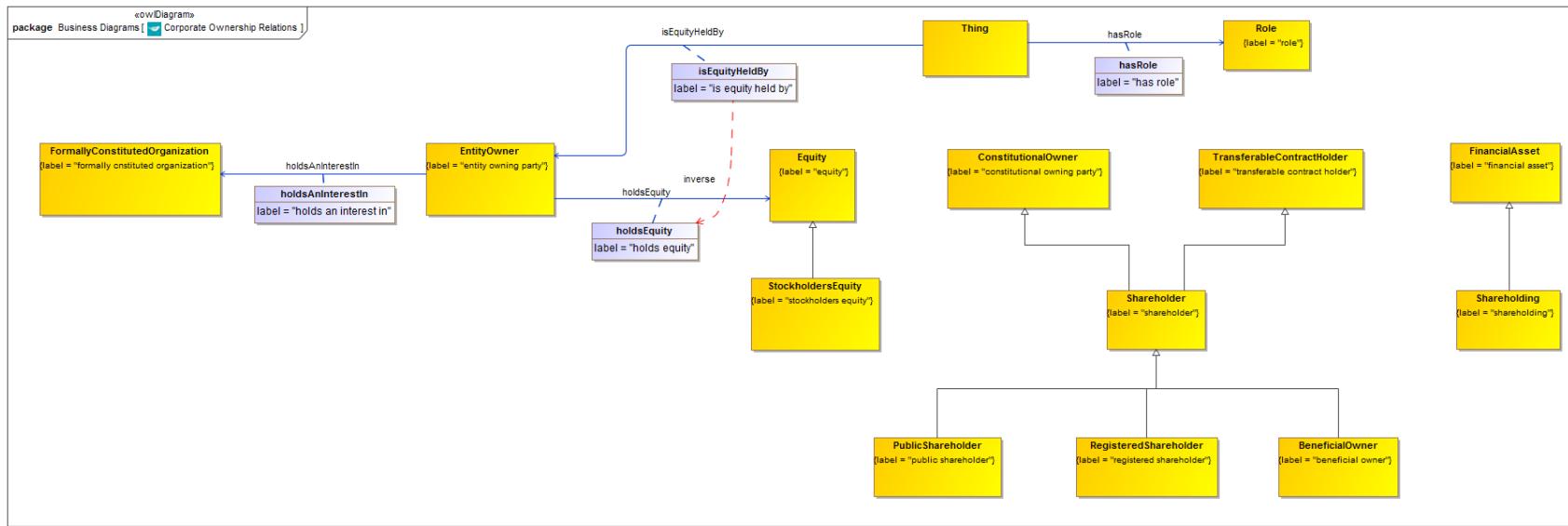
Metadata Term	Value
<b>sm:filename</b>	Corporate Ownership Ontology
<b>sm:fileAbbreviation</b>	fibo-be-oac-cown

<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateOwnership/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateOwnership/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/CorporateOwnership/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/CorporateOwnership/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEIEntities/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/Corporations/Corporations/">http://www.omg.org/spec/EDMC-FIBO/BE/Corporations/Corporations/</a>



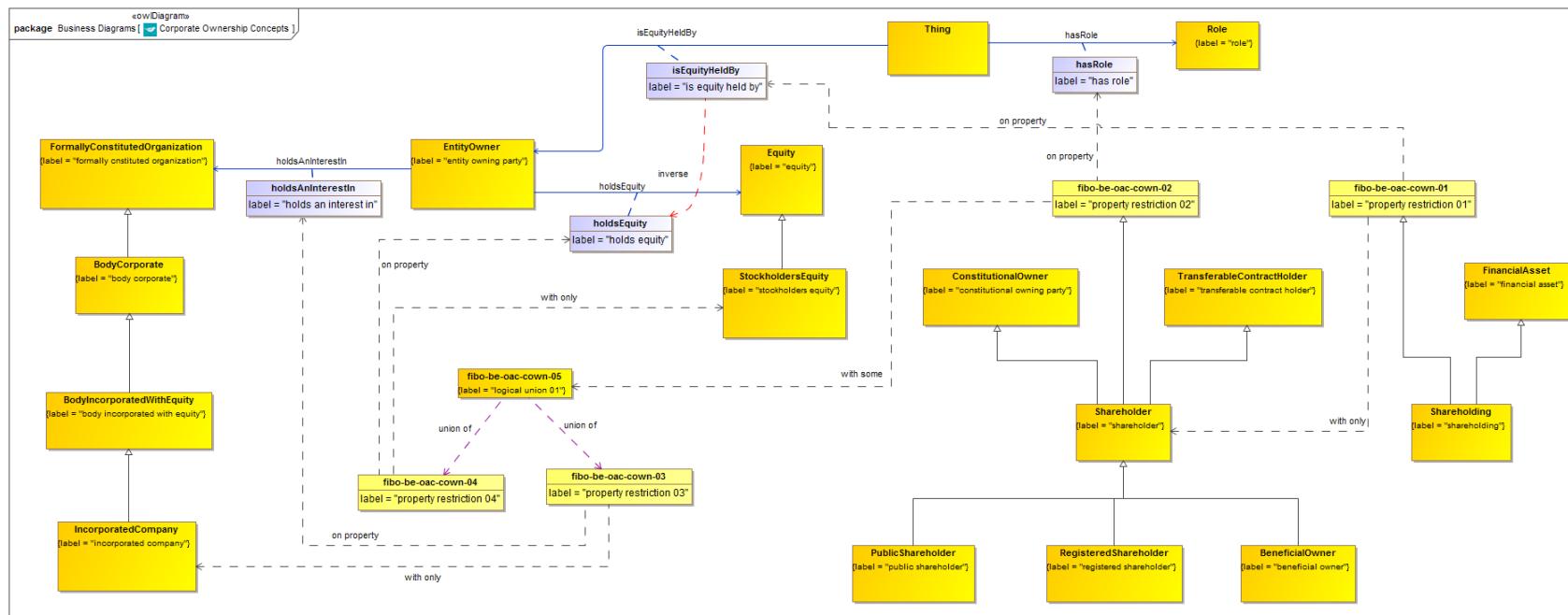
**Figure 9.6.3.1      Corporate Ownership Taxonomy**

This is the taxonomy of classes of “Thing” in the Corporate Ownership ontology along with the more general concepts of which they are a specialization.



**Figure 9.6.3.2      Corporate Ownership with Relationship Properties**

Properties in (all provided elsewhere) which are refined and reused by property restrictions in this ontology, as shown in the complete diagram which follows.



**Figure 9.6.3.3 Corporate Ownership Ontology (full diagram)**

This shows the completed ontology for Corporate Ownership. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to Corporate Ownership and related concepts.

**Table 9-25. Corporate Ownership Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	BeneficialOwner	beneficial owner		Entity that enjoys the possession and/or benefits of ownership (such as receipt of income) of a property even though its ownership (title) is in the name of another entity (called a nominee or registered owner). Use of a nominee (who may be an agent, custodian, or a trustee) does not change the position regarding tax reporting and tax liability, and the beneficial-owner									

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				remains responsible.									
Class	PublicShare holder	public shareholder		a shareholder that holds publicly issued shares in a listed company									
Class	RegisteredShareholder	registered shareholder		a shareholder that is registered on the shareholder registry for a company									
Class	Shareholder	shareholder		An individual, group, or organization that owns one or more shares in a company, and in whose name the share certificate is issued. It is legal for a company to have only one shareholder. Also called (in the US) stockholder.									
Class	Shareholding	shareholding		Legal power of stockholders (shareholders) varies in proportion to their shareholdings. Typically, ten percent and below stockholding provides no protection. Fifteen percent stockholding may give the power to petition courts against changing the shares class rights. Up to 49.9 percent stockholding normally gives power to demand calling of an extraordinary general meeting. Fifty percent and over stockholding gives power to fire a director and force out minority stockholders by acquiring their shares as per the rules of the firm. Holder of 75 percent of the stock has the power to change the articles and memorandum of association and the firms name, reduce the share capital, allow the firm to buy its own shares from other stockholders, and to shut down the business. One hundred percent stockholding of course gives total power under the corporate legislation.									
Logical Union	fibo-be-oac-cown-05	logical union 01	union of	Logical union of the types of thing identified in the column "Related Thing or Type".									
Property Restriction	fibo-be-oac-cown-01	property restriction 01	is equity held by	Set of things which, if they have the property shown,									

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				all participants in that relationship must be taken from the type of thing indicated.									
Property Restriction	fib0-be-oac-cown-02	property restriction 02	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.									
Property Restriction	fib0-be-oac-cown-03	property restriction 03	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.									
Property Restriction	fib0-be-oac-cown-04	property restriction 04	holds equity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.									

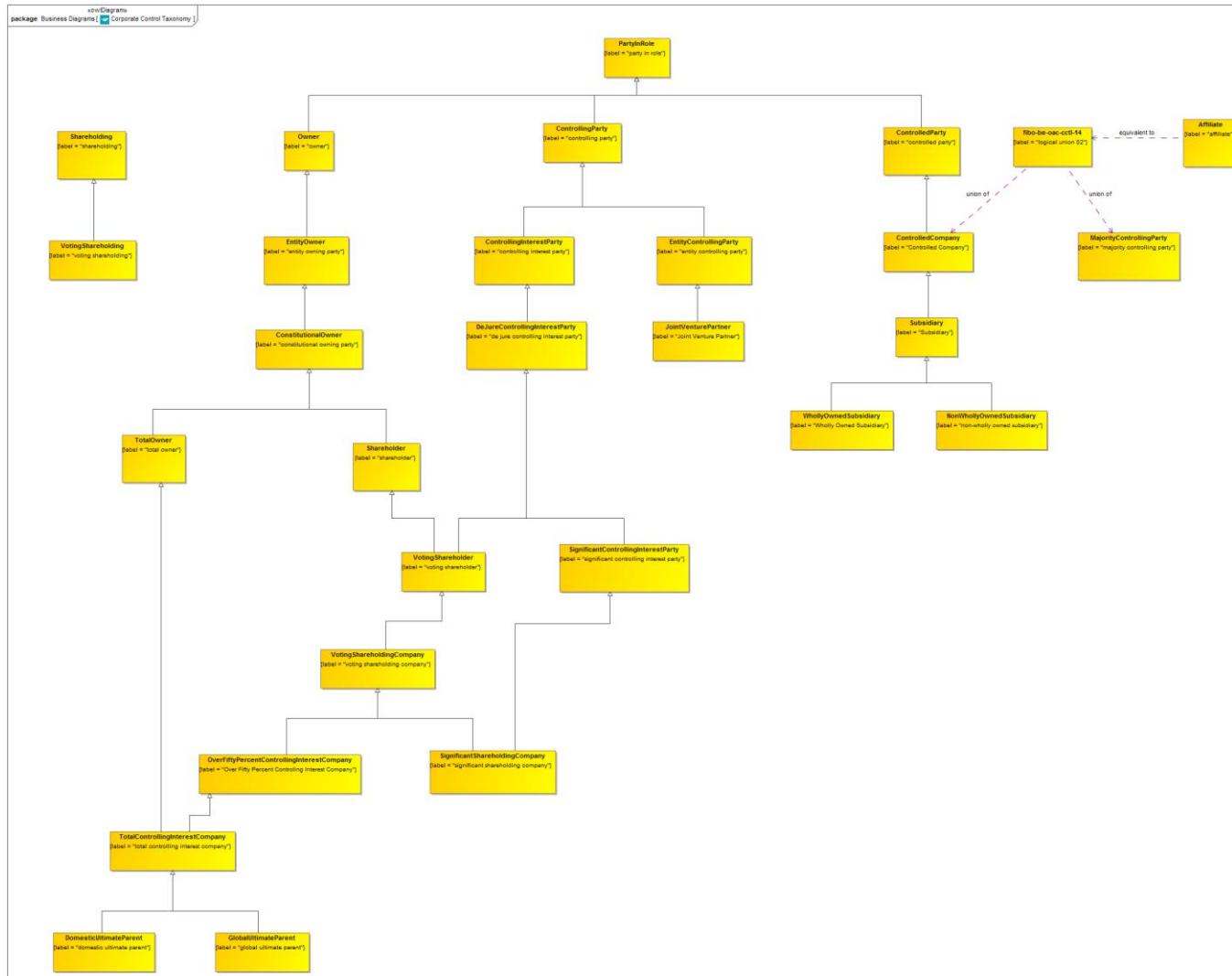
#### 9.6.4 Ontology: Corporate Control

This ontology defines concepts relating to corporation-specific control. These concepts are based on the general types of control (both de facto control and controlling interests), as defined in the ControlParties ontology, and are the specific examples of these concepts as they apply to companies incorporated by the issuance of shares.

**Table 9-26. Corporate Control Ontology Metadata**

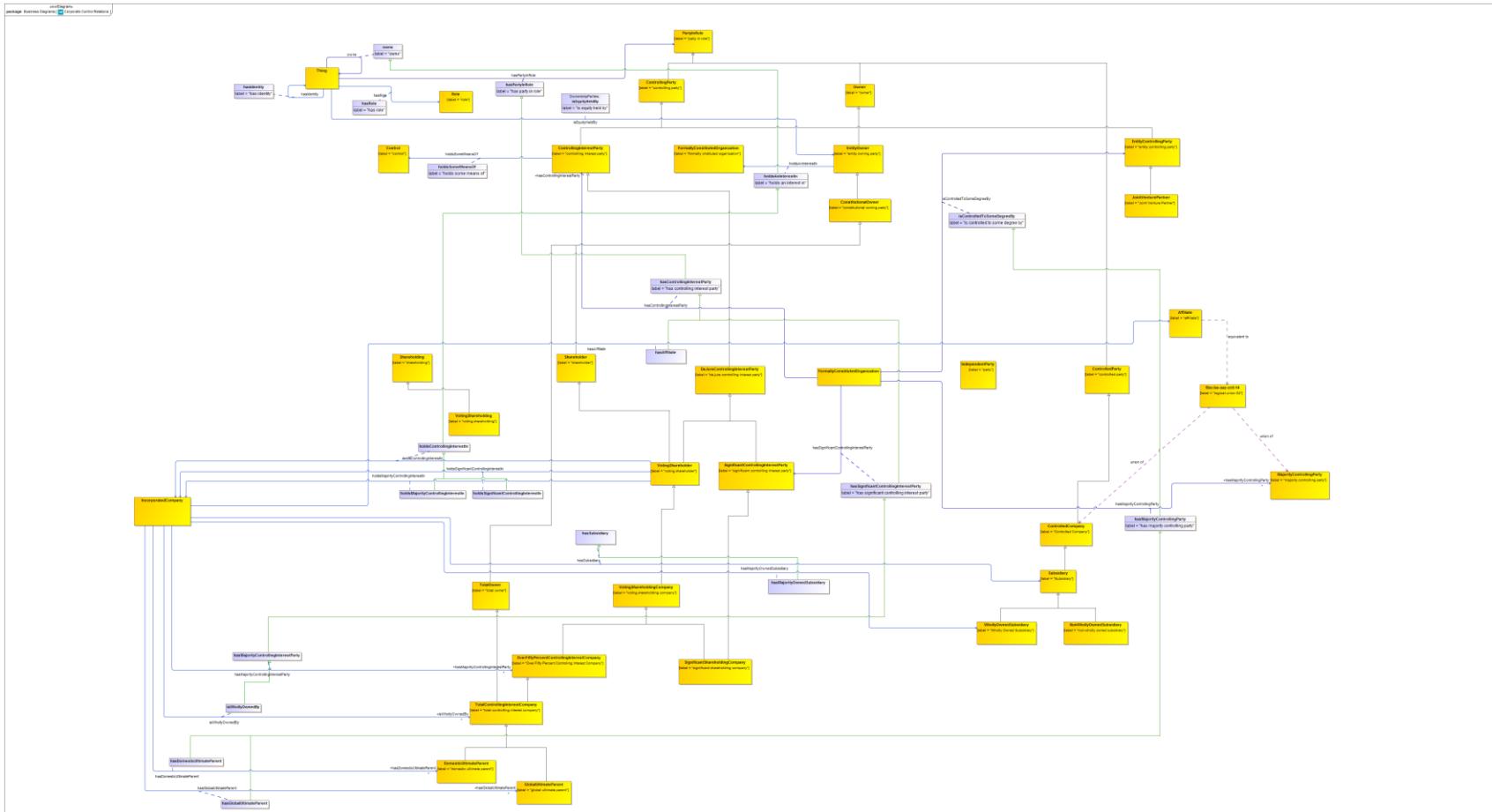
Metadata Term	Value
<b>sm:filename</b>	Corporate Control Ontology
<b>sm:fileAbbreviation</b>	fib0-be-oac-cctl
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/CorporateControl/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/CorporateControl/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a>

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http://www.omg.org/spec/EDMC-
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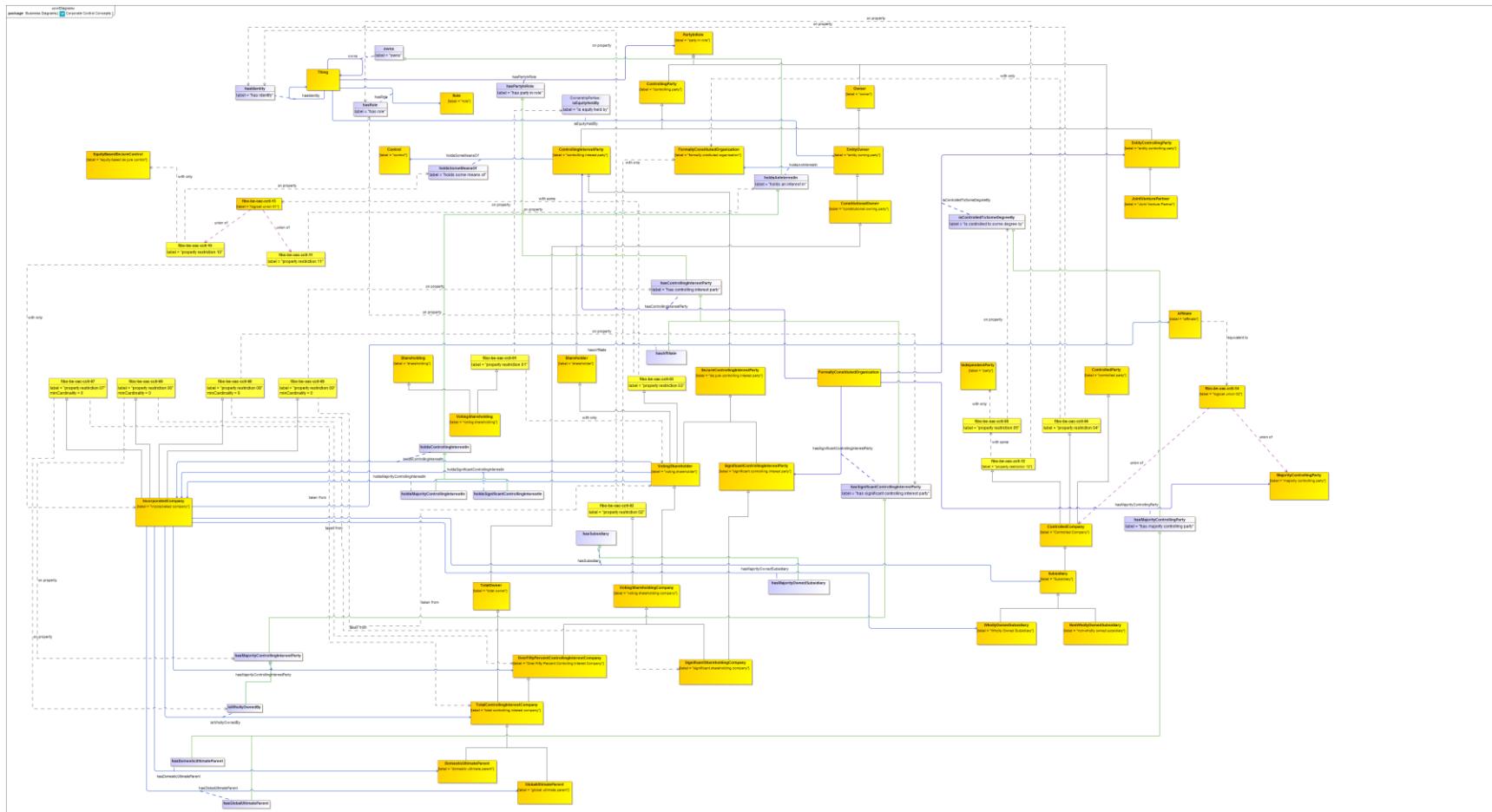
**Figure 9.6.4.1      Corporate Control Taxonomy**

This is the taxonomy of classes of “Thing” in the Corporate Control ontology along with the more general concepts of which they are a specialization.



## Figure 9.6.4.2 Corporate Control Relationship Properties

These properties in Corporate Control and elsewhere are refined and reused by property restrictions, as shown in the complete diagram which follows.



## Figure 9.6.4.3 Corporate Control Ontology (full diagram)

This shows the completed ontology for Corporate Control. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to corporate control relations and their related concepts.

**Table 9-27. Corporate Control Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
proxy	Incorporated Company	incorporated company		Proxy for the class, in order that properties or restrictions may be added locally.	property restriction 06 property restriction 07 property restriction 08 property restriction 09						The restrictions defined herein extend the definition of incorporated company to link it to external entities that hold shares in it.		
proxy	Incorporated Company	incorporated company		Proxy for the class, in order that properties or restrictions may be added locally.									
Relationship Property	isWhollyOwnedBy	Incorporated Company	is wholly owned by	the formally constituted organization that has 100 percent ownership and control over a given incorporated company			total controlling interest company						
Relationship Property	hasSubsidiary	Incorporated Company	has subsidiary	a subsidiary of the company, that is an affiliae controlled by the company directly, or indirectly through one or more intermediaries.			Subsidiary						
Relationship Property	hasMajorityOwnedSubsidiary	Incorporated Company	has majority owned subsidiary	a majority owned subsidiary of the company, in this case, where there is above 50 percent (50 percent plus one share) ownership of the shares.			Wholly Owned Subsidiary						
Relationship Property	hasMajorityControllingInterestParty	Incorporated Company	has majority controlling interest party	the parent organization of the company, if there is one.	has significant controlling interest party		Over Fifty Percent Controlling Interest Company			This is defined as company or other Formal Organization which owns a controlling stake of greater than 50 percent (50 percent plus one voting share or above) in this company.			
Relationship Property	hasGlobalUltimateParent	Incorporated Company	has global ultimate parent	the organization recognized as the ultimate parent of the company, if it has one	has majority controlling party		global ultimate parent			In the case of companies that are subsidiaries of another company that itself has a parent, this identifies the organization at the top of the hierarchy, worldwide. Adapted from consensus definition of Ultimate Parent, now that this is			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										split into national and global parent.			
Relationship Property	hasDomesticUltimateParent	Incorporated Company	has domestic ultimate parent	the organization recognized as the ultimate parent of the company within its country or jurisdiction of incorporation, if it has one	has majority controlling party		domestic ultimate parent			In the case of companies that are subsidiaries of another company that itself has a parent, this identifies the organization at the top of the hierarchy of organizations in the country of registration. Adapted from consensus definition of Ultimate Parent, now that this is split into national and global parent.			
Relationship Property	hasAffiliate	Incorporated Company	has affiliate	has a party which directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with the company.	has controlling interest party		affiliate						
Class	Affiliate	affiliate		an affiliate of, or a person affiliated with, a specific person is a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the person specified.									
Class	ControlledCompany	Controlled Company		A company over which another incorporated company has some degree of control by way of ownership of voting shares	property restriction 04 controlled party property restriction 12								
Class	DomesticUltimateParent	domestic ultimate parent		the organization which is recognized as the ultimate parent of the company within the country or jurisdiction of incorporation, this relationship may or may not be present, i.e. in the case of a company which has no parent.	total controlling interest company								
Class	GlobalUltimateParent	global ultimate parent		The organization which is recognized as the ultimate parent of the company. This relationship may or may not be present, i.e. in the case of a company which has no parent.	total controlling interest company								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	JointVenturePartner	Joint Venture Partner		A party which has the role of Joint Venture Partner to some venture.	entity controlling party					This is part of ongoing work - legal definitions sought.			
Class	NonWhollyOwnedSubsidiary	non-wholly owned subsidiary		A subsidiary which is not a wholly owned subsidiary.	Subsidiary								
Class	OverFiftyPercentControllingInterestCompany	Over Fifty Percent Controlling Interest Company			voting shareholding company								
Class	SignificantShareholdingCompany	significant shareholding company		a company that owns a significant voting stake in an incorporated company	voting shareholding company significant controlling interest party								
Class	Subsidiary	Subsidiary			Controlled Company								
Class	TotalControllingInterestCompany	total controlling interest company		formal organization having 100 percent ownership in the incorporated company it holds voting shares in.	Over Fifty Percent Controlling Interest Company total owner					By virtue of holding 100 percent of the share ownership, the total controlling interest company also holds 100 percent of the controlling equity, if there is a difference. Therefore, it is both a total owner and a total controlling party.			
Class	VotingShareholder	voting shareholder		A party owning voting shares in some company limited by the issue of shares	property restriction 03 de jure controlling interest party shareholder								
Relationship Property	holdsSignificantControllingInterestIn	voting shareholder	holds significant controlling interest in	the incorporated company in which the voting shareholder holds a significant proportion (but not fifty percent or more) of the voting share equity.			incorporated company						
Relationship Property	holdsMajorityControllingInterestIn	voting shareholder	holds majority controlling interest in	the incorporated company in which the voting shareholder holds fifty percent or more of the voting share equity.			incorporated company						
Relationship Property	holdsControllingInterestIn	voting shareholder	holds controlling interest in	a company in which the voting shareholder owns some voting equity stake.	holds an interest in		incorporated company						
Class	VotingShareholdingCompany	voting shareholding company		a formal business organization that holds voting shares in some incorporated company	property restriction 02 voting shareholder								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	VotingShare holding	voting shareholding		a holding of some voting share	property restriction 01 shareholding								
Class	WhollyOwned Subsidiary	Wholly Owned Subsidiary			Subsidiary								
Logical Union	fib0-be-oac-ctl-13	logical union 01	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			property restriction 10 property restriction 11						
Logical Union	fib0-be-oac-ctl-14	logical union 02	union of	Logical union of the types of thing identified in the column "Related Thing or Type". This union is equivalent to the class "Affiliate".			majority controlling party Controlled Company						
Property Restriction	fib0-be-oac-ctl-01	property restriction 01	is equity held by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			voting shareholder		may only be				
Property Restriction	fib0-be-oac-ctl-02	property restriction 02	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac-ctl-03	property restriction 03	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			logical union 01		must be some				
Property Restriction	fib0-be-oac-ctl-04	property restriction 04	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			formally constituted organization		may only be				
Property Restriction	fib0-be-oac-ctl-05	property restriction 05	is controlled to some degree by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			party		may only be				
Property Restriction	fib0-be-oac-ctl-06	property restriction 06	has Majority Controlling Interest Party	Set of things that may have the property shown, taken from the type of thing indicated.			Over Fifty Percent Controlling Interest Company		min 0				
Property Restriction	fib0-be-oac-ctl-07	property restriction 07	is Wholly Owned By	Set of things that may have the property shown, taken from the type of thing indicated.			total controlling interest company		min 0				
Property Restriction	fib0-be-oac-ctl-08	property restriction 08	has significant controlling interest party	Set of things that may have the property shown, taken from the type of thing indicated.			significant shareholding company		min 0				
Property Restriction	fib0-be-oac-ctl-09	property restriction 09	has controlling	Set of things that may have the property shown, taken			voting shareholder		min 0				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
			interest party	from the type of thing indicated.									
Property Restriction	fibo-be-oac-ctl-10	property restriction 10	holds some means of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			equity-based de jure control		may only be				
Property Restriction	fibo-be-oac-ctl-11	property restriction 11	holds an interest in	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			Incorporated Company		may only be				
Property Restriction	fibo-be-oac-ctl-12	property restriction 12	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 05		must be some				

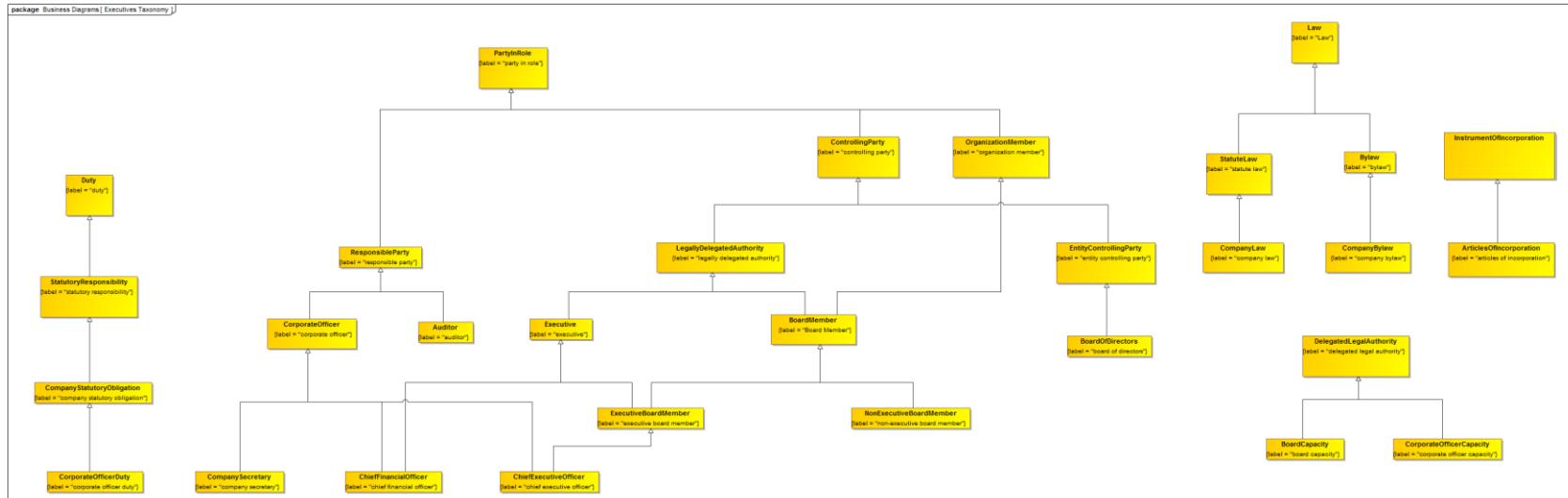
### 9.6.5 Ontology: Executives

This ontology defines concepts relating to executives and their formal capacities. The concepts defined in this ontology cover types of corporate officers, board members and the like, along with the capacities in terms of which those party roles are defined, and the kinds of entity (principally natural persons) that are able to perform in those roles.

**Table 9-28. Executives Ontology Metadata**

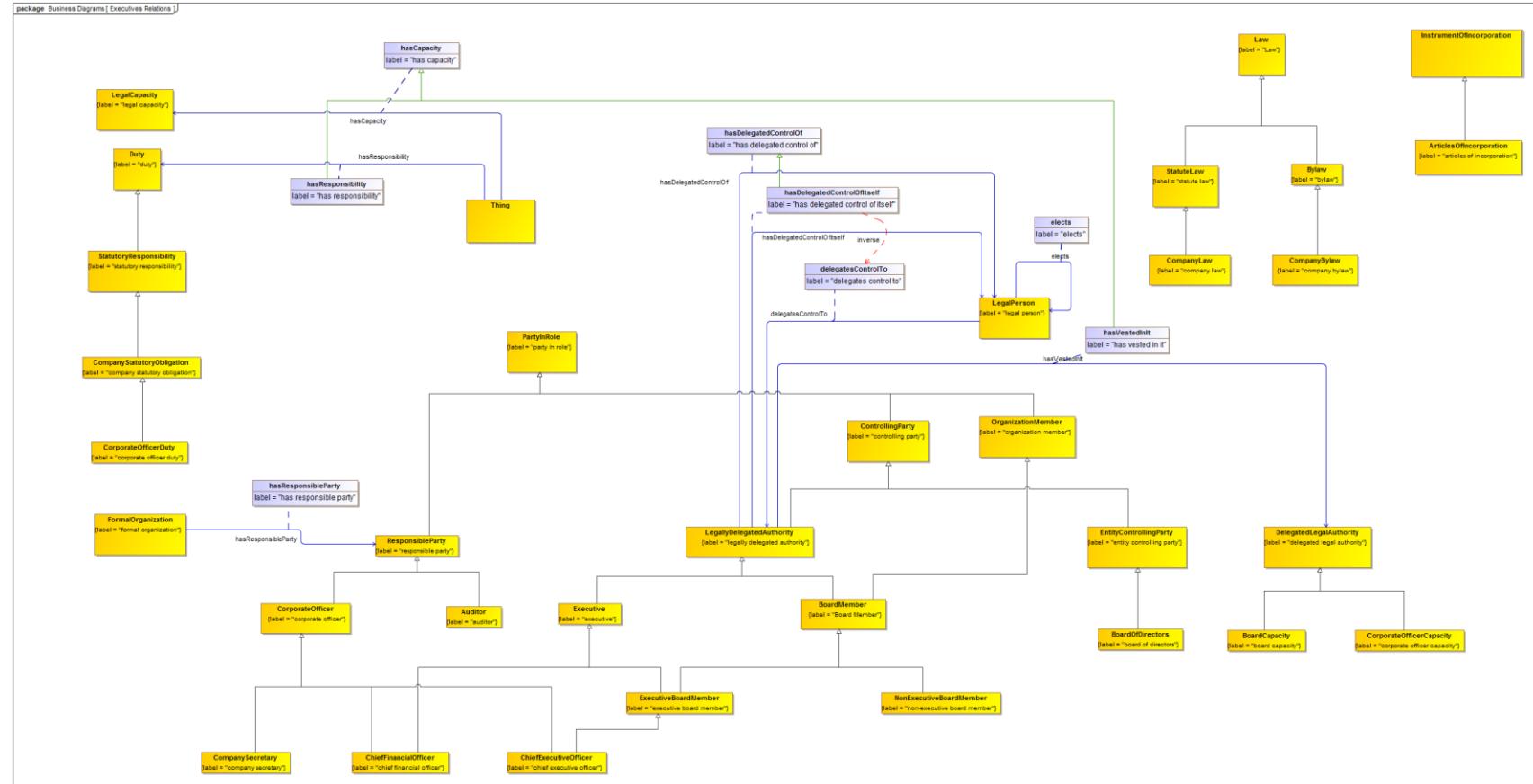
Metadata Term	Value
<b>sm:filename</b>	Executives Ontology
<b>sm:fileAbbreviation</b>	fibo-be-oac-exec
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/Executives/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/Executives/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/Executives/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/OwnershipAndControl/Executives/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/Executives/">http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/Executives/</a>

FIBO/BE/LegalEntities/FormalBusinessOrganizations/  
<http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/>  
<http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LEI Entities/>  
<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/OwnershipParties/>  
<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/>  
<http://www.omg.org/spec/EDMC-FIBO/BE/Corporations/Corporations/>  
<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateOwnership/>  
<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/>



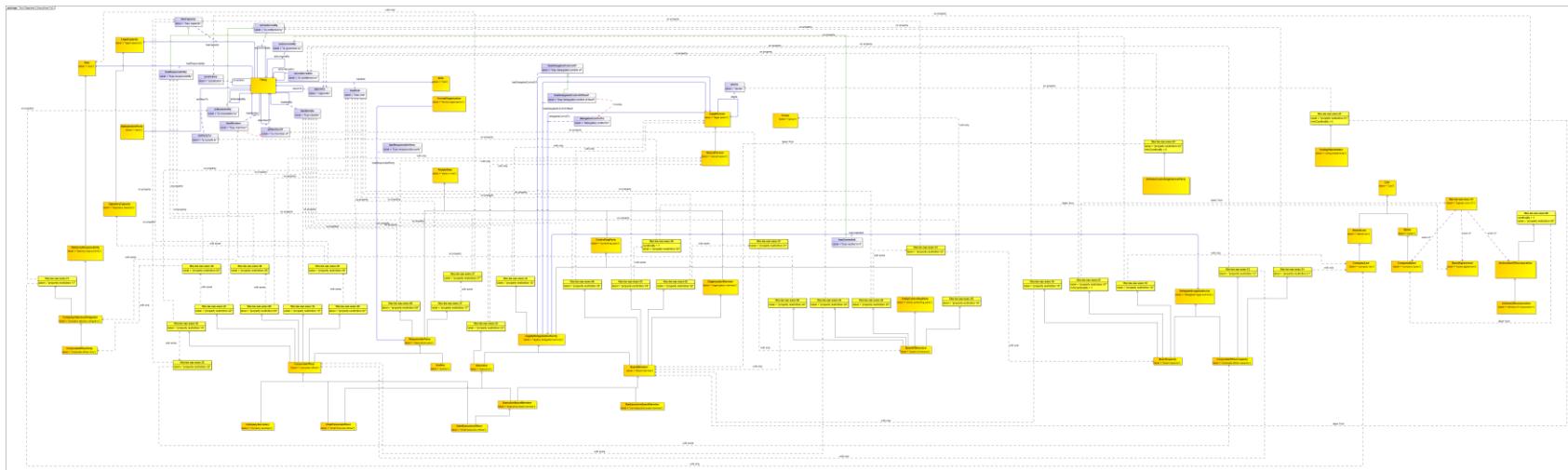
**Figure 9.6.5.1      Executives Taxonomy**

This is the taxonomy of classes of “Thing” in the Executives ontology along with the more general concepts of which they are a specialization.



**Figure 9.6.5.2      Executives with Relationship Properties**

Properties in this ontology which are refined and reused by property restrictions, as shown in the complete diagram which follows. Properties reused from elsewhere are omitted for clarity.



**Figure 9.6.5.3 Executives Ontology (full diagram)**

This shows the completed ontology for Executives. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to Executives and their related concepts.

**Table 9-29. Executives Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Relationship Property	hasResponsibility	Anything	has responsibility	identifies a particular burden of obligation upon one who is responsible	has capacity		duty						
Relationship Property	delegatesControlTo	legal person	delegates control to	A party to which this legal person has delegated some authority or control	designates		legally delegated authority	has delegated control of itself					
Relationship Property	elects	legal person	elects	chooses someone to hold office or some other position by voting	designates		legal person			In the case of an election for a member of the board of directors, the bylaws state the manner in which that process is effected. The candidate members may be recommended by the board or other proxy and are then elected by the shareholder. A similar process may be			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										conducted to elect outside auditors.			
Relationship Property	hasResponsibleParty	formal organization	has responsible party	some party that has some defined responsibility with respect to the formal organization	has party in role		responsible party						
Class	ArticlesOfIncorporation	articles of incorporation		The articles of association are a contract (1) between the members (stockholders, subscribers) and the organization and (2) among the members themselves. It sets out the rights and duties of directors and stockholders individually and in meetings. Certain statutory clauses (such as those dealing with allotment, transfer, and forfeiture of shares) must be included; the other clauses are chosen by the stockholders to make up the bylaws of the organization. A court, however, may declare a clause ultra vires if it is deemed unfair, unlawful, or unreasonable. A copy of the articles is lodged with the appropriate authority such as the registrar of companies. Articles are public documents and may be inspected by anyone (usually on payment of a fee) either at the premises of the organization or at the registrar's office. Lenders to the organization take special interest in its provisions that impose a ceiling on the borrowings beyond which the organization's management must get shareholders' approval before taking on more debt. The usual American term is articles of incorporation.	instrument of incorporation								<a href="http://www.businessdictionary.com/definition/articles-of-incorporation.html">http://www.businessdictionary.com/definition/articles-of-incorporation.html</a>
Class	Auditor	auditor		An individual qualified (at the state level) to conduct audits. An auditor may be an internal auditor (an individual whose primary job function is to audit his or her own company) or an external auditor (an individual from outside the	responsible party					They have power independently of the board. Power to assess the quality of the financial reports. Also has obligations to the statutory			<a href="http://www.investorwords.com/326/auditor.html">http://www.investorwords.com/326/auditor.html</a>

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				company, who typically is employed by an auditing firm who handles many different clients).						authorities in that regard. The auditor has obligations to the shareholders which are not directly to the Board. Their specific role is to supervise the board to ensure they are acting on behalf of the shareholders. To report to the shareholders on the activities of the Board. Therefore, Auditor's report is a required part of the financial reports. They are responsible for providing a true and fair view of the financial positions of the company. Election - Put up by the board. Appointed by the Board on behalf of the shareholders. Can be voted out by the shareholders at an AGM or EGM but the board can also put up a competitive process. Normally board elects them but the shareholders can override that selection.			
Class	BoardCapacity	board capacity		the capacity that resides in the board of directors of a company	delegated legal authority property restriction 07 property restriction 10 property restriction 12								
Class	BoardMember	Board Member		A person who is a member of the board of directors of an incorporated company.	property restriction 02 property restriction 05								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
					organization member property restriction 19 legally delegated authority								
Class	BoardOfDirectors	board of directors		Governing body (called the board) of an incorporated firm. Its members (directors) are elected normally by the subscribers (stockholders) of the firm (generally at an annual general meeting or AGM) to govern the firm and look after the subscribers' interests. The board has the ultimate decision-making authority and, in general, is empowered to (1) set the company's policy, objectives, and overall direction, (2) adopt bylaws, (3) name members of the advisory, executive, finance, and other committees, (4) hire, monitor, evaluate, and fire the managing director and senior executives, (5) determine and pay the dividend, and (6) issue additional shares. Though all its members might not be engaged in the company's day-to-day operations, the entire board is held liable (under the doctrine of collective responsibility) for the consequences of the firm's policies, actions, and failures to act. Members of the board usually include senior-most executives (called inside directors or executive directors) as well as experts or respected persons chosen from the wider community (called outside directors or non-executive directors).	entity controlling party property restriction 04 property restriction 18 property restriction 24 property restriction 25								<a href="http://www.businessdictionary.com/definition/board-of-directors.html">http://www.businessdictionary.com/definition/board-of-directors.html</a>
Class	Bylaw	bylaw		Corporate bylaws are typically called Articles of Association in the United Kingdom, or Articles of Incorporation in the United States. In government usage, the term bylaws is	Law								

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				used to describe laws, orders, regulations, rules, etc., made by a ministry, local authority (a municipality, for example), or public corporation, in accordance with the powers conferred by or delegated under a statute (called the parent act).									
Class	ChiefExecutiveOfficer	chief executive officer		Top executive responsible for a firm's overall operations and performance. He or she is the leader of the firm, serves as the main link between the board of directors (the board) and the firm's various parts or levels, and is held solely responsible for the firm's success or failure. One of the major duties of a CEO is to maintain and implement corporate policy, as established by the board. Also called President or managing director, he or she may also be the chairman (or chairperson) of the board.	corporate officer executive board member								<a href="http://www.businessdictionary.com/definition/chief-executive-officer-CEO.html">http://www.businessdictionary.com/definition/chief-executive-officer-CEO.html</a>
Class	ChiefFinancialOfficer	chief financial officer		Senior-most executive responsible for financial control and planning of a firm or project. He or she is in charge of all accounting functions including (1) credit control, (2) preparing budgets and financial statements, (3) coordinating financing and fund raising, (4) monitoring expenditure and liquidity, (5) managing investment and taxation issues, (6) reporting financial performance to the board, and (7) providing timely financial data to the CEO. Also called chief finance officer, comptroller, controller, or finance controller.	corporate officer executive								<a href="http://www.businessdictionary.com/definition/chief-financial-officer-CFO.html">http://www.businessdictionary.com/definition/chief-financial-officer-CFO.html</a>
Class	CompanyBylaw	company bylaw		The official rules and regulations which govern a corporation's management. Drawn up at the time of incorporation, along with the charter.	bylaw								<a href="http://www.investorwords.com/660/bylaws.html">http://www.investorwords.com/660/bylaws.html</a>

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	CompanyLaw	company law		Legislation under which the formation, registration or incorporation, governance, and dissolution of a firm is administered and controlled.	statute law								<a href="http://www.businessdictionary.com/definition/company-law.html">http://www.businessdictionary.com/definition/company-law.html</a>
Class	CompanySecretary	company secretary		Officer appointed by the directors of a firm as responsible for ensuring that firm's legal obligations under the corporate legislation are complied with. His or her formal duties include (1) calling meetings, (2) recording minutes of the meetings, (3) keeping statutory record books, (4) proper payment of dividend and interest payments, and (5) proper drafting and execution of agreements, contracts, and resolutions. A company secretary is not automatically an employee of the firm and, if employed with executive responsibilities, not be its director shareholder. If a firm has only two directors, one may act as its secretary; but a sole director may not. A firm (such as of accountants) may not act as a company secretary for any firm. Called corporate secretary in the US.	corporate officer					Functionary but also a signer of documentation in the company. Does not have powers to do anything without instruction from the board. The role arises from legal obligations imposed by the company. responsible to legislative authorities for the company meeting those legal obligations. Role is that they gain a degree of control but only in the fact that they must report according to rules established by their legislative jurisdiction. Example: Delaware: you need a designated corporate secretary who is responsible for submitting certain documents etc.			<a href="http://www.businessdictionary.com/definition/company-secretary.html">http://www.businessdictionary.com/definition/company-secretary.html</a>
Class	CompanyStatutoryObligation	company statutory obligation		An obligation defined in company law (statute).	statutory responsibility property restriction 11					This is the set of laws that define the statutory obligations on public officers for the jurisdiction in which the company operates.			
Class	CorporateOfficerCapacity	corporate officer capacity		the capacity vested in a public officer of a company	property restriction 13 delegated legal authority property restriction 21					This is framed as a capacity: -an individual acts in their capacity of the role as CFO, CEO etc. but their legal			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
										liability rests in their relationship with the board itself i.e. comes from their membership on the board from a corporate standpoint.			
Class	CorporateOfficerDuty	corporate officer duty		Some duty incumbent upon some officer of a company	company statutory obligation								
Class	CorporateOfficer	corporate officer		The executives of a corporation charged with certain operational responsibilities. Typically appointed by the board of directors, the corporate officers usually include the Chief Executive Officer (CEO), Chief Financial Officer (CFO), President, and in some corporations the Chief Operating Officer.	property restriction 09 responsible party property restriction 15 property restriction 16 property restriction 20 property restriction 22					Some party which is recognized by law as having the role and responsibilities defined for a Public Officer as described in that law.			<a href="http://www.investorwords.com/15091/corporate_officers.html">http://www.investorwords.com/15091/corporate_officers.html</a>
Class	ExecutiveBoardMember	executive board member		An individual performing the role of a board member of a company who also has executive responsibilities in the company.	Board Member executive								
Class	DeFactoControllingInterestParty	de facto controlling interest party			property restriction 03					A Control Owner (i.e., Control Person, per SEC regulations) may have some means or right that allows them to exercise control over board composition, other than through proxy assignment or vote. Not all Control Persons have this facility, as it is not inherent to having a significant (for example, 20 percent or more) ownership stake.			
Class	Executive	executive		Person appointed and given the responsibility to manage the affairs of an organization and the authority to make decisions within specified boundaries.	legally delegated authority property restriction 23								<a href="http://www.businessdictionary.com/definition/executive.html">http://www.businessdictionary.com/definition/executive.html</a>

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Class	InstrumentOfIncorporation	instrument of incorporation			property restriction 06						extends the definition of an instrument of incorporation to constrain corporate bylaws		
Class	LegallyDelegatedAuthority	legally delegated authority		a party having some legal control of some entity	property restriction 14 controlling party								
Relationship Property	hasDelegatedControlOfItself	legally delegated authority	has delegated control of itself	the legal person that has delegated some authority or control to this party and over which this party therefore has control	has delegated control of		legal person	delegates control to					
Relationship Property	hasDelegatedControlOf	legally delegated authority	has delegated control of	the legal person that has delegated some authority or control to this party	controls		legal person						
Relationship Property	hasVestedInIt	legally delegated authority	has vested in it	a delegated legal authority is one that has the legal capacity of delegated legal authority vested in it.	has capacity		delegated legal authority						
Class	NonExecutiveBoardMember	non-executive board member		Some person performing the role of a Board Member of a company, and having no executive responsibilities towards the running of the company.	Board Member								
Class	ResponsibleParty	responsible party		A party to which some responsibility has been given.	property restriction 08 property restriction 17 party in role					The responsibility may be defined in terms of specific instruments such as laws, bylaws or contracts, or by some other means. These instruments would mandate certain obligations on the part of the party, for example statutory obligations.			
Class	VotingShareholder	voting shareholder			property restriction 01					A voting shareholder may exercise control over board composition by (1) attending a shareholder meeting and voting directly, (2) assigning a proxy to vote on their behalf, either as specified in the recommendations made in the			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
											proxy card or as indicated in a manner that deviates from those recommendations but is detailed on the proxy card, (3) by rejection of the proxy, either implicitly or explicitly, or (4) through a direct ballot that they create themselves.		
Logical Union	fib0-be-oac-exec-34	logical union 01	union of	Logical union of the types of thing identified in the column "Related Thing or Type".			company bylaw board agreement instrument of incorporation						
Property Restriction	fib0-be-oac-exec-01	property restriction 01	elects	Set of things that may have the property shown, taken from the type of thing indicated.			Board Member		min 0				
Property Restriction	fib0-be-oac-exec-02	property restriction 02	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 31		must be some				
Property Restriction	fib0-be-oac-exec-03	property restriction 03	appoints	Set of things that may have the property shown, taken from the type of thing indicated.			Board Member		min 0				
Property Restriction	fib0-be-oac-exec-04	property restriction 04	has member	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			Board Member		may only be				
Property Restriction	fib0-be-oac-exec-05	property restriction 05	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			legal person		may only be				
Property Restriction	fib0-be-oac-exec-06	property restriction 06	constrains	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			company bylaw		exactly 1				
Property Restriction	fib0-be-oac-exec-07	property restriction 07	is conferred by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			logical union 01		min 1				
Property Restriction	fib0-be-oac-exec-08	property restriction 08	has identity	Set of things which, if they have the property shown, all participants in that			natural person		may only be				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				relationship must be taken from the type of thing indicated.									
Property Restriction	fibo-be-oac-exec-09	property restriction 09	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 28		must be some				
Property Restriction	fibo-be-oac-exec-10	property restriction 10	is conferred on	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			Board Member		may only be				
Property Restriction	fibo-be-oac-exec-11	property restriction 11	is mandated by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			company law		may only be				
Property Restriction	fibo-be-oac-exec-12	property restriction 12	is governed by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			company law		may only be				
Property Restriction	fibo-be-oac-exec-13	property restriction 13	is conferred on	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			corporate officer		may only be				
Property Restriction	fibo-be-oac-exec-14	property restriction 14	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			legal person		may only be				
Property Restriction	fibo-be-oac-exec-15	property restriction 15	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			natural person		may only be				
Property Restriction	fibo-be-oac-exec-16	property restriction 16	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 32		must be some				
Property Restriction	fibo-be-oac-exec-17	property restriction 17	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 27		must be some				
Property Restriction	fibo-be-oac-exec-18	property restriction 18	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			group		may only be				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				from the type of thing indicated.									
Property Restriction	fibo-be-oac-exec-19	property restriction 19	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 30		must be some				
Property Restriction	fibo-be-oac-exec-20	property restriction 20	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 29		must be some				
Property Restriction	fibo-be-oac-exec-21	property restriction 21	is conferred by	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			company law		may only be				
Property Restriction	fibo-be-oac-exec-22	property restriction 22	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 26		must be some				
Property Restriction	fibo-be-oac-exec-23	property restriction 23	has identity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			natural person		may only be				
Property Restriction	fibo-be-oac-exec-24	property restriction 24	appoints	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			corporate officer		must be some				
Property Restriction	fibo-be-oac-exec-25	property restriction 25	has role	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			property restriction 33		must be some				
Property Restriction	fibo-be-oac-exec-26	property restriction 26	has responsibility	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			corporate officer duty		may only be				
Property Restriction	fibo-be-oac-exec-27	property restriction 27	has responsibility	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			duty		may only be				
Property Restriction	fibo-be-oac-exec-28	property restriction 28	has responsibility	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing			company statutory obligation		must be some				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				indicated.									
Property Restriction	fib0-be-oac-exec-29	property restriction 29	has capacity	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			Signatory Capacity		must be some				
Property Restriction	fib0-be-oac-exec-30	property restriction 30	is a party to	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			board agreement		exactly 1				
Property Restriction	fib0-be-oac-exec-31	property restriction 31	is member of	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			board of directors		may only be				
Property Restriction	fib0-be-oac-exec-32	property restriction 32	has capacity	Set of things with the property shown, where at least one participant in that relationship must be taken from the type of thing indicated.			corporate officer capacity		must be some				
Property Restriction	fib0-be-oac-exec-33	property restriction 33	has capacity	Set of things which, if they have the property shown, all participants in that relationship must be taken from the type of thing indicated.			board capacity		may only be				

## 9.7 Module: Functionally Defined Business Entities

**Table 9-30. Functionally Defined Business Entities Module Metadata**

Metadata Term	Value
<b>sm:moduleName</b>	Functional Entities
<b>sm:moduleAbbreviation</b>	FIBO-BE-FCT
<b>sm:moduleVersion</b>	1.0
<b>sm:moduleAbstract</b>	This module includes ontologies describing entities which are defined according to their function, as opposed to their form. These include special purpose vehicles, banks, business versus non-profit

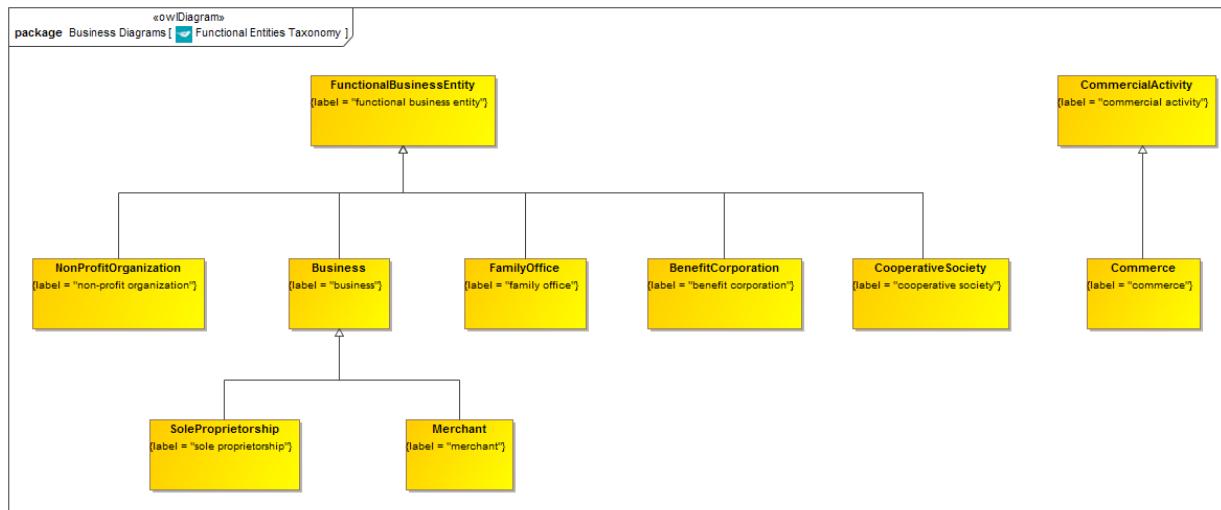
etc., as well as entities described in terms of their function in some process, such as clearing houses, settlement entities and the like.

### 9.7.1 Ontology: Functional Entities

This ontology defines the fundamental concepts for entities defined by their function, such as the relationship to the various forms which one or another functionally-defined entity may take. It also includes a number of basic types of entity defined by function, such as business and non-profit. The concepts in this ontology are intended to be extensible in other ontologies which may be dedicated to specific kinds of functionally-defined business entity or organization.

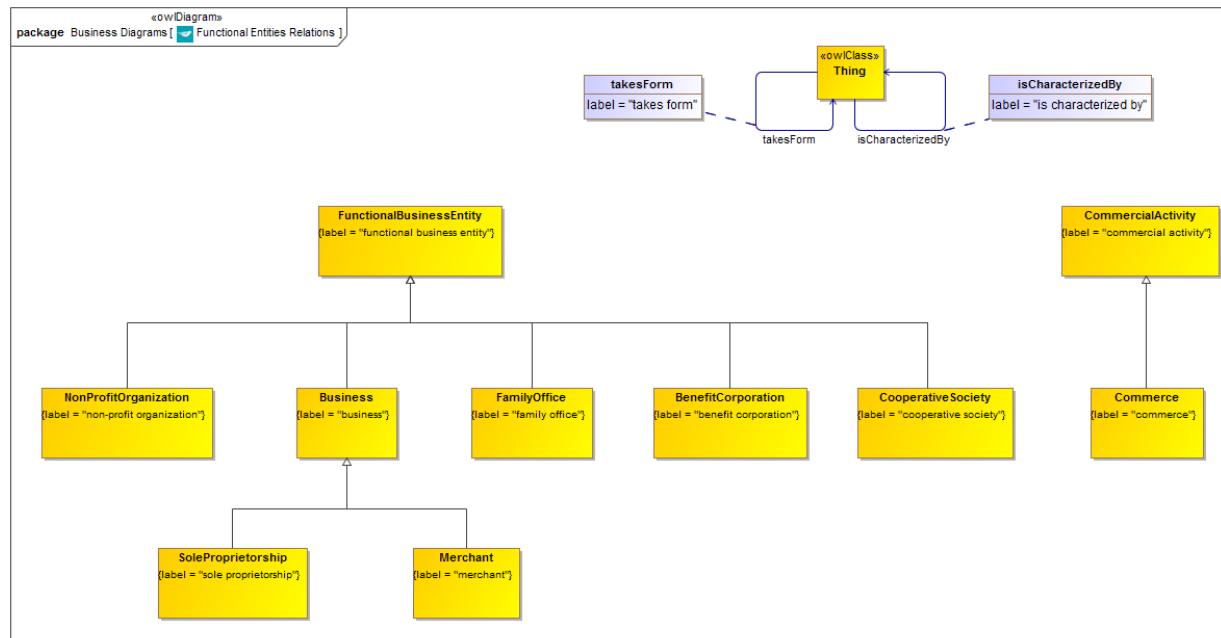
**Table 9-31. Functional Entities Ontology Metadata**

Metadata Term	Value
<b>sm:filename</b>	Functional Entities Ontology
<b>sm:fileAbbreviation</b>	fibo-be-fct-fct
<b>OntologyIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/FunctionalEntities/FunctionalEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/FunctionalEntities/FunctionalEntities/</a>
<b>owl:versionIRI</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/20131101/FunctionalEntities/FunctionalEntities/">http://www.omg.org/spec/EDMC-FIBO/BE/20131101/FunctionalEntities/FunctionalEntities/</a>
<b>sm:dependsOn</b>	<a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/LegalPersons/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/">http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/</a> <a href="http://www.omg.org/spec/EDMC-FIBO/BE/Corporations/Corporations/">http://www.omg.org/spec/EDMC-FIBO/BE/Corporations/Corporations/</a>



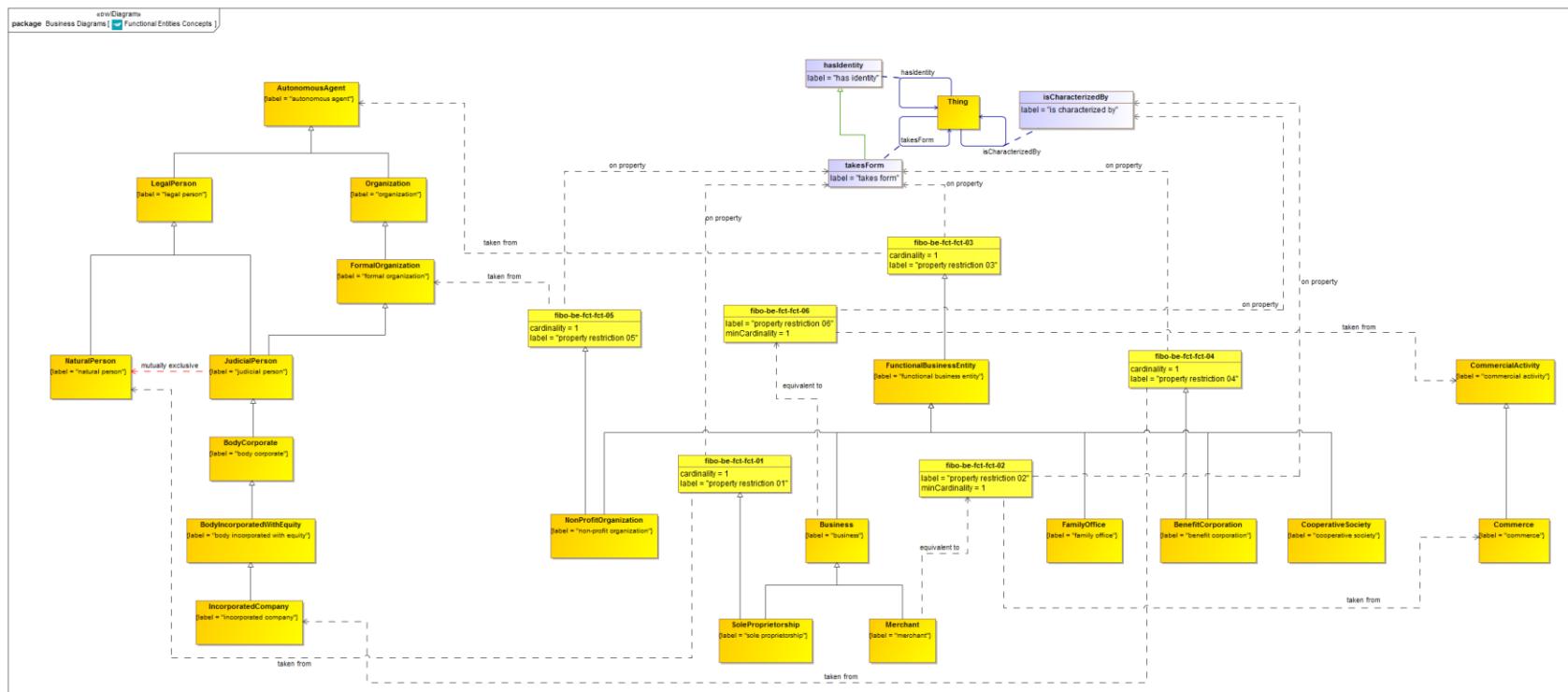
**Figure 9.7.1.1      Functional Entities Taxonomy**

This is the taxonomy of classes of “Thing” in the functionally defined entities ontology along with the more general concepts of which they are a specialization.



**Figure 9.7.1.2      Functional Entities Relationship Properties**

These are all the properties which are refined and reused by property restrictions, as shown in the complete diagram which follows. Of these, the property “is characterized by” is defined in this ontology.



**Figure 9.7.1.3 Functionally Defined Business Entities Ontology (full diagram)**

This shows the completed ontology for entities defined by their function. Properties defined in this ontology and elsewhere are refined or re-used to frame the properties essential to functionally defined business entities and their related concepts.

**Table 9-32. Functional Entities Details**

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
Relationship Property	isCharacterizedBy	Anything	is characterized by	that context in which a contextually defined thing is defined				characterizes					
Class	BenefitCorporation	benefit corporation		Corporation set up under specific state legislation to provide some stated societal benefit, and with some corresponding relaxation of the obligation to maximize shareholder return.	property restriction 04 functional business entity						This is a US-specific type of entity defined in new and emerging legislation in the US states of California,	www.bcorporation.net	

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
											Hawaii, Virginia, Maryland, Vermont, New Jersey. Additional upcoming legislation (as at November 2011) in Colorado, New York, North Carolina, Pennsylvania, Michigan. Much of the description is framed in terms of the role of the entity rather than its nature, however the legislation specifically relaxes or otherwise changes the basic parameters of the Incorporated Company structure (for example relaxing the requirement to maximize shareholder return) It may therefore be more correct to define this as a type of Incorporated Company not a role that one sits in. Having said this, B Corporations are certified by a certifying body (B Lab), which implies that they already exist and are granted a status in a similar way to that granted to non profit enterprises. Therefore at present this is defined as a status which an Incorporated Company may attain.		
Class	Business	business		An organization or economic system where goods and services are exchanged for one another	functional business entity								<a href="http://www.businessdictionary.com/definition/business.html">http://www.businessdictionary.com/definition/business.html</a>

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
				or for money. Every business requires some form of investment and enough customers to whom its output can be sold on a consistent basis in order to make a profit. Businesses can be privately owned, not-for-profit or state-owned. An example of a corporate business is PepsiCo, while a mom-and-pop catering business is a private enterprise.									
Class	Commerce	commerce		The activity of buying and selling goods.	commercial activity								
Class	Commercial Activity	commercial activity		The context of carrying out trade and other commercial i.e. for-profit activities.						This is the context which distinguishes "businesses" or commercial organizations from organizations in general, the latter including government, trans-national and non profit organizations. Note that these distinctions are usually made with reference to these kinds of context and are not necessarily reflected in the structure of those organizations.			
Class	Cooperative Society	cooperative society		A commercial enterprise owned and managed by and for the benefit of customers or workers.	functional business entity								
Class	FamilyOffice	family office		Family Office as defined in the relevant legislation.	functional business entity								
Class	FunctionalBusinessEntity	functional business entity		A business entity defined in terms of its function.	property restriction 03					The key distinguishing feature of a Functional Business Entity is that it may itself be constituted as some kind of Business Entity or Legal Entity, but the definition of this entity does not depend on it			

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
											always having one specific legal structure (for example always being a limited company). This would define for example a bank, a special purpose vehicle, most government bodies and so on.		
Class	Merchant	merchant		A business entity engaged in a trading activity.	business								
Class	NonProfitOrganization	non-profit organization		An organization which exists for some purpose other than to make a profit for its participants.	functional business entity property restriction 05						A non profit or charitable public or private foundation is a legal entity Action; needs a relationship to Legal Entity. Which is not a human being. Need non human legal entity scope formally defined. Probably has a board of directors.		
Class	SoleProprietorship	sole proprietorship		A business structure in which an individual and his/her company are considered a single entity for tax and liability purposes.	property restriction 01 business						A sole proprietorship is a company which is not registered with the state as a limited liability company or corporation. The owner does not pay income tax separately for the company, but he/she reports business income or losses on his/her individual income tax return. The owner is inseparable from the sole proprietorship, so he/she is liable for any business debts.		Investorwords.com
Property Restriction	fibo-be-fct-fct-01	property restriction 01	takes form	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			natural person		exactly 1				
Property Restriction	fibo-be-fct-fct-02	property restriction 02	is characterized	Set of things that have the property shown, in the			commerce		min 1				

Concept Type	Name	Type Of Thing	Property	Definition	Parent	Mutually Exclusive With	Related Thing or Type	Inverse Of Property	Multiples	Editorial Note	Explanatory Note	Term Origin	Definition Source
			by	multiples given, taken from the type of thing indicated.									
Property Restriction	fibo-be-fct-fct-03	property restriction 03	takes form	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			autonomous agent		exactly 1				
Property Restriction	fibo-be-fct-fct-04	property restriction 04	takes form	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			incorporated company		exactly 1				
Property Restriction	fibo-be-fct-fct-05	property restriction 05	takes form	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			formal organization		exactly 1				
Property Restriction	fibo-be-fct-fct-06	property restriction 06	is characterized by	Set of things that have the property shown, in the multiples given, taken from the type of thing indicated.			commercial activity		min 1				

# Annex A: Deliverables Included with this RFC

## (normative)

The FIBO ontologies are delivered as (1) RDF/XML serialized OWL (normative and definitive), (2) UML XMI, serialized from UML with the ODM profiles for RDF and OWL applied (normative), (3) ODM XMI, serialized based on the ODM MOF metamodels for RDF and OWL (normative), and (4) Visual Ontology Modeler (VOM) model files, based on the VOM plug-in to MagicDraw (informative). If there are differences between the OWL files, ODM XMI, and UML XMI, the OWL files take precedence, followed by the UML XMI, and finally the ODM XMI.

Regardless of their form, each of the ontologies included in Business Entities makes normative reference to the DCMI Dublin Core Metadata Terms<sup>1</sup>, W3C Simple Knowledge Organization System (SKOS) Recommendation<sup>2</sup>, and the OMG Architecture Board's Specification Metadata Recommendation<sup>3</sup>, which are not part of this specification.

The individual RDF/XML files are organized by module (directory), and within a given module, alphabetically by name, as shown in the URI structure for each individual OWL file. These files are UTF-8 conformant XML Schema files that are also OWL 2 compliant, and may be examined using any text editor, XML editor, or RDF or OWL editor. They have been verified for syntactic correctness via the W3C RDF Validator and University of Manchester OWL 2 Validator. They have also been checked for logical consistency using the Pellet OWL 2 reasoner from Clark & Parsia as well as the HermiT OWL 2 reasoner from Oxford University. It is anticipated that the OWL ontologies will be dereferenceable, together with technical documentation (HTML) from the OMG site once the specification is adopted.

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<sup>1</sup> <http://www.dublincore.org/documents/dcmi-terms/>

<sup>2</sup> <http://www.w3.org/TR/2009/REC-skos-reference-20090818/>

<sup>3</sup> <http://www.omg.org/techprocess/ab/SpecificationMetadata/>