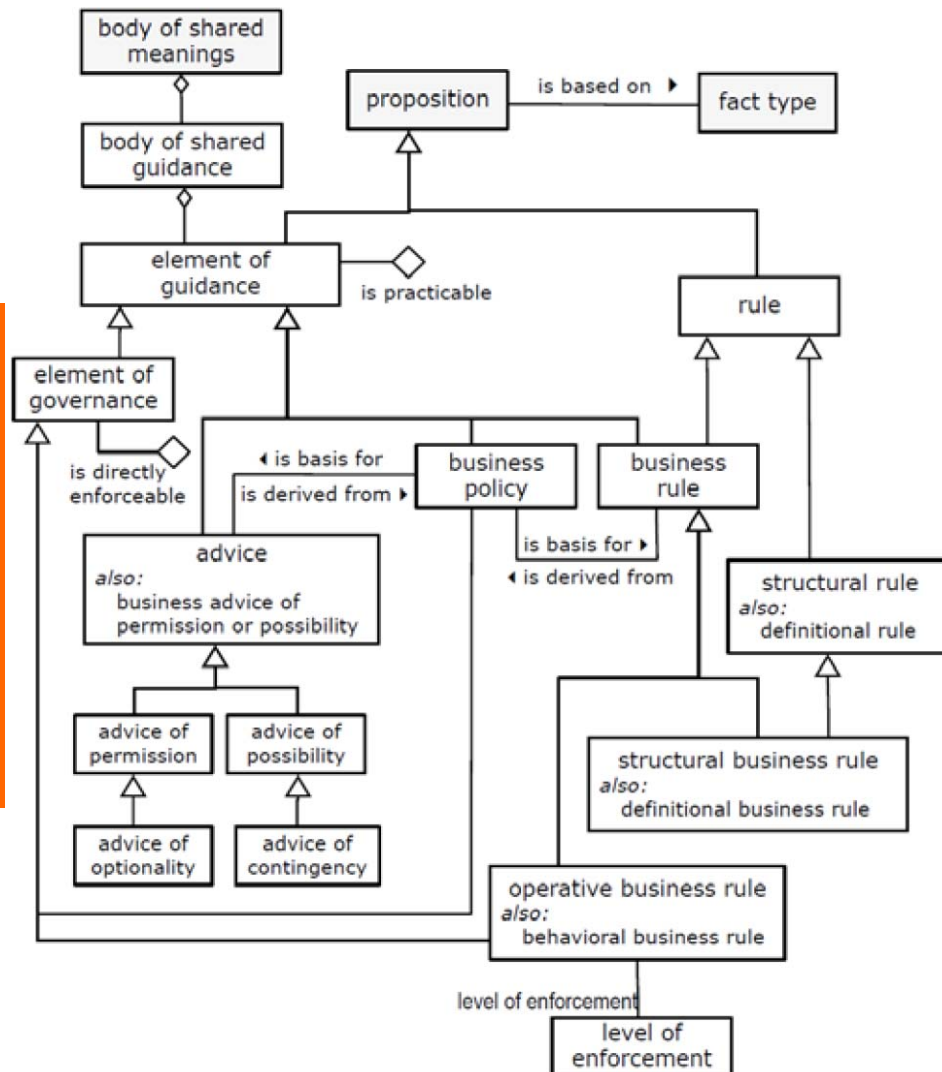


# Clause 12: Business Rules



- (Surprisingly) small part of SBVR
- Business Vocabulary is much bigger (and reusable for other aspects of business modelling)
- Intended for people:
  - ◆ Can be broken
  - ◆ Need enforcement
- Actionable, but not necessarily automatable



# Business Rules

## rule

Definition:

proposition **that** is a claim of obligation **or** of necessity

Dictionary Basis:

one of a set of explicit or understood regulations or principles governing conduct or procedure within a particular area of activity ... a law or principle that operates within a particular sphere of knowledge, describing, or prescribing what is possible or allowable. [ODE]

## business rule

Definition:

rule **that is** under business jurisdiction

General Concept:

rule, element of guidance

Note:

A rule's being "under business jurisdiction" means that it is under the jurisdiction of the semantic community that it governs or guides - that the semantic community can opt to change or discard the rule. Laws of physics may be relevant to a company (or other semantic community); legislation and regulations may be imposed on it; external standards and best practices may be adopted. These things are not business rules from the company's perspective, since it does not have the authority to change them. The company will decide how to react to laws and regulations, and will create business rules to ensure compliance with them. Similarly, it will create business rules to ensure that standards or best practices are implemented as intended. See subclause A.2.3

## business rule is derived from business policy

Synonymous Form:

business policy **is basis for** business rule



# Kinds of Business Rules

Two kinds of business rule:

- **Operational**: govern what the business does
  - “It is obligatory that ...”
  - “It is permitted that ...” (and its negation, “It is forbidden that ...”)
- **Structural**: true by definition
  - “It is necessary that ...”
  - “It is possible that ...” (and its negation, “It is impossible that ...”)



# Kinds of Business Rules

## structural rule

Definition: rule that is a claim of necessity.

Synonym: definitional rule

## structural business rule

Definition: structural rule that is a business rule

Necessity: Each structural business rule is *practicable*.

Synonym: definitional business rule

## operative business rule

Definition: business rule that is a claim of obligation

Definition: element of governance that is *directly enforceable*

Dictionary Basis: a prescribed, suggested, or self-imposed guide for conduct or action : a regulation or principle  
<his parents laid down the rule that he must do his homework before going out to play> <a very sound rule for any hiker is to mind his own business [...] F.D.Smith & Barbara Wilcox>  
<made it a rule never to lose his temper> [...] [MWU (1a) 'rule']

Dictionary Basis: a prescribed guide for conduct or action [MWCD 'rule']

Necessity: No operative business rule is a structural business rule.

Synonym: behavioral business rule



## Defining a Business Rule

Underlying verb concept (in SBVR's Vocabulary for Business Rules):

element of guidance *is based on* verb concept

We know that (also in SBVR's Vocabulary for Business Rules):

element of guidance *introduces an* obligation or necessity  
business rule *is a category of* element of guidance

So, in the SBVR Business Vocabulary+Rules for a specific business  
(e.g. EU-Rent)

- Start with a verb concept, e.g.  
rental has driver
- Apply an obligation or necessity to it, e.g.  
*it is obligatory that* rental has driver.
- Add qualifications, quantifications and conditions, if necessary e.g.  
*it is obligatory that each* rental has at most 4 drivers.

(Chapin & Hall 2006)



## Levels of Enforcement

- Levels of Enforcement are separated from rules

### level of enforcement

Definition:	a position in a graded or ordered scale of values that specifies the severity of action imposed in order to put or keep <b>an <u>operative business rule</u></b> in force
Dictionary Basis:	a position on a real or imaginary scale of amount, quantity, extent, or quality [NODE 'level']
Dictionary Basis:	compel observance of or compliance with [NODE 'enforcement']

- Only operative rules have levels of enforcements

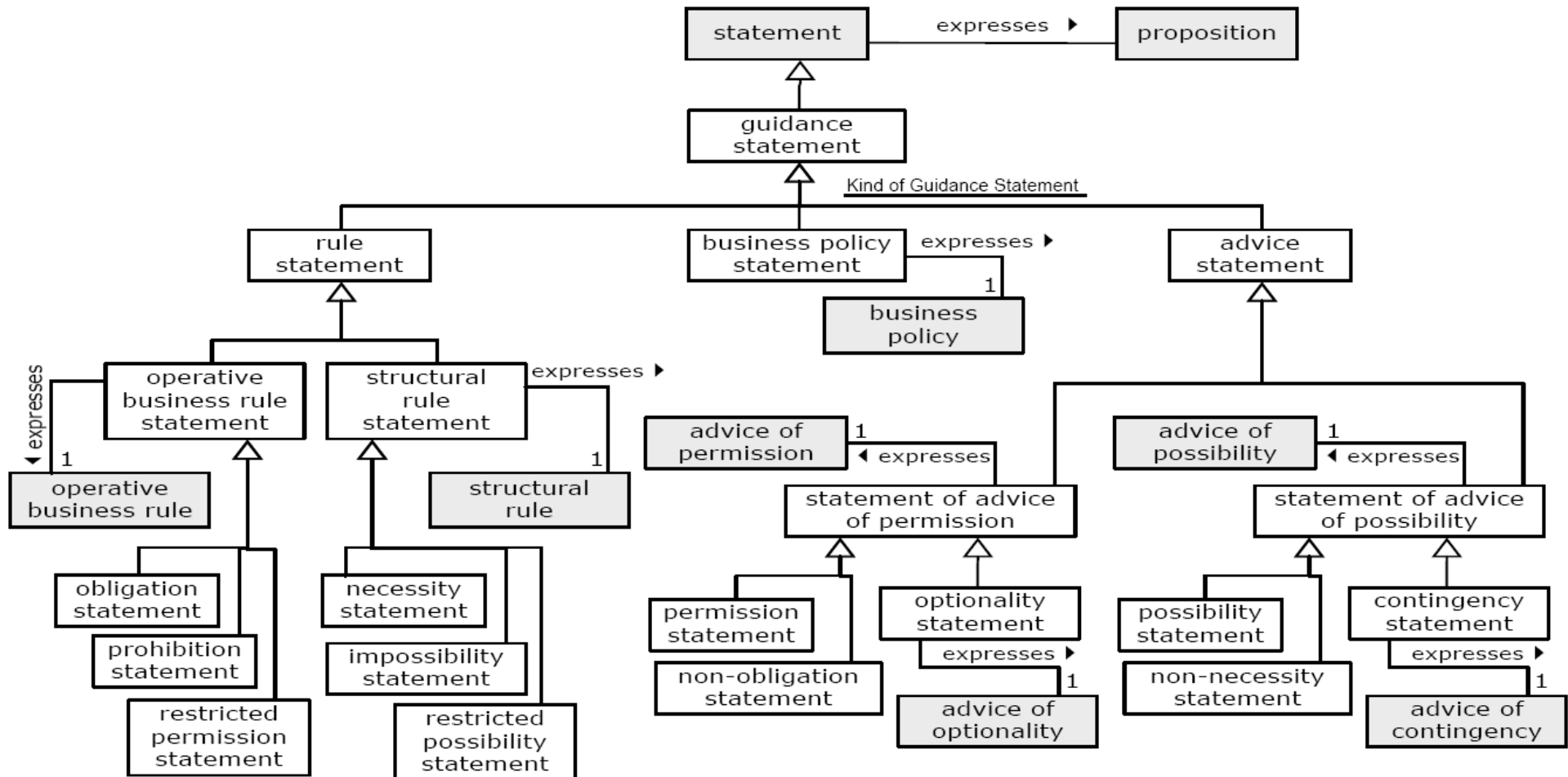
### operative business rule has level of enforcement

- SBVR does not prescribe any enforcement levels. It only gives examples (the ones also mentioned in BMM):  
strict, deferred, pre-authorized, post-justified, override, guidelines

## Statements of Guidance

- Clause 12.2 provides a normative vocabulary for the kinds of guidance statements that business people assert.
- These kinds of guidance statements are general with respect to any particular language.
- It does not standardize any particular rule language
- The categories presented in this subclause are intended for business people.
  - ◆ deeper logical analysis is provided in clause 10 of the SBVR specification (see later)

# Statements of Guidance



# Statements of Guidance

## guidance statement

- Definition: statement that expresses an element of guidance
- Definition: statement that provides advice or information aimed at resolving a problem or difficulty, especially as given by someone in authority
- Dictionary Basis: a statement that provides advice or information aimed at resolving a problem or difficulty, especially as given by someone in authority [NODE 'guidance']

## business policy statement

- Definition: guidance statement that expresses a business policy
- Necessity: The concept 'business policy statement' is included in Kind of Guidance Statement.

## rule statement

- Definition: guidance statement that expresses an operative business rule or a structural rule
- Necessity: The concept 'rule statement' is included in Kind of Guidance Statement.



# Rule Statements

## structural rule statement

- Definition: rule statement that expresses a structural rule
- Note: One structural rule can be expressed as various equivalent kinds of statements by introducing or removing negation. The following are examples of the same rule, expressed in three forms.
- Example: [as a necessity statement] “It is necessary that the pick-up branch of a one-way rental is not the return branch of that rental.”
- Example: [as an impossibility statement] “It is impossible that the pick-up branch of a one-way rental is the return branch of that rental.”
- Example: [as a restricted possibility statement] “It is possible that the pick-up branch of a rental is the return branch of the rental only if the rental is not a one-way rental.”

## operative business rule statement

- Definition: business rule statement that expresses an operative business rule
- Necessity: No operative business rule statement is a structural rule statement.
- Note: One operative business rule can be expressed as various equivalent kinds of statements by introducing or removing negation. The following are examples of the same rule, expressed in three forms.
- Example: [as an obligation statement] “It is obligatory that a rental that is open has no driver that is a barred driver.”
- Example: [as a prohibition statement] “It is prohibited that a rental be open if a driver of the rental is a barred driver.”
- Example: [as a restricted permission statement] “It is permitted that a rental be open only if no driver of the rental is a barred driver.”

