Breakout Session 3

(Brief) report

Financial Information Workshop
22nd July 2010

General Research Issues (some)

- Where do data come from?
- What is the right level of detail required?
- Need for case studies (mortgage proposed)
- KR generally deals with sets and relations on sets
  - ⋆ need for more expressive power

1. Representation

- Consistent theory
- Formal representation of contracts
- Term sharing
- Consider off-the-shelf ontologies
- Mismatch with real-world entities in case of no shared vocabulary
  - ⋆ e.g. data extracted from the Web

2. Ontology matching and merging

- Ontologies need to be flexible to change
- Links between concepts are needed to merge/integrate
- Different organisations have different ontologies/vocabularies
- Work on “atomic” concepts to set the basis for integration
- Regulator vs. third party perspective

3. Rules and complexity of reasoning

- Behaviour needs rules
- Time is involved in contracts (no question)
- Rule languages have to allow for tractable/decidable reasoning
- Automated reasoning is the key to draw concusions on risk

4. Approximate and probabilistic reasoning

- The only fact is the contract
  - ⋆ pretty much all the rest is uncertain
- Kinds of uncertainty to be modelled
  - ⋆ e.g. is the Govt. going to bail a bond issuer out?
- Probability and risk are subjective but representable formally

5. Systemic risk evaluation

- Evaluation of representations
  - ⋆ is any fact missing from the representation?
- Where is risk intrinsically? In the model or in the instrument itself?
- Domain experts should be enabled to evaluate risk rather than IT experts
- How is risk represented?
- Timeliness of data is sometimes essential to risk evaluation