

# Ontology-based Financial Standards: Some ongoing work

Ontology Based Standards Miniseries

7 November 2013

# Introduction

- What standards are there in the financial services industry?
- What moves are there towards semantic representation of business concepts in the industry?
  - As assertions of meaning
  - As formal ontologies
- Challenges in semantics: making models really meaningful
  - Common / shared meaning across standards / ontologies
  - Getting business validation of concepts
- Uses for Semantic Standards
  - Common Language
  - Semantic Technology applications
  - Regulatory reform

# The Financial Standards Landscape

Investment roadmap –  
FIX, ISO, FpML syntax

**High-level**

	Cash Equities	Fixed Income	Forex	Listed Derivatives	Bank Loan / Loan Deposits	OTC Derivatives	Funds
<b>Pre-Trade</b>							
<b>Trade</b>				FIX		FIX + FpML	
<b>Post-Trade</b>				FIX, ISO	FIX + FpML		ISO †
<b>Clearing / Pre-Settlement</b>						FpML ††	
<b>Settlement</b>							
<b>Asset Servicing</b>						FpML	
<b>Pricing / Risk / Reporting</b>							

† Represents ISO 20022, ISO 15022 and SWIFT FIN messages

†† Combination of FIX+FpML is supported for post-trade allocations and confirmations



# Where are they now?

- Most industry standards started out as physical message schemas or database schemes
- Growing recognition of the need to elevate these to a “Logical” level
  - FIX (front office / trading)
  - MISMO (Loans)
  - ACORD (insurance)
- Some standards groups are working to assert formal meanings as part of standards, principally in ISO:
  - ISO 20022: improvements to the logical model, toward semantics; “Semantic layer” WG
  - ISO 15944-4: formal transactions semantics
  - XBRL: has its own unique way of modelling accounting semantics; XBRL-GL initiative to capture common meanings across XBRL silos
- Semantics is a new thing to the industry
  - Perceived variously as a threat, a new paradigm or some irrelevant philosophy
  - Demonstrations of the capabilities of reasoning based applications are winning hearts and minds, including in the regulatory community

# Today's Focus

- Common, formal semantics
  - Transactions, accounting and the re-use of common concepts
  - Taming the complexity of semantics
  - The use of a common conceptual framework, ontology partitions etc. to align concepts semantically across the industry
- Regulatory Use Case
  - Use of common semantics in the framing of regulatory rules and requirements
  - Interfacing with the business domain to ensure accuracy of concepts

# Session Agenda

- Presentations
  - **Professor Bill McCarthy** (Michigan State U) - "**ISO 15944-4 (2nd edition) and the REA accounting ontology**"
  - **Mr. Dave McComb** (Semantic Arts) - "**Taming Complexity in the Financial Services Industry**"
  - **Mr. Mike Bennett** (EDM Council) - "**FIBO and Shared Semantics**"
  - **Dr. Elie Abi-Lahoud** (University College Cork, Ireland) - "**Use of SBVR to create regulatory ontologies**"
  - **Mr. John Hall** (Model Systems, UK) - "**Interpreting Regulation: some snippets from a methodology**"
- Discussion