A Framework of Management Assertions in the Interactive Data Environment

Rajendra Srivastava, Ernst & Young Distinguished Professor
Ken Dalton, PhD Student
The University of Kansas
March 22, 2012
Outline

- Objective
- Information Quality (IQ) Requirements
- Management Assertions for Preparing Financial Statements in Compliance with IQ
- Audit or Assurance Process – the basics
- Management Assertion for Preparing Financial Statements in interactive data environment – a new Language (XBRL)
- Audit or Assurance Process under interactive data environment
Develop a set of “Management” assertions that would allow:

1. Preparers to generate XBRL filings directly from accounting systems that comply with Information Quality requirements.

2. Assurance providers to provide assurance on financial (business) reports directly generated from accounting systems in the XBRL format (both in terms of semantics and syntax).
"Philosophy gets back to first principles, to the rationale behind the actions and thoughts which tend to be taken for granted. Philosophy is concerned with the systematic organization of knowledge in such a way that it becomes at once more useful and less likely to be self-contradictory” (p. 8)
Analogy: Translation of a passage from one language to another language (say, English to Hindi)

- Vocabulary and Facts (Taxonomy and Facts)
- Grammar (Schema and Linkbases)

----------

Ultimate goal is to translate the passage so that the contents and meanings remain the same in the translated version (i.e., Facts, Semantics, and Syntax).
Information Quality Requirements
Accounting Model: FASB/IASB, 2010

Diagram source: Ernst & Young, IFRS Outlook, Issue 86, October 2010

Existing financial statement assertions

- PCAOB adopted SAS 31
- IAASB adopted SAS 106
- Insufficient for the interactive data environment

<table>
<thead>
<tr>
<th>SAS No. 31 Assertions</th>
<th>SAS No. 106 Assertions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existence or occurrence</td>
<td>Occurrence (transactions)</td>
</tr>
<tr>
<td></td>
<td>Existence (balances)</td>
</tr>
<tr>
<td>Completeness</td>
<td>Completeness (transactions)</td>
</tr>
<tr>
<td></td>
<td>Completeness (balances)</td>
</tr>
<tr>
<td>Rights and obligations</td>
<td>Rights and obligations (balances)</td>
</tr>
<tr>
<td>Valuation or allocation</td>
<td>Accuracy (transactions)</td>
</tr>
<tr>
<td></td>
<td>Cutoff (transactions)</td>
</tr>
<tr>
<td></td>
<td>Classification (transactions)</td>
</tr>
<tr>
<td></td>
<td>Valuation and allocation (balances)</td>
</tr>
<tr>
<td>Presentation and disclosure</td>
<td>Occurrence and rights and obligations (Presentation and disclosure)</td>
</tr>
<tr>
<td></td>
<td>Completeness (presentation and disclosure)</td>
</tr>
<tr>
<td></td>
<td>Classification and understandability (Presentation and disclosure)</td>
</tr>
<tr>
<td></td>
<td>Accuracy and valuation (presentation and disclosure)</td>
</tr>
</tbody>
</table>

Source: Archambeault (2007), Tennessee CPA Journal
IQ Model (Bovee, Srivastava & Mak, IJIS 2003)

- Information Quality
  - Integrity
    - Accuracy
    - Consistency
  - Accessibility
  - Interpretability
    - Timeliness
    - Criterion 1
    - Criterion n
  - Non-Fictitiousness
  - Completeness
  - Relevance
    - Age
    - Volatility
Srivastava & Kogan (IJAIS 2010)

XBRL instance document is a true representation of the electronic document (ASCII or HTML) filed with the SEC

1. Business Facts in XBRL Instance Document are Reliable
   - 1.1 Completeness
   - 1.2 Existence
   - 1.3 Accuracy
     - 1.3.1 Element Accuracy
     - 1.3.2 Attribute Accuracy

2. Meta-Data in XBRL Instance Document are Reliable
   - 2.1 Well-Formedness
   - 2.2 Validity
   - 2.3 Proper Representation

3. Meta-Data External to XBRL Instance Document are Reliable
   - 3.1 Proper Taxonomies
   - 3.2 Valid Taxonomy Extensions
   - 3.3 Proper Taxonomy Extension Elements
   - 3.4 Proper Linkbases
This document still pertains to current situation, i.e., making sure that XBRL formatted reports “faithfully” represent traditional financial reports.

- **Principles emphasized:**
  - Completeness
  - Mapping
  - Accuracy
  - Structure

- **Criteria can be thought of as assertions**
  - e.g., management asserts that “element attributes are consistent with the underlying source information”
Management Assertions under Interactive Data Environment

- Basically, these assertions, in a way, are the union of the three sets of assertions (SAS 31, Srivastava and Kogan 2010, and XBRL P&C)

- **Level 1: Business Facts Level** (both individual concepts and disclosures)
  - **Existence** (exists in the system and in the XBRL Document – non fictitious)
  - **Completeness** (all transactions are recorded, and all facts required are present in the XBRL document)
  - Rights and Obligations
  - Valuation or Allocation
  - Presentation & Disclosure
Management Assertions under Interactive Data Environment (continued)

- **Level 2: Semantics Level**
  - **Consistency** (consistent use of appropriate tags)
  - **Comparability** (use industry specific tags according to standard)
  - **Accuracy of Extension** (extension only when needed, schema, attributes, linkbases)
  - **Accuracy of Attributes** (Value of attributes for all tags)
  - **Inter–connectedness** (no redundant tags within a report, Tables, Calculation linkbase, Label linkbase, etc.)
  - **Polarity** (currently a big problem, it may not be needed)

- **Level 3: Syntax Level**
  - **Well–formedness** (encompasses all relevant XML and XBRL specifications)
Questions!