

Understanding Relations

Financial Report Semantics and
Dynamics Theory

Overview

- Understanding relations
 - Important notions to consider
 - Example of related facts
 - Sets of facts which go together for some purpose
 - Relations between characteristics
 - Relations between concepts characteristic
 - Relations between components

Important Notions to Consider

- Facts are not random
- Facts are not free-floating
- Different types of relations
- Recognizing patterns helps
- Facts have patterns
- Relations have patterns
- Some patterns identified, could be more
- Hierarchies or “trees” are a good way to visualize relations

Example of Related facts

Reporting entity	Legal entity	Period	Concept	Value
ABC Company	Consolidated entity	Jan 1, 2011 to Dec 31, 2011	Revenues	3000
ABC Company	Consolidated entity	Jan 1, 2011 to Dec 31, 2011	Cost of revenues	1000
ABC Company	Consolidated entity	Jan 1, 2011 to Dec 31, 2011	Gross profit	2000
ABC Company	Consolidated entity	Jan 1, 2010 to Dec 31, 2010	Revenues	4500
ABC Company	Consolidated entity	Jan 1, 2010 to Dec 31, 2010	Cost of revenues	1500
ABC Company	Consolidated entity	Jan 1, 2010 to Dec 31, 2010	Gross profit	2500

Facts are related. Facts are not generally “free floating in space”.

For example, in example above (a) facts are related in that they are part of an income statement component; (b) Revenues, cost of revenues and gross profit are related in that $\text{Gross profit} = \text{Revenues} - \text{cost of revenues}$; (c) all the facts are related in that they all relate to the “consolidate entity”; (d) the first three facts are related in that they all are in the same period; same for the last three. These are only some of the relations which might exist.

Sets of Facts which go Together for Some Purpose

- **Component**

- Balance sheet
- Income statement
- Maturities of long term debt
- Significant accounting policies
- Inventory policies
- Details of property, plant and equipment
- Subsequent events
- Nonmonetary transactions

For more information on this topic please watch the video “Understanding components”.

Relations between characteristics

- **Partial Set** – does not provide the complete set of possible options, therefore these cannot be added
- **Complete flat set** – provides a complete, flat list, therefore these can be added
- **Complete hierarchical set** – provides a complete list, but the list has some hierarchy to it
- **Complete complex set** – provides a complete list and the list is a complicated hierarchy

For more information on this topic please watch the videos “Relations between characteristics” and “Relations between concepts”.

Relations between concepts characteristic

- **Roll up** – Fact A + Fact B + Fact n = Fact T (total)
- **Roll forward** – Beginning balance + changes = ending balance
(or BASE, beginning + additions – subtractions = ending)
- **Adjustment** – Originally stated + adjustments = restated
- **Variance** – Actual – budgeted = variance
- **Complex computation** – Some other complex computation
such as net income / weighted average shares = earnings per share
- **Hierarchy** – Related in some way but not a numeric-type
relation (i.e. everything else)

Relations between components

- **Flow**

- Order of components
- Sequence of components

- Primary financial statements
 - Balance sheet
 - Income statement
 - Cash flow statement
 - Statement of changes in equity
- Significant accounting policies
- Financial statement account disclosures
 - Cash and cash equivalents
 - Receivables
 - ...
- Broad transaction categories disclosures
 - Subsequent events
 - Related party transactions
 - ...

For more information on this topic please watch the video “Understanding flow”.

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