TSMT6, The power and challenges of interactive XBRL data global analysis,
Rita Ogun-Clijmans, 03/22/2012
XBRL holds the potential to deliver near real time, customized, high quality and rich deep content to investors but there are some challenges when consuming all the taxonomies and XBRL instances

- What challenges do users have sourcing and mapping XBRL data?
- What challenges do users have consuming ‘raw’ as reported data?
- What challenges do users have integrating non-GAAP data?
- Where do we go from here?
What challenges do users have sourcing and mapping XBRL data?

To understand the XBRL challenge, we need to understand what users have now

Sell side
Users intuitively understand the data model of a PDF/HTML document

Buy side analysts use data aggregators
- One single global feed and taxonomy
- Parallel running and/or long notification period for significant changes
- ‘Fixed to fixed’ item mapping
- Central filings library
- Content and Technical support

Data Aggregator
Proprietary tools to parse financial statements and automate the data tagging and collection
What challenges do users have sourcing and mapping XBRL data?

- Can I trust the data?
- Where and how can I access the XBRL instance filings?
- How many data elements do I need to map? Do I have to have a specific mapping for each country, what if local GAAP moves to IFRS?
- How do I handle dynamic mapping for child parent relationships?
- How do I format XBRL into my data model and database? For example: year end changes, internal restatement reason codes, fixed length, dimensions.
- How can I query the data? I want an ‘change only’ service for restatements. I want a ‘historical data refresh’. I want to know the data available for EPS at a particular moment in time. How?

**XBRL Value Added Services need to simplify it to the investor whilst at the same time leverage XBRL by providing customized choices.**
What challenges do users have consuming ‘raw’ as reported data?

Data need to be consistent available across companies and time periods

- History is lacking
- XBRL value added services have to calculate missing data
  - Income – continuing operations is net income when no discontinued activities
  - calculate EPS for all classes of shares when primary security only disclosed

Net earnings per share attributable to Berkshire Hathaway shareholders
$1,380

*represents EPS per common A share, earnings per class B common share is equal to 1/1,500 of such amount.

\[ => \text{Class B EPS} = \frac{1,380}{1,500} \text{ but XBRL needs to tag ‘1/1,500’}. \]
What challenges do users have consuming ‘raw’ as reported data?

*XBRL taxonomies provide all the trees that could be planted but investors also want to see the forest*

=> XBRL Value Added Service: data pyramid structure with full navigation between all data layers to allow for both deep dive and high level comparative analysis
What challenges do users have consuming ‘raw’ as reported data?

### Breakdown of Q1 operating costs

**April-June 2010 € millions**

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel</td>
<td>1,441</td>
</tr>
<tr>
<td>Labor costs</td>
<td>1,867</td>
</tr>
<tr>
<td>Aircraft costs (amortization and provisions, maintenance costs, operating leases and chartering)</td>
<td>1,019</td>
</tr>
<tr>
<td>Landing fees and route charges</td>
<td>426</td>
</tr>
<tr>
<td>Marketing and distribution</td>
<td>239</td>
</tr>
<tr>
<td>Handling charges</td>
<td>322</td>
</tr>
<tr>
<td>Other</td>
<td>539</td>
</tr>
<tr>
<td><strong>Total operating costs</strong></td>
<td><strong>5,853</strong></td>
</tr>
</tbody>
</table>

### Company Financial Statements – XBRL as reported

<table>
<thead>
<tr>
<th>Period from April 1 to June 30,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
</tr>
<tr>
<td>Other revenues</td>
</tr>
<tr>
<td><strong>Revenues</strong></td>
</tr>
<tr>
<td>External expenses</td>
</tr>
<tr>
<td>Salaries and related costs</td>
</tr>
<tr>
<td>Taxes other than income taxes</td>
</tr>
<tr>
<td>Amortization and depreciation</td>
</tr>
<tr>
<td>Provisions</td>
</tr>
<tr>
<td>Other income and expenses</td>
</tr>
<tr>
<td><strong>Income from current operations</strong></td>
</tr>
<tr>
<td>Aircraft fuel</td>
</tr>
<tr>
<td>Chartering costs</td>
</tr>
<tr>
<td>Aircraft operating lease costs</td>
</tr>
<tr>
<td>Landing fees and en route charges</td>
</tr>
<tr>
<td>Catering</td>
</tr>
<tr>
<td>Handling charges and other operating costs</td>
</tr>
<tr>
<td>Aircraft maintenance costs</td>
</tr>
<tr>
<td>Commercial and distribution costs</td>
</tr>
<tr>
<td>Other external expenses</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
What challenges do users have consuming ‘raw’ as reported data?

Company Press Release: high level normalized data items

**Key data**

<table>
<thead>
<tr>
<th></th>
<th>Quarter to 30th June</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>In euro millions, except per share data in euros</td>
<td></td>
</tr>
<tr>
<td>Revenues</td>
<td>5,721</td>
</tr>
<tr>
<td>EBITDA*</td>
<td>484</td>
</tr>
<tr>
<td>Operating income / (loss)</td>
<td>(132)</td>
</tr>
<tr>
<td>Operating income / (loss) – excluding air space closure</td>
<td>26</td>
</tr>
<tr>
<td>Income / (loss) from operating activities</td>
<td>878</td>
</tr>
</tbody>
</table>

⇒ **XBRL provides new Value Added Opportunities, some examples;**

⇒ A data mapping engine to automate and customize the way XBRL as reported data is rolled up and normalized

⇒ Relationship links between adjusted data and as reported XBRL to easily spot deviations over time for a company or across companies

But unstructured extensions and incomplete relationships need to be addressed.
What challenges do users have integrating non-GAAP data?

Where is the XBRL non-GAAP data to integrate?
important investor content is still missing: news, shareholdings, guidance data, detailed product line data, activity specific operating metrics

Cross-content taxonomy collaboration is critical in order to ensure that MUST HAVE relationships are done

- Analytical investment ratios and derived data items accurately co-mingles multiple content sources
- Common data presented in multiple taxonomies and reporting sources are synchronized

FULL POTENTIAL is considered
- Opportunities to focus on new ways to link information together rather than the facts itself are considered
What challenges do users have integrating non-GAAP data?

**Example: News**

- **News is critical for investors and affects nearly all content**
  - Unexpected stories that do not meet forecasts move prices
  - News should be reflected into databases for information not to be stale
    - Earnings release => non GAAP income, revenue for product lines, segment data, guidance, financial data etc. needs to be updated.

- **News XBRL taxonomies and instances have to be ‘content interoperable’**
  - Same element tags and context data across taxonomies and instances
  - News XBRL taxonomies will have unique features such as breakdown of news stories by categories, growth rates rather than absolute values, precise announcement dates/times.
What challenges do users have integrating non-GAAP data?

- But if we get it right, the XBRL potential is really exciting …
  - ROCE is linked to: a) asset turnover/margins and b) textual management guidance
  - Asset turnover is linked to retail operating metrics

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### Improving UK return on capital

**Key drivers of last 5 years**
- Asset turnover
  - Sales densities / sq ft stable
  - Lower build cost per square foot
- Margin
  - Leverage, scale benefits
  - Growth in retailing services
  - Productivity, step change

**UK ROCE to improve gradually going forward particularly from reduced WIP and growth in retailing services**

![Asset Turnover Chart](chart1.png)

- Sales densities
  - 05/06: 100
  - Average last 6 years: 101
- Build cost/sq ft
  - 06/07: 100
  - Average last 5 years: 93

![UK trading profit margin Chart](chart2.png)

- %
  - 06/07: 5.86%
  - 07/08: 6.06%
  - 08/09: 6.07%
  - 09/10: 6.17%
  - 10/11: 6.14%
Where do we go from here?

- Single web-based investor ‘access’ integrating and linking content of multiple taxonomies
  - All sources and all content
  - Content Interoperable taxonomies is a must, global mapping for key items

- Taxonomies for non-GAAP data
  - Product data, operating metrics and guidance data

- Tame the extensions
  - Taxonomy data model that allows for flexible financial reporting, deep dive and consistent/comparable data.
Where do we go from here?

- Re-engage investors

- New XBRL empowered investor tools. For example:
  - Customized data aggregation engine
    - Investor specifies roll-up of lower level data elements into higher level aggregates
  - Interactive XBRL enabled investor ‘financial’ data reports
    - Facilitating user driven data extraction – remembers what has been done in the past, does it again in the future and highlights what has changed.
    - Links content together in the source document for easy navigation
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