XBRL and Financial Reporting Transparency

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Abstract
Using eXtensible Business Reporting Language (XBRL) in financial reporting increases transparency by allowing viewing the details of the information provided by organizations without subdividing it and the possibility of easy access and processing information, even if it is presented in different languages or it results from the application of different regulations. Through this paper we try to emphasize the transparency ensured to financial reporting by using XBRL, which is why we transposed in this modern format, partially, the contents of one of the components of financial reports, namely, the balance sheet. In this process we based on the requirements of the Romanian accounting regulations in compliance with European directives, XML requirements and XBRL requirements concerning schemas, linkbase files and instances, and we used three of the modules of Altova MissionKit application (XMLSpy, MapForce and StyleVision), while taking into account the best practices in the field.

Keywords: financial reporting, XBRL, transparency, specification, taxonomy, instance

1. Introduction
The literature presents a variety of views on the significance of transparency in financial reporting or general reporting of information on the activities unrolled by organizations. Thus, according to different sources, the information is considered transparent when: it reflects the economic substance of transactions in a straightforward manner, even in times of great uncertainty (McEwen, 2009, p. 5); it reflects the entity’s underlying economics in a way that is readily understandable by users (Barth and Schipper, 2008, p. 176); it presents the economic reality of an entity (Lander and Auger, 2008, p. 113); it reflects full and fair all material aspects that have implications for the analysis of entity’s earnings and financial position (Mulford and Comiskey, 2002, p. 313); the financial reporting rules allow entities a certain degree of freedom to reflect their specifics (Schuster and Hjelström, 2008, p. 22); is easily extracted and effectively used (Hunton et al., 2006, p. 138); is characterized by relevance, reliability and timeliness (Roohani et al., 2009, p. 359).

In the context of XBRL use, transparency implies: full and fair disclosure of information about business activities and operation management (Roohani et al., 2009, p. 359); easy viewing the complete details of the information provided by organizations without increasing their level of detail and easy finding the information the users are seeking (Eccles and Krzus, 2010, p. 70); ensuring the clarity and well documentation of the facts reported (Piechocki, 2007, p. 198); providing the possibility of direct search for relevant information regardless of the location of this information and easy compare the information provided by different organizations (Li et al., 2006, p. 241); easily using the data due to their flexibility, dynamism, timeliness, accuracy, interactivity (Hoffman and Watson, 2010, p. 119), etc.

2. Research methodology
To carry out this work we have studied the relevant literature and the content of the standards in the domain of financial reporting in XBRL format, especially in order to identify the best practices and
the normative requirements regarding the development of XBRL taxonomies and instances. We also analyzed the content of some XBRL taxonomies designed based on accounting regulation applicable in different states of the world, for then, using an appropriate software, to develop a taxonomy based on Romanian accounting regulations in compliance with European directives and use it in generating an XBRL instance. Thus, showing through a practical example how XBRL action allowed easy extracting the features through which this modern language provides transparency to financial reporting.

3. Using XBRL for financial reporting

XBRL is defined, from a practical business perspective, as an open, platform-independent, international standard for the timely, accurate, efficient, and cost-effective electronic storage, manipulation, repurposing, and communication of financial and business reporting data (Bergeron, 2003, p. 15).

Within this section of our paper we try to emphasize the manner which XBRL action for financial reporting, going step by step from developing a taxonomy to generating an instance and explaining the role of different files involved in this process, inclusively the role of some elements or attributes in these files.

In carrying out this process, the information from the literature on XBRL fundamentals and developing taxonomies and instances helped us a lot (Bergeron, 2003; Andone, 2004; Hoffman, 2006; Piechocki, 2007; Debreceny et al., 2009; Hoffman and Watson, 2010; Enachi and Rotilă, 2010; Luca, 2011).

“The corner stone” in the construction of XBRL taxonomies and instances is represented today by the XBRL 2.1 Specification. XBRL “family” also includes a series of XBRL specifications, called modules (XBRL Dimensions Specification, XBRL Formula Specification, Inline XBRL (Rendering) Specification, XBRL Versioning Specification, Generic Linkbase Specification, etc.), which define new functionalities compliant with XBRL 2.1 base specification, no other older versions of this (1.0, 2.0, 2.0a), otherwise no longer supported and maintained by XBRL International consortium.

A first decision to be taken in order to ensure the basis for preparing financial reports in XBRL format consists in the option for one of the following solutions: creating a taxonomy based on the accounting regulations specific to different industries, organizations, etc. or using some existing taxonomies with or without creating extensions to them.

Given the differences between the Romanian accounting regulations applicable to economic agents and other European and international accounting regulations for which taxonomies have already been conceived, we consider it’s more appropriate to create a proper taxonomy, than to extend an existing one. Thus, based on the information provided by the Order of the Public Finances Ministry no. 3055/2009 for the approval of Romanian accounting regulations in compliance with European directives, with subsequent amendments, we conceived a taxonomy, of course not complete, which support the process of preparing the balance sheet in a modern format.

As it can be seen in figure 1, the use of XMLSpy module of Altova MissionKit application allowed us to create the taxonomy and to validate its content.
The taxonomy conceived by us consists of five files that we have not included in this paper due to the space required for presenting their content, namely: roinsfi_20101231.xsd, indicating different components of individual financial statements of Romanian economic entities and the types of links existing between elements within them, also including a series of concrete and abstract concepts declarations; roinsfi_lab20101231.xml, describing the links existing between concepts and label resources; roinsfi_ref20101231.xml, showing the links existing between concepts and reference resources; roinsfi_pre20101231.xml, reflecting the links existing between concepts in terms of presentation; roinsfi_cal20101231.xml, showing the links existing between concepts in terms of calculation of some values, where “roinsfi” is an abbreviation for individual financial statements of Romanian enterprises. The content of all these files can be customized by organizations, if they are allowed to do that, respecting the rules which apply when creating extensions.

After preparing the taxonomy, the transition to financial reporting based on XBRL standard viewed from the perspective of organizations in terms of informatics, taking into consideration the currently most used tools, involves using one of the following solutions: mapping the information in a certain document to XBRL and then using the document and the mapping to generate XBRL instances; exporting the information from an accounting program or other software application in XBRL format, after implementing XBRL in the existing software products; importing the information in any format in an XBRL dedicated program, which is intended to generate instances.

Choosing one of the three implementation methods involves that organization carry out some analysis of the conditions under which they conduct activities and the costs that they are willing to accept in relation to expected benefits.
In the example provided, we mapped the information in an Excel document (including the balances of various patrimonial elements at the end of the financial period) to the content set for the XBRL instance through the taxonomy, to which were automatically added some elements and attributes for which presentation is made directly in the instance. In fact, this is one of the simplest ways of implementing the language in the organizations. Figure 2 shows the manner in which the mapping was done for extracting the data from accounting in order to transpose them in XBRL format.

![Figure 2. Mapping Excel to XBRL using the MapForce module](image)

After the mapping process the XBRL instance is generated. This is subject for validation, inter alia, in order to observe if the relations established through the taxonomy as existing between various patrimonial elements are respected. The content of the generated and validated instance is presented by us in example 1.

**Example 1. Extract from the content of a balance sheet in XBRL format**

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xbrli:xbrl xmlns:roinsfi="http://www.roinsfi.com"
    xmlns:xlink="http://www.w3.org/1999/xlink"
    xmlns:xl="http://www.xbrl.org/2003/XLink"
    xmlns:link="http://www.xbrl.org/2003/linkbase"
    xmlns:ref="http://www.xbrl.org/2006/ref"
    ... /
```
xmlns:xbrldt="http://xbrl.org/2005/xbrldt"
xmlns:xbrli="http://www.xbrl.org/2003/instance">
<link:schemaRef xlink:type="simple"
xlink:href="D:/MihaelaEnachi/Example/roinsfi_20101231.xsd"/>
<xbrli:context id="SituatieLa_31Dec2009">
  <xbrli:entity>
    <xbrli:identifier
      scheme="http://www.mfinante.ro/agenticod.html">995549</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2009-12-31</xbrli:instant>
  </xbrli:period>
</xbrli:context>
<xbrli:context id="SituatieLa_31Dec2010">
  <xbrli:entity>
    <xbrli:identifier
      scheme="http://www.mfinante.ro/agenticod.html">995549</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2010-12-31</xbrli:instant>
  </xbrli:period>
</xbrli:context>
<xbrli:unit id="RON">
  <xbrli:measure
</xbrli:unit>
<roinsfi:CheltuieliDeConstituireTotal contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">700</roinsfi:CheltuieliDeConstituireTotal>
<roinsfi:CheltuieliDeDezvoltareTotal contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">850</roinsfi:CheltuieliDeDezvoltareTotal>
<roinsfi:ConcesiuniBreveteLicenteMarciComercialeDrepturiSiActiveSimilareTotal contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">1900</roinsfi:ConcesiuniBreveteLicenteMarciComercialeDrepturiSiActiveSimilareTotal>
<roinsfi:FondComercialTotal contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">100</roinsfi:FondComercialTotal>
<roinsfi:AlteImobilizariNecorporaleTotal contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">800</roinsfi:AlteImobilizariNecorporaleTotal>
<roinsfi:AvansuriSiImobilizariNecorporaleInCursDeExecutieTotal contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">900</roinsfi:AvansuriSiImobilizariNecorporaleInCursDeExecutieTotal>
<roinsfi:ImobilizariNecorporaleInCursDeExecutieTotal contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">600</roinsfi:ImobilizariNecorporaleInCursDeExecutieTotal>
<roinsfi:AvansuriAcordatePentruImobilizariNecorporale contextRef="SituatieLa_31Dec2009" unitRef="RON" decimals="-1">500</roinsfi:AvansuriAcordatePentruImobilizariNecorporale>
The XBRL instance presented above contains, on the first row, a prologue that comprises only one of the entities allowed here, namely, an eXtensible Markup Language (XML) declaration, indicating the XML version used in editing the instance and the character set used. The prologue is followed by the root of the document, created by including between start and end tags the xbrl element, which incorporates all other parts of the instance.

In the opening tag, <xbrli:xbrl>, there are specified several definitions of namespaces which elements and attributes used in the instance are coming from, and, immediately after this tag, through the schemaRef element is indicated the schema which XBRL instance refers to. Optionally, can be specified linkbaseRef elements, which show the linkbases which XBRL instance refers to, but, in our example, the reference to these was indirectly made, through the XBRL schema. The schemaRef and linkbaseRef elements help, as resulting from the above mentioned, in combining the components of a DTS (Discoverable Taxonomy Set). A discoverable taxonomy set may comprise any number of XBRL schemas and linkbases files which support the process of preparing instances, and the changes in the structure of a DTS provide flexibility in presenting financial reports or updating their content according to the new requirements set out in regulations.

After the taxonomy identification, there is specified some information about the organization which the facts presented refer to, the moment of presenting the facts and the unit used in measuring the numerical facts. The facts reported presents the following attributes: contextRef, linking...
information by a particular context; unitRef, identifying the unit of measure; decimal, which shows, through the value taken (-1), that all the figures on the left of tens are accurate.

We could also include in this instance some footnotes in order to refer to certain components of the financial statements containing additional information on the issues surprises by the balance sheet.

XBRL specific software allows us to view the instance according to different models, predefined or created by users, in order to easily read it. In figure 3 we present a model created by us, using StyleVision, based on the requirements formulated in the Romanian accounting regulations, concerning the organization of information in the balance sheet, which we made some corrections that we deemed necessary and that does not affect the compliance with European directives.

![Figura 3. Model for presenting the balance sheet created using StyleVision](image)

Based on the model created, the XBRL instance can be viewed in various formats (HTML, PDF, RTF, etc.), depending on the possibilities offered by the software used, example 2 showing the manner in which it is presented in Word 2007.

**Example 2. Extract from the content of a balance sheet presented with StyleVision**

<table>
<thead>
<tr>
<th>[20] BILANT - SITUATII FINANCIARE INDIVIDUALE (RON)</th>
<th>2010-12-31</th>
<th>2009-12-31</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. ACTIVE IMOBILIZATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. IMOBILIZARI NECORPORALE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cheltuieli de constituir</td>
<td>550.00</td>
<td>700.00</td>
</tr>
<tr>
<td>2. Cheltuieli de dezvoltare</td>
<td>1,275.00</td>
<td>850.00</td>
</tr>
<tr>
<td>3. Concesiuni, brevete, licente, marci comerciale, drepturi si active similare</td>
<td>2,850.00</td>
<td>1,900.00</td>
</tr>
<tr>
<td>4. Fond comercial</td>
<td>150.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>
If we also create labels in other languages for the elements declared in the XBRL schema, this instance will be understood by a much larger number of users. In addition, to increase transparency, we can create events, by writing codes in different programming languages, and attach them to the elements in the balance sheet, for example, in order to display in a separate window, by a simple click, the regulations and their subdivisions where we find formulated the requirements in accordance with which is made the valuation of different elements at the end of the year.

The publication of the XBRL instances on Internet allows them to be accessed for any use by investors, creditors, customers, government and its institutions, employees, etc. In this respect, we consider that is necessary to create a platform, managed in Romania by the Public Finances Ministry, similar to EDGAR (Electronic Data Gathering, Analysis, and Retrieval) platform from US SEC (United States Securities and Exchange Commission), where organizations can safely load their financial reports prepared in a modern format and that allows free viewing and downloading financial reports of interest to different users in making decisions.

4. The transparency of information in XBRL format

The usefulness of information provided through financial reports is influenced both by compliance with appropriate regulations and by meeting certain qualitative requirements, which are sometimes formulated directly in the regulations.

Efforts made by IASB and FASB in order to develop an improved conceptual framework for IFRSs and U.S. GAAP led, among other things, to a reorganization of the qualitative characteristics that information in the financial reports must have. Thus, at present, we talk about fundamental qualitative characteristics (relevance and faithful representation) and enhancing qualitative characteristics (comparability, verifiability, timeliness, understandability). These characteristics have been included by IASB in the new framework called Conceptual Framework for Financial Reporting, while FASB included them in SFAC 8 Conceptual Framework for Financial Reporting, situation which replaces SFAC 1 Objectives of Financial Reporting by Business Enterprises and SFAC 2 Qualitative Characteristics of Accounting Information.

Romanian accounting regulations make further reference to the qualitative characteristics that financial accounting information must have in the manner in which they were presented in the old IASB framework, Framework for the Preparation and Presentation of Financial Statements, principal being considered: understandability, relevance, reliability and comparability.

We consider that XBRL supports meeting these qualitative characteristics, in particular, by: preventing that producers of financial reports affect the relevance of information by styling these documents or presenting them under different forms; preventing that producers unprovide information that is, in fact, required; substantial reducing the errors in financial reports by automatic taking the values from accounting and verifying the relations that must exist between them; clarifying the content of financial reports for different users, even making possible that computers understand it; reducing the time required in preparing financial reports; the possibility offered to make automatic comparison in time and space by simply using programs that allow working with information in this modern format.
These kinds of advantages appear, among others, due to the fact that this widely accepted language allows modular representation of information, by separating, in the taxonomy, the elements (described by different attributes) from links that may exist between them (calculation, presentation, label, reference, etc.) and, at the same time, offers the possibility of viewing and/or saving the instances in different formats and even different languages, using the presentation style that users want.

5. Discussion and conclusions

Financial reports are the only public documents designed to provide financial accounting information to users outside organizations. Therefore, for them to make the right and timely decisions are important not only the quantity and quality of information provided through financial reports but also the form of these reports (their standardized or not standardized structure) and the manner which the information is transmitted to users (the use of traditional or modern means in transferring information).

Using XBRL in financial reporting allows reducing the information asymmetry resulted from incompatible global reporting formats (Premuroso and Bhattacharya, 2008, p. 5), making possible the easy recognition, selection, processing and analysis of information, even if it is in different languages and results from the application of different regulations. Thus, the publication on Internet of the financial reports in this modern format enables accelerating and improving decision-making processes.

Through our work we tried to emphasize the transparency ensured to financial reporting by using XBRL, which is why we went step by step from developing a taxonomy to generating an instance, providing explanations, among others, on the role of different files involved in this process, inclusively the role of some elements or attributes in these files that finally conduct to the transparency of financial reporting.

The limits of this study are found in focusing only on one of the components of financial reports and not considering the other components that can contain figures, graphics, tables, etc. and the absence of some models of operating with information in XBRL format, issues that will be, in fact, the subject of future studies.

6. References


The Order of the Public Finances Ministry no. 3055/2009 for the Approval of Accounting Regulations in Compliance with European Directives, published in the Official Journal of Romania No. 766 bis from 10 November 2009, with subsequent amendments.