# COMPUTER MODELING OF FINANCIAL INFORMATION FOR BUSINESS PLANS (XBRL - EXTENSIBLE BUSINESS REPORTING LANGUAGE)

Professor PhD **Valeriu LUPU** "Ștefan cel Mare" University of Suceava, Romania <u>valeriul@seap.usv.ro</u>

#### Abstract:

The quality of a manager's decision improves based on high quality financial statements, hence the need to find means to increase the quality of financial reporting, specifically to increase the quality of the assurance process. The ultimate aim is to reduce the skepticism of users of financial data and to use XBRL as Internet-based technology to enable electronic preparation and exchange of worldwide financial statements.

Key words: XBRL, insurance services, audit, financial information, business

JEL classification: M15, M49

### **1. INTRODUCTION IN THE FIELD**

The XBRL taxonomist is a new profession with an explosive demand in the world of work. Each company will be dedicated to train the XBRL specialists who will be: accountants, auditors, economists and will be specialising in different taxonomies:

- IFRS
- US GAAP
- UK GAAP

or taxonomies of local/national jurisdictions (Romania, France, Belgium and others) who will track the new versions and changes of the taxonomies, will reshape the assets and statutory reportings according to the active standards, will know very well the standards specifications and they will be highly paid for their cognitive synergy in financial and accounting sector.

The financial reporting taxonomist profession is not part of the IT department and also the economists don't want to learn a programing language. Same as an accountant is describing the elements from a company into account books by identifying the right accounts according to the double entry bookkeeping, same the financial reporting taxonomist will reshape the accounts of the company applying the financial concepts that are standardised and regulated by IFRS and will transform the financial reporting into a web document with a standardised meta-data, that will include the reported financial concepts , balance sheets and meta-data ( the description of the data). All companies' web portals or institutional, banking portals of Stock Exchange and of the government agencies will be changed into web informatic systems which will be documents consuming / XBRL reportings, the whole Business – to- Business industry will be consuming XBRL documents, any financial, managerial, controlling, performance reporting KPI ( Key Performance Indicator) will apply the XBRL format.

The main objective for Romania, the Government, the Commission Securities, Stock Exchanges, Association of Chartered Certified Accountants and Charter Institute of Internal Auditors is the exchange of economic data with the business global sector.

At the moment, the companies are reporting the balances using the electronic signature. To implement XBRL, the main strategies are:

• To generate economic data. At this time the balance sheet of a company is financial data but by aggregating the data of all companies listed on Stock Exchange means economic data.

• To increase the number of the private and public investors by simplifying the transparence and the quality of business data.

How is the process of collecting the balance sheets data working at the moment? Of course, it is done manually by collecting Excel documents with the data of the companies and then in the systems of commercial registers, of the NAFA and of different institutions using the data.

Worldwide economic and social transformations have changed the way companies think and do business.

Any IT solution to support accounting must use the XBRL standard (Extensible Business Reporting Language) as a novel and optimal solution for improving the accounting systems in the Digital Economy.

XBRL is an Internet based technology that is rapidly evolving towards a standard for financial reporting. A good manager's decision is based on high-quality financial information. XBRL is an extensible reporting language (the eXtensible Business Reporting Language), a system built to allow electronic preparation and exchange of worldwide financial reporting.

XBRL is a universal language of electronic business for information, reporting and analysis, an easier, faster and more efficient means of communicating financial and accounting information. XBRL creates a link between information technologies (XML) and accounting standards (GAAP). Raising the quality of financial information means simplifying them, expanding their transparency, increasing their compliance with legal regulations, and accelerating their preparation. The quality of financial statements gains the status of an insurance service.

#### 2. WHAT IS XBRL?

Being independent from the hardware and software platform, XBRL is able to use the Internet for reporting, providing an ideal basis for building a standard, as a XBRL taxonomy is a translation of GAAPs in XML documents. The work based on the XML provides the financial community with a preparation method based on standards, publication in various formats and proper extraction of financial statements of companies. XBRL provides software vendors, developers and users, with specifications necessary to enhance the preparation, exchange and comparison of information reporting, thus adding extensible semantics. This is possible by applying the concept of taxonomy.

A XBRL taxonomy is an XML schema that defines new elements, each corresponding to a concept found in XBRL documents. A taxonomy adds semantic value to XBRL language. The importance of financial information is described in the taxonomy, and the value of a document refers to the meaning of tags, where a tag is a meta-definition in a programming language, used to identify modules, Web pages or keywords. Currently, XML has become an open data format for using the Internet. XBRL is a client-type language based on XML, specialized in accounting and financial reporting. Based on its results, any accounting software will be able to perform the automation and translation of numbers and text, that can be viewed with Web browsers, spreadsheets, expert systems, computer applications etc., and at the same time ensure the necessary transparency. XBRL is intended to improve the product of financial statement by understanding accounting standards and not by introducing new ones. XBRL specification is designed to maximize the benefits of all parties who use it:

- those responsible for preparing financial information;
- intermediates in the preparation and distribution process;
- users of financial information (society as a whole);
- vendors that distribute software and services to more users.

For reporting and distributing financial accounting information in a consistent format, the designers of this language aim at developing a unitary vocabulary, used in all documents reported on the Internet, throughout the entire life cycle of information, starting with creating primary documents (invoices, orders, etc.), creating other documents for the operations of collecting, aggregating and processing financial-accounting information, and ending with legal regulations and

any other statements and reports of the company. As it is known, information is stored in the company's information systems in a wide variety of formats and in great detail. This aspect is characteristic to each company, even if companies use the same software for financial and accounting statements. This explains the inconsistencies found in the loan documentation or during harmonization of accounting, reporting to investors and other joint activities. The problem complicates even further, when the definition of a single information element may be altered by the specific regulations of the country of origin. For example, the value of an asset may be defined differently in some European countries compared to other countries, where there are other accounting principles and practices. Such differences affect many businesses operating in compliance with particular national jurisdictions. XBRL creates a common vocabulary for precise financial information in all their details for inclusion in a report, taking into account the differences in legal regulations and other regulations.

#### **3. XBRL IN EUROPE AND WORLDWIDE**

XBRL is designed as a standard language that can be used in any company to define financial reporting documents. After being created and published on the Web, the financial situation can be accessed for any reason by analysts, investors, publishers, software vendors, developers and others. Of course, there may be not only the financial statements themselves, but also other types of reports such as general ledger transactions, non-financial situations, financial and accounting legislative acts, yearly and biannual reports of any kind. In XBRL, the annual report will contain all elements of a financial statements (balance sheet, income and loss statement, cash flow statement, statement of changes in equity, accounting policies and explanatory notes, the auditor's report) encoded in XBRL. The obtained document can be either read directly by users interested in printing the report or used on the Web for other purposes. Graphics developed based on financial data, reports or even specific ledger accounting transactions, all encoded in XBRL, can represent elements of the annual report. In Europe, XBRL International has worked together with the IASB (International Accounting Standards Board) to ensure the compliance with International Financial Reporting Standards (IFRS), in terms of coding elements in XBRL format. The program can help managers and investors to reduce skepticism and increase the transparency of financial statements. XBRL is supported by "The International coalition of regulators and software companies, of corporations and of Big Four". On an international level, regulatory bodies in the UK, Australia, China, Denmark, Germany, Japan, Korea, all implement XBRL. International financial-accounting regulatory bodies quickly develop XBRL procedures and coding, and recently Argentina, Belgium, France, Hong Kong, India, Ireland, Italy, New Zealand and Spain are among countries using XBRL or have announced that they are considering using it. Many large companies use XBRL for publishing information. In 2005, SEC adopted a rule that sets the voluntary filling in of XBRL reports, using financial information files in the EDGAR computer system. The introduction of XBRL encodings automates the processing of information based on software, eliminating the intensive and expensive labor of manually entering and comparison of data. Computers can treat "XBRL" intelligent data and can "recognize" financial information in a XBRL document, by selecting it, analyzing it, storing it, and exchanging it with another computer; it can also automatically present it to users in various forms. XBRL is based on a simple idea. Instead of treating financial information as "text", as it is printed on a standard electronic document, XBRL enables companies to use common "financial labels", for identifying concepts regarding individual reports, present in company reports, capturing the semantics encoded in standards such as GAAP or IFRS. XBRL significantly increases the peed of financial data management, reduces the possibility of error and enables the automatic checking of information. Companies can use XBRL to reduce costs and time for collecting and processing data for financial reports. Users of financial data, analysts, or financial investors can receive, compare and use data more quickly and efficiently, thanks to XBRL. Although in 2002, the SEC took the view that regarding companies using XBRL,

it is premature to discuss and make concrete suggestions about "insurance", the question of whether each auditor should review each XBRL coding was raised.

The insurance provided by XBRL to financial statements is a very discussed issue, regarded as a potential field of developing scientific research conducted by audit specialists, academics and practitioners. Today, XBRL data - obtained through SEC, the interactive data voluntary programmed – do not require additional independent assurance, and the guidelines for completing the information required by XBRL refer to auditing information and recommends testing, if the financial elements are properly labeled. "Risk control" for XBRL commitments refers more to the process of labeling financial information than to the internal control over the accounting process. Of course, we discussed the assurance through XBRL issue, which may be provided at the level of data input, which could mean adding the date and the nature of he assurance provided by the auditor through a possible digital signature, together with other system information, as it has been recently proposed, starting from the need to clarify the subject of XBRL insurance. There is also the problem of identifying technical issues and establishing "of what could constitute an error." Academics in the field of audit can give potential solutions to the technical problems associated with providing insurance through XBRL. For example, due to the nature and character of XBRL, automation, as part of the insurance process, will increase both the efficiency and effectiveness of these insurance commitments. Technological developments prove potential in this area, such as the Financial Reporting and Auditing Agent with Net Knowledge (FRAANK), which originated in academic research. The continuous development of XBRL is a certainty, and represents a technological advantage that can be used in ensuring its facilitation. XBRL based technologies can be used for other auditing procedures, for example in the area of fraud and risk assessment or in comparing very specific industrial data. SEC proves "slow" in promoting XBRL and showed that members of the Financial Accounting Standards Board (FASB) traveled to SEC headquarters to discuss issues related to XBRL. In May 2008, SEC proposed using eXtensible Business Reporting Language for publishing financial information, starting with 2009 for large companies and 2011 for public companies. This announcement follows a series of decisions taken by worldwide regulatory bodies and financial services organizations aiming for the global standardization of financial statements. XBRL has been adopted by the large Federal Deposit Insurance Corporate (FDIC), which mandated the use of XBRL for 8,200 US banks; Shanghai Stock Exchange has adopted XBRL for Chinese public companies, and banking companies in Spain, Belgium, Japan follow this example; also, the European Committee for Banking Supervision discuss the global implementation of federal and government reports. XBRL is free and becomes a means of standard electronic communication of financial information, via the Internet, and it is implemented by a number of large companies, organizations and government agencies. James Gunn, Deputy Director of the Committee for Auditing and Assurance Standards has repeatedly stated that XBRL brings opportunities and challenges in increasing the quality of financial statements.

#### 4. OPERATIONAL VECTORS FOR XBRL

For the optimal resolution of this objective, we will separate this issue into five operational vectors:

- ✓ Digital Economy
- ✓ Integration of accounting systems (SCM-ERP-CRM)
- ✓ Improving the integrated accounting systems
- ✓ Directions of improving the integrated accounting systems
- ✓ Choosing the method and way to achieve an integrated accounting information system for financial reporting and control of virtual organization performances.

The development of an integrated accounting system for financial reporting and performance control of organizations will perform the following functions:

- The analysis and use of the newest and most competitive system for financial reporting, the XBRL system for providing US, GAAP and IFRS specific reports and indicators.

- The system's capability to provide and process all accounting and financial indicators and financial-accounting reports regarding Financial accounting, Managerial accounting, and also reports plus US GAAP IFRS specific indicators; the main financial reports are taken into consideration (Balance Sheet, Income Statement, Shareholder's Equity, Cash Flow and Disclosures).
- Creating a safe and operational interface between US GAAP standards and / or IFRS information system.
- The orientation of the computer system specifications towards the organization's management system, its information system, third parties and fiscal bodies; in this way, the fiscal policies and requirements are abided by, as they become the priority of an computer system;
- The approach of using the XBRL standard, while developing an management computer application used for checking and enhancing the XBRL possibilities in the area of financial reports.

As previously mentioned, XBRL is a language that can be extended at an international level, open for use on the Internet, created by XBRL International, a consortium of more than 400 members worldwide, representing public and private companies, government agencies and regulatory agencies, for publishing, exchanging and analyzing the reported financial data. XBRL simplifies the preparation and publication of financial documents. The idea is to collect data only once and convert them into multiple formats, through automatic processing. Since Romania has joined the European Union, it is mandatory to adopt a common language for economic and financial reporting, that is XBRL. Financial statements, Balance Sheet and Profit and Loss account have to be aligned with the world standard. Thus, each country has its own taxonomy, in accordance with international standards.

The adoption of XBRL in Romania would significantly reduce the costs involved in collecting and validating information from reports, as well as their conversion, dissemination and exchange; some of the main beneficiaries would be the following: the Government; Ministry of Finance; Agencies and intermediary bodies for managing European funds; Body of Experts and Licensed Accountants of Romania; local financial administrations; financial banking system; commercial companies; national and international investors.

## 5. CONCLUSIONS

The benefits and opportunities that may arise from using XBRL (Extensible Business Reporting Language) as a tool can be described; furthermore, we suggest that the use of XBRL can be extended towards the legislation regarding accounting reporting on a national level. Companies can use XBRL to reduce costs and processing time, to collect, and process data for financial reports. The users of financial data can receive, compare and use data more quickly and efficiently. Moreover, the speed of financial data management increases significantly, thus reducing the possibility of error and enabling the automatic verification of information. In terms of insurance services, due to the nature character of XBRL, automation, as part of the insurance process, will increase both the efficiency and effectiveness of these insurance commitments. In order to implement XBRL in Romania, taxonomies must be created, respectively concepts to be defined in terms of their meanings and relations among them relating to data to be reported; moreover, infrastructure must be created in order to enable the processing of XBRL information (collection, validation, exchange). At the same time, software programs enabling the generation of financial reports should be adapted to this new extensible language, abiding by the accounting standards in force.

## REFERENCES

[1] Cozgarea, G 2010, Metodologii orientate pe obiecte utilizate în proiectarea sistemelor informatice, Editura Infomega;

[2] OMG 2011, Business Process Model and Notation (BPMN), Version 2.0, <u>http://www.omg.org/spec/BPMN/2.0</u>

[3] Havey, M 2005, Essential Business Proces Modeling, Editura O'Reilly Media;

[4] Basu, A.,Blanning, R.W. 2003, Synthesis and Decomposition of Processes in Organization, Harvard Business Review

[5] Porte, M.E., Millar, V.E. 1985, How Information Gives You Competitive Advantage, Harvard Business Review

[6] Tudor, C. 2015, Sisteme informatice integrate pentru domeniul financiar-contabil, Editura ASE Bucuresti;

[7] <u>http://xbrl.squarespace.com/journal/2013/6/15/digitizing-financial-reports-issues-and-insights-a-viewpoint.html</u>

[8] http://xbrl.squarespace.com/journal/2008/4/21/ten-years-ago-the-xbrl-journeybegan.html

[9] <u>http://www.plu.edu/scene/issue/2006/spring/sections/alumni-profiles.html</u>

[10] http://xbrl.squarespace.com/journal/2009/8/3/aicpa-publishes-history-of-xbrl.html