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# Improving the Decision-Making Process and Transparency of Corporate Governance Using XBRL

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Abstract—Several recent studies have shown that the transparency of financial reporting have a significant influence on investor's decisions. Thus, regulation authorities and professional organizations (IFAC) have emphasized the role of XBRL (eXtensible Business Reporting Language) and interactive data as a means of promoting transparency and monitoring corporate reporting. In this context, this paper has as objective the analysis of interactive reporting through XBRL and its use as a support in the process of taking decisions in corporate governance, namely the potential of interactive reports in XBRL to increase the transparency and monitoring process of corporate governance.

*Keywords*—Corporate Governance, decision, financial reporting, transparency, XBRL.

#### I. INTRODUCTION

N the context of the current financial crisis, Corporate ■Governance is a key concept for the economic science research. The Corporate Governance System can be seen as a complex system of regulations, procedures, monitoring and evaluation methods, processes and relationships between system actors [1]. Also, this system is focused exclusively on decision making processes and data flows between shareholders, board of directors, audit committees and management. Thus, in this system we can identify a number of interest groups that have various roles in corporate governance [2], [3], [4]. These groups interact in complex processes that can affect the performance of the company and its market position. A problem that can be raised regarding integration and optimal functioning of these processes is that of informational support [5]. Good corporate governance for both actors and processes needs an integrated information system to process and provide accurate and real time information to all stakeholders in the corporate governance systems [6]. At the same time, this support should be a collaborative one.

Currently, a number of studies have shown that the transparency of financial reporting have a significant influence in investor's decision [1]. In this context, the use of information technology (IT) can be viewed as a real support in order to ensure good corporate governance [6]. Information technologies could lead to an increase in efficiency for the corporate governance systems, by reducing information asymmetry within the agency relationship, offering a real and

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permanent support to the principal. Also, it could ensure increasing the efficiency of corporate governance systems, by ensuring support for monitoring and evaluating corporate governance in order to optimize and increase its performance. Recently, regulation authorities, professional organizations and financial reporting standards have emphasized the role of XBRL (eXtensible Business Reporting Language) and interactive data as a means of promoting transparency and monitoring corporate reporting [7].

To develop a culture based on responsibility and accuracy is required the re-orientation of how information is produced, verified and submitted. So for most companies the use of XBRL technology will be the most appropriate way to impose a necessary rigorous reporting framework [8]. In this context, most regulation authorities are working to ensure business support for information users. For example, a U.S. public company is required to provide a public management report regarding the internal control of the company [7].

Analyzing current literature we can say that, as most authors, information technology can provide increased effectiveness of corporate governance systems by ensuring transparency and support for monitoring and evaluation of Corporate Governance to optimize it's performance and growth [9], [10], [11].

XBRL (eXtensible Business Reporting Language) can be characterized as:

- a language for describing and communicating electronic the financial data of a company (http://www.xbrl.org);
- it belongs to the XML (Extensible Markup Language) family;
- through labeling standards ("tags") of financial information it allows to identify and direct rendering them in any computer system;
- represents "a barcode system for financial reporting" (KPMG).

Benefits of using XBRL can be summarized as follows:

- significantly reduce the costs of obtaining and analyzing information published by companies by eliminating incompatible formats of reports [12];
- allow all users (including non-professional) of financial information to integrate and analyze various reports so they can take the right decision [13].
- helps to ensure transparency and standardization of financial information in the GC [7].

This paper focuses on analyzing, through XBRL, the interactive reports and their use to support decision making in Corporate Governance (CG) and the potential of interactive

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reports in XBRL to increase the effectiveness of GC.

#### II. RESEARCH METHODOLOGY

#### A. Research Problem

Our research is undertaken to explore and to probe the issue that the XBRL can be use to support decision making in Corporate Governance (CG) and the potential of interactive reports in XBRL to increase the effectiveness of GC.

#### B. Research Design

The research is quantitative and action based to validate the proposed integrated model.

# C. Sample, Population or Subjects

The sample consists of a set of international companies which use XBRL for financial reporting and publish their Corporate Governance reports.

### D. Variables in the Study

The variables in this study are the CG decision processes and XBRL taxonomies.

# III. FINDINGS

To illustrate how XBRL language is used to represent financial information in Fig. 1 is presented XBRL serialization of cash flows according with IAS 7[14].

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Fig. 1 XBRL representation of cash flows according to IAS 7

Analyzing XBRL technology use, we can synthesize the potential of this technology in corporate governance by ensuring:

- · transparency in corporate reporting;
- monitoring reports;
- · multidimensional data analysis from reports;

Implementation of XBRL technology in the GC may lead to

significant benefits for:

- Shareholders
- Stakeholders (extern)
- Intern "actors" (managers, intern auditors etc.).

Starting from the GC Index of ECGI (2008), to increase the effectiveness of GC, we have identified the need to develop specific taxonomies for GC reporting and to integrate them into support systems for GC.

Thus, as a significant result of this research, in Table 1 there are summarized elements that we consider necessary to be represented by XBRL to ensure transparency, monitoring and analysis in an efficient GC system.

TABLE I
XBRL POTENTIAL FOR INCREASING THE EFFECTIVENESS CG

	Transparency	Monitoring	Analysis
XBRL			
- BOD	X	X	
- Scoring (GMI, CGQ, S&P GAMMA)			Х
- Risk Indicators	Χ	X	X
- Performance Indicators	Х	X	X

A first step in this process was conducted by Fujitsu (2009), who developed an XBRL taxonomy for GC regarding the:

- financial reporting;
- · management policies;
- rights and obligations of shareholders;
- information on the BOD.

# IV. CONCLUSION

From the study of literature it fallows that implementing XBRL technology in the GC is a current concern of regulation authorities and professional organizations.

XBRL technology has the potential to significantly improve the way company reporting are used in the GC process by creating transparency, multidimensional analysis possibility and facilitate monitoring by specialized bodies.

We propose the implementation of XBRL technology in Hybrid and Adaptive Decision Support Systems to evaluate and improve performance of CG.

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#### REFERENCES

- R. Bushman, Q. Chen, E. Engel, A. Smith, "Financial accounting information, organizational complexity and corporate governance systems", *Journal of Accounting and Economics*, 37(2), 167–201, 2004.
- [2] \*\*\*, OECD, Principles of Corporate Governance, 2004.
- [3] \*\*\*, Bourse de Luxembourg. Corporate Governance The Ten Principles of Corporate Governance of the Luxembourg Stock Exchange, 2009.
- [4] \*\*\*, Institute of Directors, The handbook of international corporate governance: a definitive guide, Kogan Page, London, 2009.
- [5] C. Brandas, "Study on the Support Systems for Corporate Governance", Informatica Economica, 15(4): 55 – 63, 2011.
- [6] T. Lazarides, E. Drimpetas, "The missing link to an effective corporate", Corporate Governance, 8(1): 73-82, ISSN 1472-0701, 2008.
- [7] S. Roohani, Y. Furusho, M. Koizumi, "XBRL: Improving transparency and monitoring functions of corporate governance", *International Journal of Disclosure and Governance*, 6(4): 355-369, ISSN 1741-3591, 2009
- [8] \*\*\*, KPMG, Improving governance with XBRL, 2008.
- [9] R.S. Kaplan, M.E. Nagel, "Improving Corporate Governance with the Balanced Scorecard", Working Paper, Harward Business School, 2003.
- [10] A. Renders, A. Gaeremynck, P. Sercu, "Corporate-Governance Ratings and Company Performance: A Cross-European Study", Corporate Governance: An International Review, 18(2): 87–106, 2010.
- [11] M. Alles, M. Piechocki, "Will XBRL improve corporate governance?: A framework for enhancing governance decision making using interactive data", *International Journal of Accounting Information Systems, In Press, Corrected Proof*, Available online 30 October 2010, ISSN 1467-0895, DOI: 10.1016/j.accinf.2010.09.008., 2010.
- [12] R. A. Weber, XML, XBRL, and the Future of Business and Business Reporting, in Trust and Data Assurances in Capital Markets: The Role of Technology Solutions. In: Roohani ST, editor. Smithfield, RI: Bryant College, p. 3–6, 2003.
- [13] Hodge FD, Kennedy JJ, Maines LA. Does search-facilitating technology improve the transparency of financial reporting? Account Rev 2004;79(3):687–703.
- [14] \*\*\*, http://www.ifrs.org, C. J. Kaufman, Rocky Mountain Research Lab., Boulder, CO, private communication, May 1995.

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