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- **Identificarea dificultăților întâmpinate de profesia contabilă în accesarea documentelor în contextul economiei digitale din România**
- **Identifying difficulties encountered by the accounting profession in accessing documents, in the digital economy context of Romania**



- **Auditul securității pentru sistemele informatice bazate pe cloud**
 - **Beneficii și provocări privind aplicarea normelor IFRS: experiența economiilor emergente**
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- **Auditing security for the Cloud**
- **Benefits and challenges regarding the IFRS implementation: lessons from the emerging economies**
- **The impact of the supervisory board structure on bank performance**
- **Accounting practice regarding discounts. Limitations and actions for a modern legislation**

Perspectiva mediului de afaceri asupra prețurilor de transfer și a legislației conexe în domeniu

The business perspective on transfer pricing and related legislation

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Identifying difficulties encountered by the accounting profession in accessing documents, in the digital economy context of Romania

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Abstract

The present study is a qualitative and quantitative exploratory research, aiming to identify the difficulties of documenting the engagements specific to the accounting profession, in the context of the digital economy in Romania. To this purpose, we performed a questionnaire-based survey among 300 accounting professionals. The results of the study show that, at global level, in the current development study of the digital economy from Romania, accessing accounting documents, with the purpose of their use within engagements of the accounting professionals, is a major problem, from three perspectives. As such, 73.98% of the accounting professionals confirm, through their answers, that they faced the lack and/or the impossibility to obtain accounting data, while performing specific engagements, while 69.92% link the access issue with the lack of or the restricted interaction with/access to data, which are managed by means of old or new accounting information systems. As a direct consequence of the two difficulties, revealed by our study, it results that 63.41% of the questioned accountants consider that the accounting data provided by their clients have a low level of consistency and trust. The originality of the study is granted by approaching the topic in the current circumstances of the digital economy and increased use of cloud accounting, which will call the attention of both the accounting profession, and the beneficiaries of accounting data and information, or even developers of specific software.

Keywords: Cloud, accounting profession, digital accounting, digital economy

JEL Classification: M40

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Introduction

The recent requirements of the users of financial and accounting data press the accounting profession from Romania, as well, to cross a vast transition process, motivated by the assimilation, as working tools, of the new types of information and communication technology (IT).

If the ancient nations from the Middle East used even about 10,000 years ago a processing system of data related to their economic life, based on encrusted bone or stone (Chatfield, 1977) the accounting, as a fundamental instrument of the digital economy, is currently trying to include all its activities and/or processes in an integrated environment, through modern technologies like: big data, cloud-computing, data mining etc. (Năstase and Caia, 2015; Vasarhelyi, Kogan and Tuttle, 2015). In this logic, it's easy to see that, along the accounting evolution, the accounting measuring and booking methods have been diverse and dependent on a *material (technological) support*, that defined a technological bow in time, from the material support of bone or stone encrustations, clay tablets and papyrus, to the accounting books on paper (Capron, 1994), and further to the *virtual support*, through the dematerialization of the accounting records from the cybernetic era, as a consequence of electronic information processing and its storage in *cloud*.

All these technological developments from the economic and social life left a distinct mark on the accounting profession of the last decade, whose direct effect was the adoption of a new paradigm in the accounting organization, totally dependent on technology. Hence, while the specific literature (Țugui and Gheorghe, 2014) provides studies promoting the idea that accounting professionals want a change of the accounting paradigm in the context of cloud computing, other researchers (Ionescu, Prichici and Tudoran, 2014) complement the previous statement by explaining that accounting professionals must in their turn change their professional behaviour, by embedding new information technologies in the accounting informational system and re-focusing on analysis and consultancy, in accordance with the role they play.

In the above described context, through the present paper we aim to identify the main difficulties encountered by accounting professionals while performing specific engagements, related to accessing

accounting documents in the current digitization stage of the informational flows, in the Romanian digital economy.

1. The digital context

During the last 20 years, the *digital economy* has been increasingly more perceptible in our life. Shortly, it can be observed that, in today's economy, the information is involved to a greater extent in the creation of the Gross Domestic Product (GDP), next to the classical three production factors, i.e. labour, land and capital. From the perspective of the doctrine, this omnipresent expression of digitization is called the New Economy. The concept of *digital economy* was born in 1996, in Don Tapscott's paper "*The Digital Economy: Promise and Peril In The Age of Networked Intelligence*" (1996) and is essentially based on the idea of the digital representation, as "1" and "0" sequences, of all the informational flows from the economy.

Through the 1998 Report of the USA Trade Department, entitled "*The Emerging Digital Economy*" (Margherio et al., 1998), the **digital economy** concept was described as the IT dominated economy, able to contribute to the GDP increase from the following four types of activity:

- the Internet expansion;
- the electronic inter-company trade;
- the digital delivery of goods and services;
- the retail of tangible goods.

In the above described context, the IT field was seen as the "key" of the economic engine, specific to the new digitized economy; this was a matter considered especially by the main countries, through the value of the investments in this sector.

The United Kingdom, as a member of the European Union even since 2008, funded the *digital economy*, by means of *The Research Councils UK* (RCUK – www.rcuk.ac.uk), by allocating over 150 million pounds for the identification of long-term challenges of the digital economy. To this purpose, up to 2012, 25 research topics, were funded and completed by 2,000 doctoral students, belonging to 44 formation centres.

In **Australia**, public consultations on digital economy were organized in three stages, August-September 2008, December 2008 and April 2009, leading to the definition of the concept in the light of the public interest

and the launching of a digital investment plan of 43 billion dollars, for the creation of the National Broadband Network. Its goal was the simultaneous coverage of rural and urban areas and the optical fibre connection to Internet for 90% of the homes, schools and public spaces (Anon., 2012).

In **Canada**, based on public debates organized between May-July 2010, the Federal Government summarized the directions which should be supported (Government of Canada, 2014) for increasing the quality of life in the context of the *digital economy*:

- The capacity to innovate, using digital technologies;
- The construction of a world-class type infrastructure;
- The growth of the ICT sector;
- The increase of the Canadian digital content in the digital environment;
- The creation of digital qualifications for the future.

May 2010 meant the launching, at the level of the **European Union** (EU), of the *Digital Agenda*, with a target horizon up to 2020 (European Commission, n.d.). Essentially, the Digital Agenda is a synthesis of the European Commission Strategy on the use of ICT for economic growth. Starting with 2012, at the level of the European Commission, the Digital Agenda has been directed to five concrete action lines for Europe, i.e. (Kroes, 2012):

- the implementation of cloud services;
- the Internet opening, through legislative liberalization and security assurance;
- the general broadband assurance;
- the stimulation of innovation and entrepreneurship;
- the ICT use for increasing the quality and efficiency of public services.

Romania, as a country with an emergent economy and an EU Member State, has been implementing the activities of the European Digital Agenda through the Ministry of Information Technology and Communication. Concretely, the following sectors of the *economic life* are significantly influenced by digitization: the ERP market (Anis Research, 2011), eHealth (Lita, 2011), eGovernment (EUROSTAT, 2014), eReligion (<http://www.crestinortodox.ro>), Mobile Applications (Agoramedia, 2011), Cloud Computing (EUROSTAT, 2014), eEducation and Social Network and Social Media (Țugui, 2012).

2. The accounting profession in Romania and the digitization phenomenon

The digitization phenomenon of informational flows, as well as of their interaction with the accounting profession (Țugui, 2003), means the expansion of the computer-based accounting technique, the acceptance of increasingly more intelligent technologies in the daily practice and the settling of transactions in virtual environments, up to the „extinction” of the traditional professionals and their replacement with *persons skilled in the processing of data, information and accounting knowledge* (Țugui, 2006).

From this perspective, the Romanian specific literature of the last five years noted aspects with regard to the way in which the accounting profession in Romania will evolve, in the context of its interaction with the *digital economy*. In this line, we observe that the stress is on the idea of the *continuous change of the accounting profession*, by adapting to the technological environment of the digital economy (Toader, 2012), under the pressure of the challenges that the profession must be receptive to, for the purpose of identifying possible solutions (ACCA Report, 2014; Ardeleanu, 2014).

With regard to cloud computing, as a currently fashionable digital technology, the accounting professionals debate the idea that it could complicate the integration process of the accounting information system of a modern company (Ionescu et al., 2014); some question marks connected to the harmonisations between cloud computing and the standards and regulation on auditing and information security might also appear (Bendoveschi and Ionescu, 2015). The matter of informational security in the Romanian digital economy is also perceived when it comes to auditing information systems (Năstase and Caia, 2015; Drăgoi, 2015), as support technologies of the current digital business environment. However, what mainly calls our attention are recent studies (Fotache and Păvăloaia, 2015; Homoceanu and Airinei, 2015) debating the problems surrounding the concrete interaction between digital technology and accounting professionals, in the meaning that the latter are not familiar with the facilities provided by technology.

3. Research methodology

Synthesized, the above literature review shows that the accounting profession is continuously receptive of technology and that the current technological conjunction *requires the accounting profession to keep in line with the technological evolution*. By reviewing the specific literature, we didn't find any concrete studies on the matter of the daily practice problems, related to the easiness or difficulty of accessing the necessary documentation, for performing engagements specific to the accounting profession.

The employed research methodology was of exploratory type, in the meaning that we intend to ascertain the problems faced by the accounting profession while performing specific engagements, with regard to the access to information/documents. Our exploration has both a qualitative and a quantitative character, as the accounting professionals were initially required to qualitatively assess the encountered difficulties, in order for these assessments to subsequently be processed and interpreted by us, from a quantitative perspective. In this context, our research method was the *survey*, while the research *instrument* was the on-line questionnaire, addressed to a *sample* of over 300 accounting professionals from Romania, visible on the Internet (specific sites, doctoral schools). Our intention was to include in the analysed sample those professionals who reached one of the highest accounting profession degrees (CECCAR, 2011; IESBA, 2013), i.e. accounting experts and financial auditors, including professionals

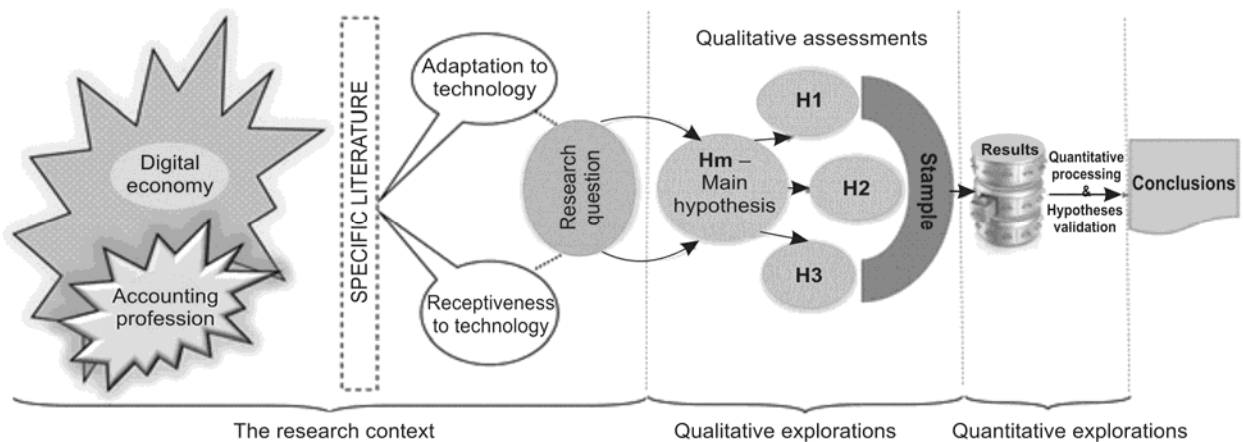
enrolled in master and doctoral programs of the universities of București, Cluj-Napoca, Iași, Timișoara. The other categories of accounting professionals were selected from the public member registers of the Chamber of Financial Auditors of Romania and the Body of Expert and Licensed Accountants of Romania from the counties Alba, Arad, Argeș, Bacău, Bihor, Botoșani, Brăila, Cluj, Iași, Prahova and Galați.

We associated the following **main hypothesis (H_m)** to the above described research question: *In the current development stage of the digital economy in Romania, accessing accounting documents in different formats, with the purpose of their use, is a significant problem for the engagements of accounting professionals.*

In accordance with the main hypothesis (H_m) that needs validation, three secondary hypotheses were itemised, which will be tested separately:

- H1:** *While performing specific engagements, accounting professionals from Romania frequently encounter the lack of accounting data and/or the impossibility to obtain accounting data.*
- H2:** *While performing specific engagements, accounting professionals from Romania frequently have no/a restricted access to data that are managed by means of old or new accounting information systems.*
- H3:** *Within engagements performed by accounting professionals from Romania, there is a perceived low level of consistency of and trust in the accounting data.*

Figure 1. Research model and hypotheses



Source: Own processing.

The validation of the secondary hypotheses will implicitly lead to the validation of the main hypothesis, as well as to a conclusion that will bring clarifications in the field of the research question. Our research model, including the research stages, the research question and the hypotheses to be tested, is illustrated in **Figure 1**.

In order to test the main hypothesis by means of the three secondary hypotheses, we shall consider the perception of most professionals, first with regard to each of the three hypotheses at global level, but also on each professional category. For the hypotheses validation we shall rely on the rule of the absolute majority which, according to the terminology dictionary (DEX, 1998), consists in 50% + 1 from an ensemble, i.e. it is a fraction from a whole, which is greater than its half.

4. Results and discussions

In order to test and validate the hypotheses H1, H2 and H3 we included, in a larger questionnaire, a question which allowed the accounting professionals to select any of the three difficulties they encountered in accessing and using specific documents of the engagements performed at their offices, which were associated by us to each of the three hypotheses. Thus, the accounting professionals could select any of the variants, in any combination, without a prioritization. Following the distribution of the questionnaire per e-mail and the

reception of the responds through Google Drive, we recorded 125 responds and validated 123 of them.

Based on the analysed responds, we ascertained that an accounting professional could hold more than one of the certifications considered by us; as a consequence, we decided to examine them separately, which led to the processing of 172 professional responds, corresponding to 123 physical respondents, with the following structure: financial auditor: 21,51%; expert accountant: 23,84%; tax adviser: 5,81%; PhD (in accounting): 11,63%; accountant: 14,53%; master student (in accounting): 4,65% and doctoral student (in accounting): 18,02%.

The H1 hypothesis – While performing specific engagements, accounting professionals from Romania frequently encounter the lack of accounting data and/or the impossibility to obtain accounting data.

Based on the responses that were received and centralized for **hypothesis 1 (H1)**, the distribution on each category of accounting professionals (see **Table 1**) shows the lack of data and/or the impossibility to obtain data was encountered by 100% of the master students in the field, 40% of the tax advisers, 80% of the PhDs in accounting, 70.27% of the financial auditors, 64% of the accountants, 63.41% of the expert accountants and 61.29% of the doctoral students.

Table 1. Response distribution on each category of accounting professionals, with regard to the “lack of data and/or the impossibility to obtain data”

Accounting profession category	Lack of data and/or impossibility to obtain accounting data						H1 validation on categories
	No. of responses			Percentage (%)			
	Yes	No	Total	Yes	No	Total	>50%
Financial auditor	26	11	37	70.27	29.73	100.00	Yes
Expert accountant	26	15	41	63.41	36.59	100.00	Yes
Tax adviser	4	6	10	40.00	60.00	100.00	No
PhD	16	4	20	80.00	20.00	100.00	Yes
Accountant	16	9	25	64.00	36.00	100.00	Yes
Master student	8	0	8	100.00	0.00	100.00	Yes
Doctoral student	19	12	31	61.29	38.71	100.00	Yes
	115	57	172	66.86	33.14	100.00	Yes

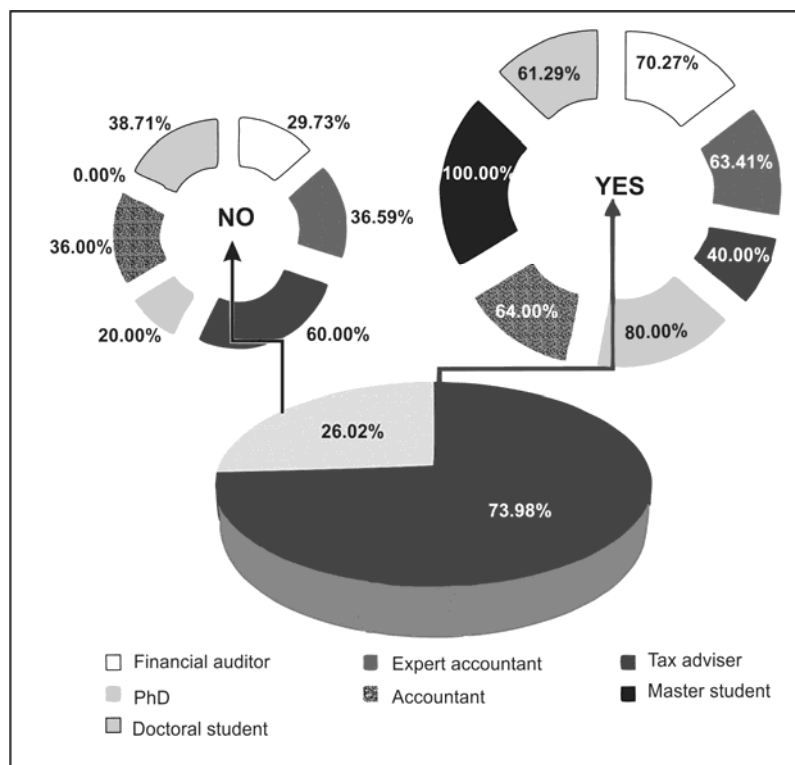
Source: Own processing.

Validation of the H1 hypothesis: In consideration of the principle of absolute majority, we find that *most accounting professionals, with the exception of the tax advisers, experienced frequently the lack of and/or the impossibility to obtain accounting data, while performing their engagements.* On average, for the entire accounting profession, we ascertain that 66.86% of the accounting professionals frequently experienced

the lack of and/or the impossibility to obtain accounting data, while performing their engagements. This hypothesis has been validated both from the perspective of the absolute majority principle and by considering the 123 respondents, who confirmed the frequent encountering of this difficulty, to an extent of 73.98%.

A summary of the H1 validation is illustrated in **Figure 2**.

Figure 2. Response distribution on accounting profession categories, related to the lack of and/or the impossibility to obtain accounting data



Source: Own processing.

From the perspective of our exploratory research, we find that *the lack of and/or the impossibility to obtain accounting data* is frequently encountered by 73.98% of the accounting professionals from Romania.

The H2 hypothesis – While performing specific engagements, accounting professionals from Romania frequently have no/a restricted access to data that are managed by means of old or new accounting information systems.

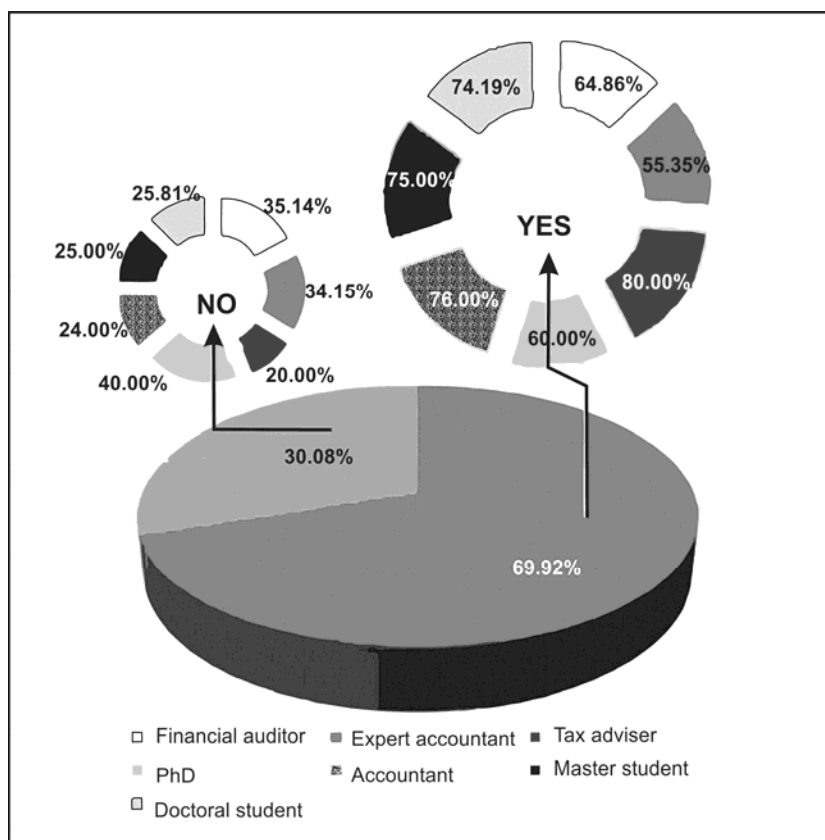
Based on the responses that were received and centralized for hypothesis 2 (H2), the distribution on each category of accounting professionals (see **Table 2**) shows that the lack of/the restricted access to data that are managed by means of old or new accounting information systems was encountered by 80% of the tax advisers, 76% of the accountants, 75% of the master students in the field, 74.19% of the doctoral students, 65.85% of the expert accountants, 64.86% of the financial auditors and 60% of the PhDs in accounting.

Table 2. Response distribution on each category of accounting professionals, with regard to the “the lack of/the restricted access to data that are managed by means of old or new accounting information systems”

Accounting profession category	Lack of/the restricted access to data that are managed by means of old or new accounting information systems						H2 validation on categories
	No. of responses			Percentage (%)			
	Yes	No	Total	Yes	No	Total	>50%
Financial auditor	24	13	37	64.86	35.14	100.00	Yes
Expert accountant	27	14	41	65.85	34.15	100.00	Yes
Tax adviser	8	2	10	80.00	20.00	100.00	Yes
PhD	12	8	20	60.00	40.00	100.00	Yes
Accountant	19	6	25	76.00	24.00	100.00	Yes
Master student	6	2	8	75.00	25.00	100.00	Yes
Doctoral student	23	8	31	74.19	25.81	100.00	Yes
Total professional respondents	119	53	172	69.19	30.81	100.00	Yes

Source: Own processing.

Figure 3. Response distribution on accounting profession categories, related to the lack of/the restricted access to data that are managed by means of old or new accounting information systems



Source: Own processing.

Validation of the H2 hypothesis:

Based on the principle of the absolute majority, we find that *all accounting professionals frequently experienced the lack of/the restricted access to data that are managed by means of old or new accounting information systems*, while performing their engagements. On average, for the entire accounting profession, we ascertain that 69.19% of the accounting professionals frequently encountered the lack of/the restricted access to data that are managed by means of old or new accounting information systems, while performing their engagements.

This hypothesis has been validated both from the perspective of the absolute majority principle and by considering the 123 respondents, who confirmed the frequent encountering of this difficulty, to an extent of 69.92%.

A summary of the H2 validation is illustrated in **Figure 3**.

From the perspective of our exploratory research, we find that the lack of/the restricted access to data that are managed by means of old or new accounting information systems, while performing their engagement, is frequently encountered by 69.92% of the accounting professionals from Romania.

The H3 hypothesis – Within engagements performed by accounting professionals from Romania, the perceived level of consistency and trust in the accounting data is low.

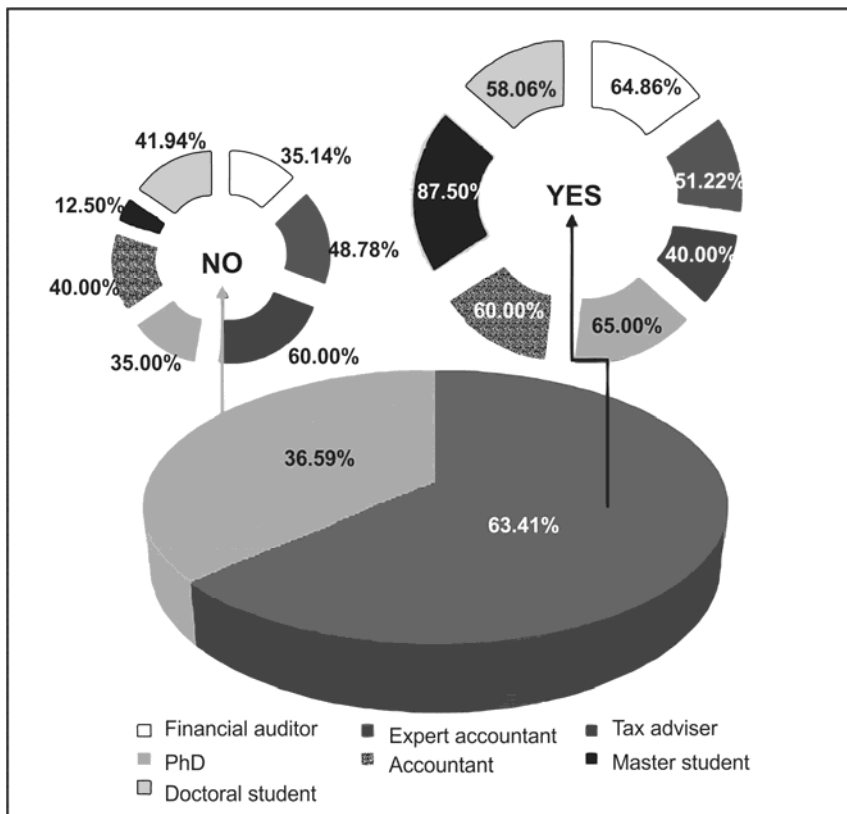
Based on the responses that were received and centralized for hypothesis 3 (H3), the distribution on each category of accounting professionals (see **Table 3**) shows that the low level of consistency and trust in accounting data was experienced by 87.50% of the master students in the field; 65% of the PhDs in accounting; 64.86% of the financial auditors; 60% of the accountants; 58.06% of the doctoral students; 51.22% of the expert accountants and 40% of the tax advisers.

Table 3. Response distribution on each category of accounting professionals, with regard to the “low level of consistency and trust in accounting data”

Accounting profession category	Low level of consistency and trust in accounting data						H3 validation on categories >50%
	No. of responses			Percentage (%)			
	Yes	No	Total	Yes	No	Total	
Financial auditor	24	13	37	64.86	35.14	100.00	Yes
Expert accountant	21	20	41	51.22	48.78	100.00	Yes
Tax adviser	4	6	10	40.00	60.00	100.00	No
PhD	13	7	20	65.00	35.00	100.00	Yes
Accountant	15	10	25	60.00	40.00	100.00	Yes
Master student	7	1	8	87.50	12.50	100.00	Yes
Doctoral student	18	13	31	58.06	41.94	100.00	Yes
Total professional respondents	102	70	172	59.30	40.70	100.00	Yes

Source: Own processing

Figure 4. Response distribution on accounting profession categories, related to the low level of consistency and trust in accounting data



Source: Own processing.

Validation of the H3 hypothesis

Based on the principle of the absolute majority, we find that *most of the accounting professionals, with the exception of the tax advisers, frequently experienced a low level of consistency and trust in accounting data, while performing their engagements.* On average, for the entire accounting profession, we ascertain that 59.30% of the accounting professionals frequently encountered a low level of consistency and trust in accounting data, while performing their engagements.

This hypothesis has been validated both from the perspective of the absolute majority principle and by considering the 123 respondents, who confirmed the frequent encountering of this difficulty, to an extent of 63.41%. A summary of the H3 validation is illustrated in **Figure 4.**

From the perspective of our exploratory research, we find that, while performing their engagements, there is a

perceived low level of consistency and trust in the accounting data, for 63.41% of the accounting professionals from Romania.

Conclusions

In the context of our exploratory research, the global validation of the three secondary hypotheses H1, H2 and H3, based on the rule of the absolute majority, leads implicitly to the validation of the main hypothesis HM, respectively *in the current development stage of the digital economy in Romania, accessing accounting documents in different formats, with the purpose of their use, is a significant problem for the engagements of accounting professionals* included in the analysis, i.e. financial auditors, expert accountants, tax advisers, PhDs in accounting, accountants, master and doctoral students, from the perspective of the lack of and/or the impossibility to obtain accounting data, the lack of/the

restricted access to data that are managed by means of old or new accounting information systems, but also the low level of consistency and trust in the accounting data.

We further observe that, consequently to the validation of the hypotheses tested in the present research, more exactly for H1 and H3, only the *tax advisers* didn't follow the rule of the absolute majority, since only 40% of this category of accounting professionals supported both cases, while 60% have not encountered the two types of problems. In our opinion, this exception within the accounting profession is explained by the punctual

solving of the practical cases, based on the tax regulation.

Based on the confirmation of the main research hypothesis, we can assert that the digital economy in Romania is in an initial development stage. In this context, by referring to the use of the fashionable technology of cloud computing, the most recent Eurostat data (2014) place Romania (8%) among the countries that have used this technology least, alongside with Lithuania and Poland; the same study shows that one of three Romanians has never used the Internet.

REFERENCES

1. ACCA (2014), Digital Darwinism: Thriving in the Face of Technology Change, *Audit Financiar*, vol. XII, no. 110 – 2/2014, pp. 16-20.
2. Agoramedia (2011), Security in Cloud, *IT Trends*, November 2011, Available at http://issuu.com/agoramedia/docs/ittrends_noiembrie_2011 [Accessed on 12 February 2016].
3. Anis Research (2011), *The Romanian ERP market is not out of the crisis, but it increases slightly*, October 2011, Available at <http://www.anis.ro/2011/10/03/piata-erp-din-romania-nu-a-iesit-din-criza-dar-creste-usor/> [Accessed on 12 February 2016].
4. Anon. (2012), Digital economy a path to prosperity, The Sydney Morning Herald, Available at: <http://news.smh.com.au/breaking-news-national/digital-economy-a-path-to-prosperity-pm-20121005-274a9.html> [Accessed on 12 February 2016].
5. Ardelean, A. (2014), Challenges to be Faced by the Audit Profession: Interest, Impact and Some Solutions, *Audit Financiar*, vol. XII, no. 109 – 1/2014, pp. 25-36.
6. Bendovschi, A.C. and Ionescu, B.S. (2015), The Gap Between Cloud Computing Technology and the Audit and Information Security Supporting Standards and Regulations, *Audit Financiar*, vol. XIII, no. 125 – 5/2015, pp. 115-121.
7. Capron, M. (1994), *Contabilitatea în perspectivă*, București: Humanitas.
8. CECCAR (2011), *Codul etic național al profesioniștilor contabili*, București: CECCAR.
9. Chatfield, M. (1977), *A History of Accounting Thought*, New York: Robert E. Krieger.
10. Drăgoi, A.-M. (2015), Research Regarding the Risks in the Audit Mission of Computerised Systems, *Audit Financiar*, vol. XIII, no. 124 – 4/2015, pp. 72-82.
11. European Commission (n.d.), Digital Agenda for Europe. A Europe 2020 Initiative [online] Available at <https://ec.europa.eu/digital-agenda/en> [Accessed on 12 February 2016].
12. Eurostat (2014), One out of every five individuals in the EU28 used the cloud to save files, Eurostat [pdf], Available at: <http://ec.europa.eu/eurostat/documents/2995521/6343581/4-16122014-BP-EN.pdf/b4f07b2a-5aee-4b91-b017-65bcb6d95daa> [Accessed on 12 February 2016].
13. Fotache, D. and Păvăloaia, V.-D. (2015), Enterprise Resource Planning's Revolution for the "Facelift" of Accounting Profession, *Audit Financiar*, vol. XIII, no. 130 – 10/2015, pp. 106-116.
14. Government of Canada (2014), Digital Canada 150 [online] Available at: <http://www.ic.gc.ca/eic/site/028.nsf/eng/00036.html> [Accessed on 12 February 2016].
15. Homocianu, D. and Airinei, D. (2015), On-Line Dynamic Dashboards in Audit Activities, *Audit Financiar*, vol. XIII, no. 125 – 5/2015, pp. 91-109.
16. IESBA (2013), *Codul etic al Profesioniștilor Contabili*, București: CECCAR.

17. Ionescu, B., Ș., Prichici, C. and Tudoran, L. (2014), Cloud Accounting – A Technology that May Change the Accounting Profession in Romania, *Audit Financiar*, vol. XII, no. 110 – 2/2014, pp. 3-15.
18. Kroes, N. (2012), The Digital Agenda two years on: is Europe well-placed?, *Digital Agenda Assembly: Brussels*, Available at: http://europa.eu/rapid/press-release_SPEECH-12-483_en.htm?locale=en [Accessed on 12 February 2016].
19. Lita, E. (2011), eHealth: Let's Learn from Examples, *IT Trends*, Iulie 2011, Available at: <http://ittrends.ro/2011/07/ehealth-2011-sa-invatam-din-exemple/> [Accessed on 12 February 2016].
20. Margherio, L., Henry, D., Cooke, S. and Montes, S. (1998), The Emerging Digital Economy, Available at: http://www.esa.doc.gov/sites/default/files/emergingdig_0.pdf [Accessed on 12 February 2016].
21. Năstase, P. and Caia, F. (2015), Study Regarding Information Systems Audit for E-business, *Audit Financiar*, vol. XIII, no. 123 – 3/2015, pp. 90-99.
22. Tapscott, D. (1996), *The digital economy: Promise and peril in the age of networked intelligence*, New York: McGraw Hill.
23. Toader, Ș. (2012), Unde ne va duce viitorul? Evoluția profesiei de audit, *Audit Financiar*, vol. X, no. 86 – 2/2010, pp. 3-5.
24. Țugui, A. (2003), *Produse informatice generalizate pentru contabilitate*, București: CECCAR.
25. Țugui, A. (2006), Contabilul, o „specie” pe cale de dispariție?, *Audit Financiar*, vol. IV, no. 17 - 5/2006, pp. 26-29.
26. Țugui, A. și Gheorghe, A.-M. (2014), Changing the role of accountancy in the context of Cloud-Computing, *Jurnalul Managementul Intercultural*, vol. XIV, no. 31 – 2/2014, pp. 149-157.
27. Țugui, A. (2012), *Information technologies – A crisis solution for Romania?*, Scientific Annals of the „Alexandru Ioan Cuza” University of Iași, Economic Sciences, vol. 59, no. 2, pp. 209-217.
28. Vasarhelyi, M.A., Kogan, A. și Tuttle, B.M. (2015), Big Data in Accounting: An Overview, *Accounting Horizons*: vol. 29, no. 2, pp. 381-396.

Auditing Security for the Cloud

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Abstract

Following the pattern of any major paradigm shift in the history of computing, the migration to cloud-based computing has known both praise and criticism. As its advantages, especially for the small and medium-sized companies, are too obvious to be doubted or questioned, the critics mainly focus on the drawbacks. Among the drawbacks, security is considered to be the most important.

The paper proposes an outline of the real image behind the many cloud computing security-related myths and misconceptions that an auditor has to deal with. The research is based on the literature review in the field of cloud-based computing and it is built starting from a synthesis of results achieved by means of a thorough analysis of the recent opinions and experience of Romanian and foreign auditors that were available for interviews. The main purpose of the paper is to find whether cloud-systems are more or less secure than traditional in-house systems from an auditor's perspective. The paper is part of a broader research process in the field of cloud computing and the neighboring technologies.

Keywords: Cloud computing security, Software as a Service, Platform as a Service, Infrastructure as a Service, Security audit

JEL Classification: L86

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Introduction

The field of security in the process of deploying, managing and auditing cloud-based applications is the main theme of criticism of the aforementioned software distribution system. While suppliers of cloud services advertise the new cloud-related technologies as the safest wave of technologies in IT history, often ignoring the obvious issues, skeptics tend to “demonize” the new paradigm, by presenting it as the end to true security and the beginning of a new and dark era, where privacy is nothing but a well preserved illusion. Both opposing views demand further analysis, as they tend to focus on collateral, and, in some cases, non-existent issues, and present them as the “great impediment of cloud technologies”, often ignoring more important ones. Caught in the middle, the auditor has to further the analysis and improve own knowledge to a reasonable level, so as not to fall in an “extremist” position and compromise professional fair-mindedness.

The cloud computing paradigm, by its nature, cannot be completely different from the previous approaches for the management and use of software applications, and, therefore, it inherits much of their associated security concerns. On the other hand, the delivery and use of software applications via Internet makes them highly dependent on the nature and operating features of the network, which leads to a whole new wave of “Internet-inherited” security problems which are completely omitted in many instances (intentionally or not), by both the supporters and critics of the new approach. Some of the issues brought forward as “major reasons for the failure” of the new technology are, in fact, as old as information technology itself, and time has proven unequivocally to what extent (and at what cost) the associated risks may be managed or minimized.

The present paper aims to use both the literature relevant to this field (which is becoming more consistent every day), and the data collected by interviewing professionals involved in the process, locally and internationally, to achieve a clear image of an auditor’s perception over the real cloud security issues, unaffected by commercial interests or aggressive marketing policies, which are usually characteristic to any new product on the market. Although currently there are not sufficient quantitative data to propose a coherent model for the estimation of a cloud computing system security or to formulate a comparison with traditional

information systems (which is the purpose of a more extensive research in the field), it is possible to comparatively estimate the levels of security for both types of systems.

1. Research methodology

This paper is one of the results of a broader research in the field of cloud computing and *Enterprise 2.0* technologies, and it develops a research in the field of computer-assisted audit tools and techniques.

Wherever possible, a direct identification of the practitioners’ expectations was attempted by means of direct interviews and also by means of a questionnaire. The questions for the empirical study were designed so as to get unbiased, objective answers. The members of the target group were encouraged to add their own observations regarding the questionnaire. Validation of the research conclusions was performed by means of an informal discussion with practitioners, members of organizations which performed or are in the process of performing a migration to cloud-based services. Also, professionals from a cloud migration assistance and consulting company were interviewed. Some of the discussions and conclusions in the paper are based on the results of previous scientific or market research studies.

2. Who is the real owner of cloud-based information?

On August 17th, 2009, the United States Justice Department publicly announced that 130 million credit card numbers were stolen, in what was to become the largest identity theft in information technology history (US Department of Justice, 2009). A few days after the announcement, the author, in the person of a former secret services employee, specialized in tracking and identifying hackers, was formally charged of stealing credit card data by exploiting security deficiencies in major retailers’ computer networks.

Based on the aforementioned fact, it can be noted that many breaches in security systems do not arise from the negligence of those responsible, but as a result of extremely ingenious attacks by experts in the field of information systems security, whose expertise exceeds, in some cases, the typical knowledge level of the

employees of a company dealing with the implementation of security mechanisms, and sometimes, even the experience of the experts entrusted to audit the security level of the aforementioned systems. Therefore, although companies continuously assess and periodically reassess the level of security risks, implement internal control systems, install and configure firewall equipment and other assimilated technologies, establish backup processes and protocols and request for audited security features for the acquired hardware and software equipment, security breaches continue to occur. In addition, more and more frequently, providers of security solutions offer new alternatives, considered to be 100% secure, which obviously proves to be at least an exaggeration.

Looking back in time, one of the most famous “miraculous” security solutions was *Kerberos*, offered at the beginning of the ‘90s as the universal solution to computer security (Perez-Mendez et al., 2012). However, its glory soon faded (Bajpai, Vardhan and Kushwaha, 2012), and the associated security issues continued to exist. A few years later it was believed that the NASA information system had reached the absolute level of information security (Reed, 2012). Nevertheless, the few successful attacks have led to a NASA computer system security audit by the Congress of the United States, through its investigative body, called the *General Accountability Office – GAO* (Purpura, 2013). Audit findings have revealed that the results reported by the space agency were highly exaggerated, and the implementation costs for the security systems were not justifiable in correlation with the results (Berriman et al., 2012). NASA was not the only organization to exaggerate the results in the field, as subsequent attacks on *Microsoft* and *Citibank* revealed a real trend in this respect (Nunes and Merrihue, 2007).

Based on the review of the relevant literature in the field, the following conclusions can be stated:

- The data on Web servers are, in the majority of cases, unencrypted, as security systems focus on limiting outside access and trying to build a “wall” around every server; once the wall is penetrated, there are no more internal security systems in place;
- Most on-line transactions do not have a *post factum* auditing system; the audit is performed on the security system as a whole, and the results are subsequently extrapolated to all transactions;

- The manner software providers and their users manage their own systems’ security is far from being transparent (and that is understandable, in most cases).

All these phenomena have been observed a long time before the emergence of the cloud computing model, and, therefore, the cloud cannot be held responsible for their existence. The main difference is that even if such cases existed before the emergence of cloud computing, they were relatively isolated, and, therefore, the negative effects were relatively easy to manage, and security breaches were soon being covered. The emergence of cloud computing has led to the existence of millions of servers, with a number of client accesses that would have seemed impossible a few years before (Han, Susilo and Mu, 2013). The best proof in this respect is the famous “crisis of the IP addresses”, which showed that, at that point, even the Internet was reaching its physical limits. Under these circumstances, for an auditor, it is compulsory to find the correct answers to two essential questions:

- Who is the real owner of the information stored in the cloud?
- Which stakeholders are primarily responsible for the security of the information stored in the cloud?

The answer to the first question seems to be “the organization which benefits from the cloud-based services and takes the role of the user”. The pieces of information a cloud service provider stores and manages belong to its customers, its employees, its accounts etc. Consequently, the security issues become highly debatable, as it becomes obvious that informational values are not managed and monitored by their rightful owner, but by an external entity (the cloud infrastructure provider).

This “reversal” of responsibilities leads to a second important question: Does the cloud provider assume the legal responsibility in the case of data leaks or identity theft, covering all damages? To the knowledge of the author, and also in the opinion of some surveyed auditors (Li et al., 2013), the cloud has not yet been tested in the judicial system, as there have not yet occurred any cases or issues important enough to create a precedent; however, the behavior of information services providers in similar cases (although not involving cloud computing) cannot be considered as reassuring. For example, in a case of identity theft,

hackers have “cleared” a French bank’s customer entire credit line. Under these circumstances, the bank not only did not assume any of the blame, but it requested the payment of installments by the customer, with interest, for the full amount stolen by hackers. A court of law has ruled against the bank’s intent to charge interest, but it did not order the latter to bear the amount stolen, as the account management was performed by the customer through an *Internet banking* service, and not by the bank (Edwards, 2014).

Identity theft usually follows a standard model. The offender is in the possession of an essential set of basic information about the victim (identity information, passwords, account numbers, etc.), that is used in order to access the victim’s financial resources and even new financing opportunities (credit lines, credit cards, and so on). It is even possible that the offender makes a series of deposits and loan payments for a while, so as to increase the credit limit and not to arouse suspicion, pending a final large hit. The moment the debt is overdue, the creditors will turn to the victim as the real debtor, and the latter will have to initiate legal actions to identify and prosecute the perpetrator, otherwise being solely responsible for the loan payments. Considering that, according to a recent study (Ren, Wang and Wang, 2012), only in the United States alone there are about 750.000 successful identity theft attempts every year, the obvious question is: “Will the set of cloud technologies allow for a worldwide recurrence of this scenario?” Unfortunately, the answer cannot be given as easily, since it is not that obvious.

3. Responsibility vs. accountability

The analysis of the current situation leads to the conclusion that in the absence of coherent cloud security management, the negative phenomena caused nowadays by security breaches will likely increase by an order of magnitude. A recent study of the manner in which contracts are negotiated between cloud services beneficiaries and providers (Carlsson and Fuller, 2013) suggests that if a cloud services beneficiary will suffer major damages from computer crime while its database is hosted by a cloud provider, that provider will not be held liable for any part of the consequences. From an auditor’s point of view, this perspective is at least interesting, given that the level of security and servers

access control is ensured completely by the company that owns the servers (the cloud provider), and not by its customers. Therefore, the providers of cloud services should have clear and direct legal responsibility for the safety and protection levels associated with the service they provide. In addition, the organizations benefiting from these services should understand that the term “public cloud” involves the following:

- The level of access is arranged so as to allow free access to all the potential beneficiaries of the service;
- The service recipients may be individuals with malicious intentions, posing as legitimate users.

From a conceptual point of view, security objectives are implemented through a set of applications and service design principles (which define the conceptual framework of security technologies), as well as through hardware devices and software applications that implement the defined framework. By its nature, technology has a dual character, as the design principles that implement security and the principles that generate cheaper and more flexible operational systems are often conflicting, forcing organizations to achieve unwanted but unavoidable compromises. These conflicts occur not only between IT technologies, but are also affecting the underlying business processes. If the premise is accepted that the use of cloud technologies allows for costs cuts and facilitates access to services, then every increase in service access leads to a proportional increase in security concerns (or the number of attempted frauds).

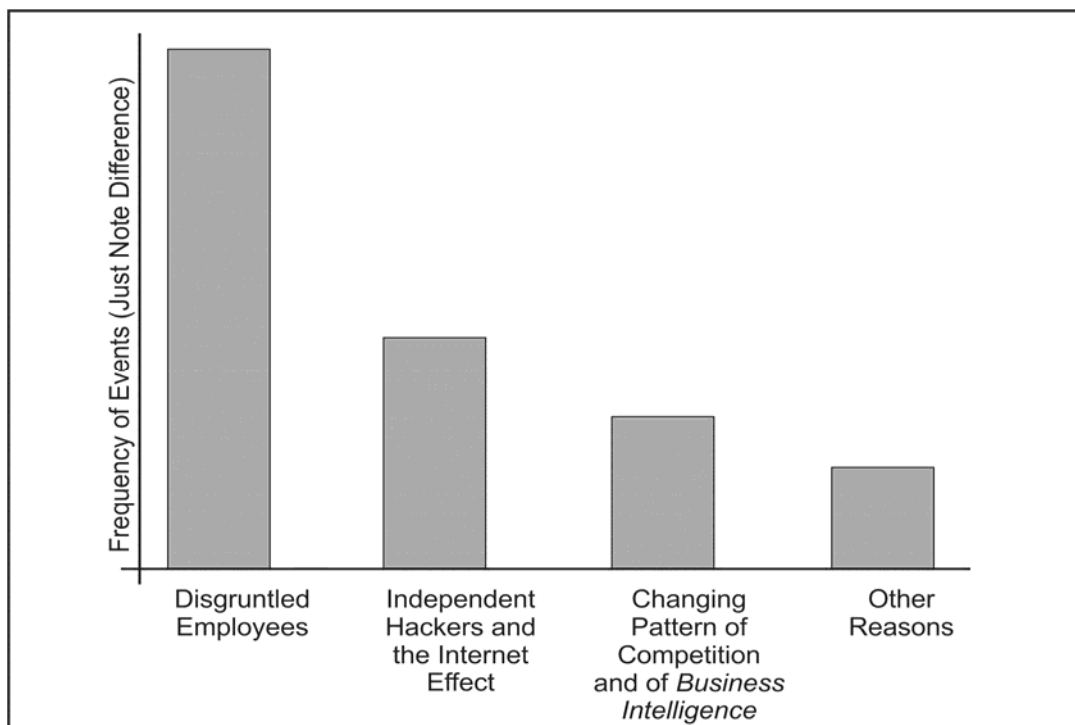
It can be considered that, sooner or later, everyone will try to benefit from cloud computing services, because most of them are available for free and are supported by advertising. If a cloud-based e-mail service is provided free of charge, the real costs of this service can be completely invisible to its users and, by consequence, the weight of security measures and data privacy enforcement in the total cost of the service will be completely unknown to a recipient of the service. These issues are becoming more relevant not only for the current cloud services recipients, but also for the companies exploring the possibility of a migration to the cloud. SMEs are attracted to a cloud-based electronic mail offer, especially if it allows the direct integration (through the browser) of other applications, like customer relationships management or enterprise resource planning applications. However, as the number

of service beneficiaries increases, security concerns are beginning to take shape. Empirical evidence (Pervez et al., 2013) reveals that “to a certain extent” consumers are willing to give up their privacy in order to enjoy a completely free of charge service; nevertheless, when that threshold is exceeded, the situation must be reevaluated. A survey conducted among users of such services, holding advanced knowledge in computer science, has led to the following results:

- When asked “Do you believe that you have a sufficient level of control over personal data?” over 87% of the respondents provided a positive answer, using the current legal provisions concerning the processing of personal data to argue the expressed opinion.
- When asked “Are you aware that the service provider has the right to use your personal data to target the advertising process?” only 32% of respondents had a positive response, and they believed that the possibility to edit their profile is an efficient solution to this particular problem.

All of these aspects, whether of technical, personal, or business-related nature, affect the way individuals, companies and auditors perceive the security of information. In addition, the discussions with cloud computing professionals suggest that the explosion of cloud-based technologies will generate extremely complex and perhaps unmanageable responsibilities in the field of information security. Moreover, the possibility of “inside” attacks cannot be completely eliminated. A survey performed by the FBI in 2012 (US House of Representatives, 2012) reveals that the number of malicious attacks made by disgruntled ex-employees is twice as large as the number of attacks made by hackers. According to the same survey, third in line are “business intelligence” attacks, translated as economic espionage actions taken by competitors, also facilitated by the cloud-based technologies. The results of the survey are shown in **Figure 1**, as presented by the original source, without any quantitative information, its purpose being to provide awareness to the weight of each type of attack in the total of security issues.

Figure 1. Origins of information security risks



Source: FBI, 2012.

When compared to public cloud systems, the private cloud infrastructure is better in terms of security, as the user organization also has ownership and full control over the service infrastructure. However, most private cloud structures have broadband connections to public cloud systems (in order to assure elastic scalability), which does not render them immune to the security issues affecting the public services.

The solution to keep cloud systems risk at a manageable and reasonable level is the formulation and the enforcement of common security standards both at the level of cloud service providers and the level of the user organizations. Moreover, at the level of the European Union, or even at an international level, the foundation of a cloud security and auditing authority, endowed with regulatory and enforcement powers is a must. Even if a lot of voices (both inside and outside the academic environment) have stated the need for such an organization, the proposal was not really taken into account by the ones empowered to regulate the foundation and the functions of such an authority.

As revealed by a previous survey (Mangiuc, 2012), the organizations benefiting from cloud services should be more realistic when dealing with security issues, starting from the moment the services are contracted. Some of the surveyed organizations seemed to massively neglect security issues, and stated that the cost cuts allowed by the migration to the cloud are far too important to be missed. Under these circumstances, it is obvious that the migration from an *in-house* solution to a cloud-based solution will require a trade-off between security, performance and costs. However, the following rules are considered to be of outmost importance:

- The security level required from a cloud services provider should not be assessed based on the offered price, but on the level of the operational risk involved;
- Major trade-offs in the field of security reveal, essentially, a huge lack of professionalism from the management of the user organization, which may render the managers directly responsible and accountable in the event of a massive information leak having major consequences at the business process level. The auditor has an obligation to express concerns if such a situation occurs.

Such carelessness may prove to be extremely harmful for the user organization and also very expensive from

the legal point of view, both at security and conformity levels. Inside the European Union, a quite detailed regulation package is in force. The package includes:

- The 1999/93/EC Directive on a Community framework for electronic signatures;
- The 2000/31/EC Directive on electronic commerce;
- The 97/7/EC Directive on the protection of consumers in respect of distance contracts;
- The 2002/65/EC Directive concerning the distance marketing of consumer financial services;
- The 2002/58/CE Directive concerning the processing of personal data and the protection of privacy in the electronic communications sector.

In addition, the providers and beneficiaries of cloud-based services must take into consideration the global nature of this technology, and the fact that many state authorities require, through their own legislation, the preservation of personal data and copyright materials within their own state borders.

The legal foundation of the relationships between cloud services providers and beneficiaries is represented by the Service Level Agreement Contracts (or SLA's), which, in many cases, are limited to the general terms definition of the security-related obligations, without openly identifying the security protocols, standards, and procedures which are mandatory to be used for clients, servers, network routers and hubs, network bridges, connection concentrators, firewalls and other equipment which implement the security policies. Such practices cannot be but harmful for all the stakeholders, as information systems security is declared to be a key competitive differentiator and a key performance indicator for both the users and the providers of cloud-based services. When SLA contracts will include bullet-proof clauses regarding responsibilities of each of the involved parties in the field of security, such agreements will lead to safer, security-enabled architectures, starting from the analysis and design phases.

4. A security prioritization model proposal

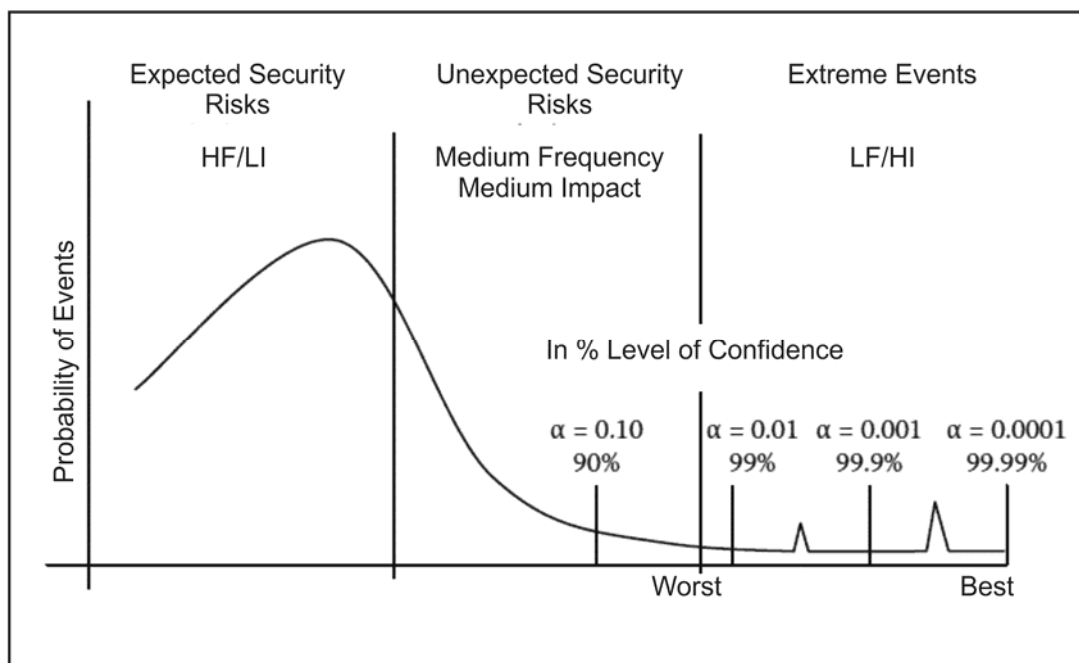
As a general answer to all the aforementioned issues, the author intends to build a model able to allow a cloud services provider, consumer or auditor to assess the real priorities in the field of security. The first stage of the

model implies the identification, the analysis and the evaluation of the vulnerabilities attached to the chosen cloud-based solution. There is a large possibility that the model will generate a very long list of vulnerabilities and possible threats, but not all of them will be major concerns for the company.

The major criteria for the priority of a security threat should be as follows: a vulnerability bears high security risk if its exploitation may expose or compromise a

physical or intellectual property asset of the company. Moreover, the threats that are considered to have high priority must be cross-checked against all other vulnerabilities, in order to assess the combinations that have the maximum destructive effects. As the frequency of certain vulnerability can be determined on a statistical basis (based on internal or external relevant data), the aforementioned procedures can be employed in order to determine the impact of vulnerability (Figure 2).

Figure 2. The vulnerability impact determination model



Source: Mangiuc, 2016.

By taking and adapting the operational risk assessment-specific approach, the subsequent directions will be followed:

- *High frequency, low-impact events (HF/LI)* – which may be addressed by using the currently available control system, at least until a coherent security policy design process is performed.
- *Medium frequency, medium impact events (MF/MI)* – the *known unknowns*, will require the creation and analysis of different scenarios able to project their possible effects at the level of the cloud-based infrastructure.

- *Low frequency, high impact events (LF/HI)* – the *unknown unknowns*, which require the adequate design of dedicated elements in the field of security strategy.

Assuming the information systems have access to a minimum of audit tools and techniques, a continuous sampling process may reveal the deviations from the normal system use (such as unnatural server load, a large number of requests having the same source etc.). The trust level for the LF/HI events should be at least 99.99%, which means at most one case in ten thousand may escape undetected to the infrastructure monitoring

system. Such a goal cannot be fulfilled at once, but only after a reasonable time lapse, through repeated analysis and increased levels of experience.

The actions presented and proposed by the current paper are also based on a series of best practices in the banking industry, designated to identify and monitor the operational risk level, as requested by the Basel Committee on Banking Supervision (Chorafas, 2004).

The aforementioned analysis pattern provides the auditor with the ability to discover vulnerabilities and the ability to establish priorities. No company, whatever its size, can afford to follow and address all the discovered vulnerabilities at once, so, it has to concentrate first on the vulnerabilities having high impact risk, no matter how low their frequency is. This approach, which may be called *the design of a security policy*, should be centered on the selection of the most efficient counter-measures (from an economic point of view), so as to decrease exposure to high impact vulnerabilities:

- A significant increase in the costs incurred for each attack by a hacker or an intruder who has found a security breach;
- A decrease of the damages that an attack can cause, by establishing more complex internal control procedures, leading to a higher degree of integrity.
- The increase of the probability that the attack is detected and stopped before it reaches its final goal.

The aforesaid proposal is considered to be only a suggestion regarding the main directions for action, as, in order to reach maximum efficiency, the model should also enclose a large number of cultural and behavioral variables, which cannot be predefined, but must be carefully evaluated in each particular case (for example, the employees' knowledge level, the level of understanding and acceptance of the new security measures, the expected level of punishment, as stated in the enforceable legislation for the security-related crimes).

Moreover, the design of a distributed security architecture has to be performed, so as the final result will be able to search, capture and analyze the behavioral models at the network access and use levels. The distributed architecture approach is far more efficient than the centralized architecture approach (Pinzon et al., 2011), as it is more sensitive to the local behavior patterns at the network level, and it also generates less load on the network equipment. Such a

security architecture must be able to gather all the proof and data required to document a security event, so as to serve the purpose of internal audit, an insurance claim, or a court of law. Studies (Munoz-Canavate and Hipola, 2011) reveal that one of the most important impediments companies in the European Union meet when instrumenting the legal action in the case of a security attack is to prove that the attack actually took place. Anomalies detection and identification mechanisms alert system administrators about the events or the connections that have not been observed before, or, if they have been observed, did not enter the attention zone of the alert systems. The use of learning-specific technologies (like neural networks, agent based networks, event identification systems, etc.) may significantly speed up the implementation process for a properly designed security system. These technologies may also be able to sensibly reduce the number of false alarms whose apparition is thought to be inevitable, no matter the nature of the system (mainly automated or mainly manual system).

Discussion and conclusions

The paper at hand identified the main types of security threats for a cloud-based information system solution, both the ones inherited from the previous generations of software solutions and the ones who arose as a consequence of founding the information system on the Internet connection.

Even if the foundation of an authority able to regulate and verify compliance for the enforcement of security requirements in the cloud was requested by many voices in the economic and academic environment, the idea was not really taken into account by the decision makers, which leads to the conclusion that, from an auditor's perspective, the fraud potential of the cloud-based infrastructure, as perceived by most of the user companies, has two major causes:

- The lack of standardized security practices whose implementation would be mandatory for the cloud services providers and consumers alike (and also would be verifiable by means of the Internet);
- The persistent ambiguity and uncertainty existent from the legal point of view, concerning the implementation mode and the scope of the legal framework applicable in the field of on-line businesses.

The risk to be held legally responsible for the manner cloud information was managed and protected belongs to the rightful owner of the aforementioned information, and the consequences of a faulty security management can become very serious, very quickly. As the paper at hand is trying to prove, the ability to provide a reasonable level of data security in the cloud is at least open to discussion nowadays, and is likely to stay that way as long as the increase in infrastructure complexity will outrun the increase in the efficiency of the security mechanisms.

Thus, the paper proposes a model blueprint for the identification and the prioritization of the security threats

inside cloud-based software architectures, inspired by the operational risk assessment model, and able to be employed in order to describe the most important development directions for the security policies.

It may be concluded that designing the absolute and perfect security solution is an utopia, even in the cloud. However, this should not be a “deal breaker”, as the recourse to the best available technologies and the use of imaginative techniques to gain protection against the cloud and Internet-specific security threats may significantly increase the efficiency and the impact of the recommended security solutions.

REFERENCES

1. Bajpai, D., Vardhan, M. and Kushwaha, D.S. (2012), Authentication and Authorization Interface Using Security Service Level Agreements for Accessing Cloud Services, *Contemporary computing, Book Series: Communications in Computer and Information Science*, vol. 306, no.1, pp. 370-382.
2. Berriman, B., Deelman, E., Juve, G., Rynge, M. and Voekler, J.S. (2012), High-Performance Compute Infrastructure in Astronomy: 2020 Is Only Months Away, *Astronomical Data Analysis Software and Systems XXI Book Series: Astronomical Society of the Pacific Conference Series*, vol. 461, no. 1, pp. 91-94.
3. Carlsson, C. and Fuller, R. (2013), Probabilistic Versus Possibilistic Risk Assessment Models for Optimal Service Level Agreements in Grid Computing, *Information Systems and E-Business Management*, vol. 11, no. 1, pp. 13-28.
4. Chorafas, D.N. (2004), *Operational Risk Control with Basle II. Basic Principles and Capital Requirements*, Butterworth-Heinemann, London.
5. Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.
6. Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications).
7. Directive 2002/65/EC of the European Parliament and of the Council of 23 September 2002 concerning the distance marketing of consumer financial services and amending Council Directive 90/619/EEC and Directives 97/7/EC and 98/27/EC.
8. Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts.
9. Edwards, C. (2014), Ending identity theft and cyber-crime, *Biometric Technology Today*, vol. 2014, no. 2, pp. 9-11.
10. Han, J., Susilo, W. and Mu, Y. (2013), Identity-based data storage in cloud computing, *Future Generation Computer Systems – The International Journal of Grid Computing and E-Science*, vol. 29, no. 3, pp. 673-681.
11. Li, M., Yu, S., Zheng, Y., Ren, K. and Lou, W. (2013) "Scalable and Secure Sharing of Personal Health Records in Cloud Computing Using Attribute-Based Encryption", *IEEE Transactions on Parallel and Distributed Systems*, vol. 24, no. 1, pp. 131-143.
12. Manguic, D. (2012), Cloud Identity and Access Management – A Model Proposal, *Journal of Accounting and Management Information Systems*, vol. 11, no. 3, pp. 484-500.
13. Munoz-Canavate, A. and Hipola, P. (2011), Electronic administration in Spain: From its beginnings to the present, *Government Information Quarterly*, vol. 28, no. 1, pp. 74-90.

14. Nunes, P.F. and Merrihue, J. (2007), The continuing power of mass advertising, *MIT Sloan Management Review*, vol. 48, no. 2, pp. 63-77.
15. Perez-Mendez, A., Pereniguez-Garcia, F., Marin-Lopez, R. and Lopez-Millan, G. (2012), A cross-layer SSO solution for federating access to kerberized services in the eduroam/DAMe network, *International Journal of Information Security*, vol. 11, no. 6, pp. 365-388.
16. Pervez, Z., Awan, A.A., Khattak, A.M., Lee, S. and Huh, E.N. (2013), Privacy-aware searching with oblivious term matching for cloud storage, *Journal of Supercomputing*, vol. 63, no. 2, pp. 538-560.
17. Pinzon, C.I., Bajo, J., De Paz, J.F. and Corchado, J.M. (2011), S-MAS: An adaptive hierarchical distributed multi-agent architecture for blocking malicious SOAP messages within Web Services environments, *Expert Systems with Applications*, vol. 38, no. 5, pp. 5486-5499.
18. Purpura, P.P. (2013), *Security and Loss Prevention – An Introduction (Sixth Edition)*, Butterworth-Heinemann, London.
19. Reed, B. (2012), The 8-Year Effort to Address Systems-Level Space Solar Power Issues for Us Government Satellite Programs, *2012 38th IEEE Photovoltaic Specialists Conference*, vol. 38, no. 1, pp. 2811-2814.
20. Ren, K., Wang, C. and Wang, Q. (2012), Toward Secure and Effective Data Utilization in Public Cloud, *IEEE Network*, vol. 26, no. 6, pp. 69-74.
21. US Department of Justice, Office of Public Affairs (2009), Alleged International Hacker Indicted for Massive Attack on U.S. Retail and Banking Networks. Data Related to More Than 130 Million Credit and Debit Cards Allegedly Stolen, [online] Available at <http://www.justice.gov/opa/pr/2009/August/09-crm-810.html> [Accessed February 10th, 2016].
22. US House of Representatives, Committee on Homeland Security, Subcommittee on Oversight, Investigations, and Management (2012), America Is under Cyber Attack: Why Urgent Action Is Needed”, [online] Available at <http://www.hsdl.org/?view&did=707644> [Accessed February 10th, 2016].

The business perspective on transfer pricing and related legislation

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Abstract

The Romanian legislation transfer on pricing was adopted following the models established by the Organization for Economic Co-operation and Development (OECD) Guidelines and the European Union Forum on transfer pricing. The first detailed legal regulations regarding the content of the transfer pricing file and the deadline for its submission were published in the Official Journal of Romania in 2008.

The objective of the research is to identify and analyse the perception of the business environment in Romania on transfer pricing issues, covering topics such as the influence of the transfer pricing law in creating a competitive business environment, how the competent fiscal authority implements the legislation, the need for companies to turn to an external consultant, as well as other related topics.

Keywords: *Transfer pricing, competitive business environment, transactions with affiliates, additional tax liabilities, specialized consulting, double taxation avoidance model.*

JEL Classification: E64, M42, M48

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Introduction

The arm's-length principle was first introduced in the national tax law in 1994, followed by the development of the legislative framework regarding transfer pricing achieved in 2004, when the definition of related parties, the arm's length principle and the transfer pricing methods were introduced in the Tax Code. This applies to all transactions with related parties, including transactions between a foreign legal entity and a company established in Romania. Recent amendments to the Tax Code clarify the possibility to investigate transactions between Romanian affiliated parties in order to determine the transfer prices.

What many companies still do not realize is that transfer pricing represents the future of financial audit and that tax controls will focus ever more on this sector.

Pak and Zdanowicz (1994), quoted by Kingsley and Zabihollah (2008), realized since 1994 that transfer pricing is the most important international tax issue perimeter that governments and multinational companies involved in international trade are facing.

Companies from Romania that have direct or indirect related party transactions must understand that the strategy of transfer pricing practices within the group must respect the arm's length principle, but also that the transactions must be analysed from the point of view of the added value created and the benefits for the parties involved, as stated by McKinley and Owsley (2013): determining a company's transfer prices requires identifying where value is created in an organization and transferred across group members.

A perspective on transfer pricing risk identification and its measurement is presented by a consultant of a multinational company in the OECD Guidelines on "Dealing Effectively with the Challenges of Transfer Pricing". He is pointing out the importance of tackling in business the arm's length principle and how to measure it. It also emphasizes the added value that the level of training of the financial department in transfer pricing and also the cooperation with external consultants can bring to the company.

The most recent study on the awareness of the companies in Romania regarding the importance of understanding the challenges related to transfer pricing was conducted by Ernst & Young (2013). The results of the study confirm that the Romanian entities consider

transfer pricing as one of the most important issues that they will face in the future. However, the study by Ernst & Young highlights a growing level of knowledge of the Romanian tax authorities regarding transfer pricing, developing more thorough analyses of transfer pricing documentation.

Another study on the perception of professionals in Romania in the field of accounting/auditing, on some specific aspects of transfer pricing, was conducted by Corlaci and Tiron-Tudor (2014). Based on the questionnaire used, the authors concluded that the respondents considered that transfer prices are important to the overall business strategy but, at the same time, transfer prices may be used as tools of manipulation of the fiscal result.

The Romanian Tax Code provides a general description of the arm's-length principle, which is consistent with the Guidelines on Transfer Pricing for Multinational Enterprises and Tax Administrations issued by the OECD (OECD, 2010).

The objective of the transfer pricing documentation is to evaluate the extent to which a company in Romania carries out transactions with an affiliated entity in another Member State in accordance with the market value and also to meet the requirements for transfer pricing rules which are in force in Romania. In case of disputes, the responsibility of proving that the transfer prices used do not respect the arm's length principle falls to the tax authorities.

1. Research methodology

During the planning and implementation of the research activities aimed at identifying the perceptions of the Romanian business environment in relation to transfer pricing, a questionnaire was designed, which consisted of 18 questions. Out of these, 17 are closed questions with predefined single answers, the last being an open-answer question meant to identify the degree to which the respondent is familiar with transfer pricing. The questionnaire was built using the funnel technique (Chelcea, 2007, p.259), which involves structuring the questions so as to observe a shift from general to particular aspects of the research topics.

The questions used in the questionnaire were divided into four categories, as it follows:

1. The first four questions are designed to identify the company's profile, business segment, ownership structure and whether they were subject to a tax audit on transfer pricing. Pre-coded questions with a broad spectrum of answers and also simple "Yes or No" questions were used, in order to shape the profiles.
2. The following six questions are designed to outline the perception and ability of the respondent in preparing the transfer prices documentation and its importance within the economic context. Because this issue is complex and opinions can vary in intensity, there were used questions with answer ranging on a scale from 1 to 10, where 1 reflects a low degree of influence, and 10 reflects a very high degree of influence.
3. The remaining questions with predefined answer options were designed to outline the respondents' opinion on how the tax law in the field of transfer pricing are applied by the tax authorities.
4. The last question is an open -answer one and it serves to identify the degree to which a respondent is familiar with transfer pricing and his/her view in relation to the topic presented.

The target group consisted of companies from different areas of activity and different sizes (small, medium and large taxpayers). The companies that have been requested to answer the questionnaire were selected using various contacts made on the business-oriented social networking platform, LinkedIn. The target group was offered the possibility of providing the answers anonymously or by stating the name of the company.

The questionnaire was made with Microsoft Word and the responses were aggregated using Microsoft Excel (the graphs were prepared using Microsoft Excel).

The responses were collected from 1 March 2015 to 31 October 2015.

2. Analysis and interpretation of the results

Approximately 500 persons were contacted to complete the questionnaire by e-mail, through the LinkedIn platform and through questionnaires submitted and filled at the registered office/place of business of the respondents. By the end of October 2015 there have

been recorded a number of 70 responses, mostly from the large taxpayers.

The results will be presented divided according to the categories of questions mentioned above.

2.1. Identifying the profiles of companies to which the respondents belong

To ensure a representative sample, most companies that answered the questionnaire had to be classified as large taxpayers, 50% of companies should have had at least one shareholder/partner who held more than 25% of the value/number of shares or of the voting rights and from at least 20% of the respondents the transfer pricing documentation should have been requested by the fiscal authorities.

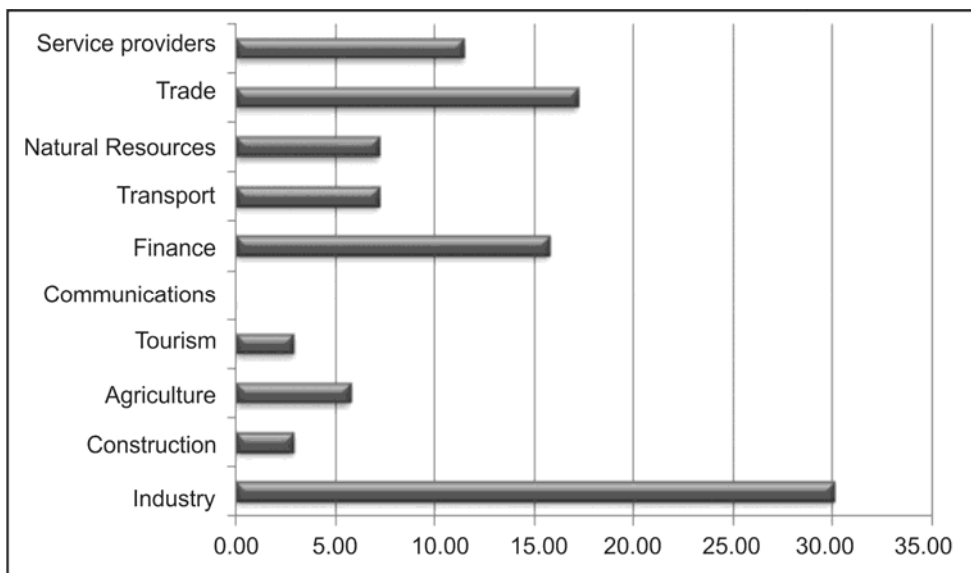
According to the centralized results of the questionnaire, 32.86% of the respondents are small taxpayers, 28.57% are medium taxpayers and 38.57% are large taxpayers, according to the selection criteria applicable for the year 2015. Also, we noticed that 62.86% of the companies have at least one person that holds more than 25% of the value/number of shares or voting rights. If there are no legal or physical persons that hold at least 25% of a company, the company was automatically labelled as independent.

Figure 1 provides information regarding the profile of companies that answered the questionnaire.

According to **Figure 1** we notice that the sample is made up of: 30% companies which operate in industry, 17% in commerce, 15% in finance, 11% are service providers and 27% in other areas. In all of the areas covered in the questionnaire there may occur transactions between affiliates that are subject to transfer pricing regulations and the arm's length principle, even if we talk about industry and commerce where there are transactions between affiliates (purchases and sales of finished products, semi-finished products or raw materials) or if we refer to the financial institutions or services providers.

In order to determine if the sample of the companies is representative to the study it was necessary to identify the number of companies which previously prepared a transfer pricing documentation for the entire activity or just a certain type of transactions. Thus, based on the answers received, we can conclude that more than 20% of the companies were required to prepare the transfer pricing documentation prior to the date of the questionnaire.

Figure 1. Companies' profiles



Source: compiled by the author.

According to the information received for the first four questions, which aimed to collect preliminary information on the representativeness of the analysed sample, we conclude that the respondents can provide answers based on their professional experience within the company, related to transfer pricing.

2.2. Perception and aptitude in relation to the need for preparing the transfer pricing file

Most respondents who answered the questionnaire replied that if it is necessary to prepare a transfer pricing documentation they would turn to a specialized consulting company (65.71%), while 31.43% would assign the task to the company's financial department and the rest (2.86%) would use other resources. At the same time, confirming the result of the previous question, most of the respondents who answered the questionnaire (71.43%) believe that it is necessary to have a special software license to obtain the comparability sample needed to compile a transfer pricing file. The programs that were mentioned are AMADEUS and ORBIS, which are used by specialized consultants in order to obtain comparability samples used to prove that the arm's length principle was observed.

To the question regarding the positive impact of transfer pricing legislation on the development of a competitive business environment, 55% of respondents answered that there is a connection between the two (by marking out the fields from 6-10 on a scale from 1 to 10 where 1 represents low influence and 10 represents very high influence).

Analysing the perception regarding the competitive environment, we decided to quantify the impact of transfer pricing legislation, as an additional "burden" that must be managed by the company. Most of the respondents (22.86%) have provided the answer 5 (on a scale of 1 to 10), thereby adopting a neutral position. Also, 10% of the respondents felt that transfer pricing legislation is not a "burden" for the company, while 12.86% felt that they will be forced to allocate important resources to this activity.

Since in related party transactions it is necessary to apply the arm's length principle, 41.43% of the respondents believe that transfer pricing legislation may affect to some extent the transactions with its affiliates (the respondents marked the answers 5, 6 and 7). Regarding the other respondents, 20% considered that transfer pricing legislation does not affect in any way the transactions with affiliates and 10% believed that it has a great influence on group transactions.

Since many large companies, especially those in manufacturing, purchase raw materials, semi-finished products or finished products from affiliates, we assessed the perceptions regarding the quality and conformity of the products or services if they were provided by an entity from the group. Most of the respondents (21.43%) have provided the answer 5 (on a scale of 1 to 10), thereby adopting a neutral position. Also, 11.43% felt that quality is not ensured if the products/services are purchased within the group, while 14.29% said that the quality of products/services is ensured if the purchases are within the group (out of these, only three companies in the industry chose the answer 10 – very high influence).

In terms of the transfer pricing influence in diminishing the “tax base erosion and profit shifting”, 37.14%¹ out of all respondents felt that the current legislation (Romanian Tax Code in force in 2015) has little influence, while 31.43% adopted a neutral position. The remaining 31.43% considered that the legislation has a strong influence in increasing voluntary compliance of companies. Some companies tend to use transfer pricing to increase group profits reported in low tax jurisdictions and reduce group profit where taxation is high.

To the question “*To what extent transfer pricing legislation restricts a company’s rights in relation to*

affiliates?”, 72.86%² of respondents marked the first four fields, recognizing that legislation does not force them to respect a certain profitability margin within the company, but is mainly influenced by the economic environment and very little by legislation.

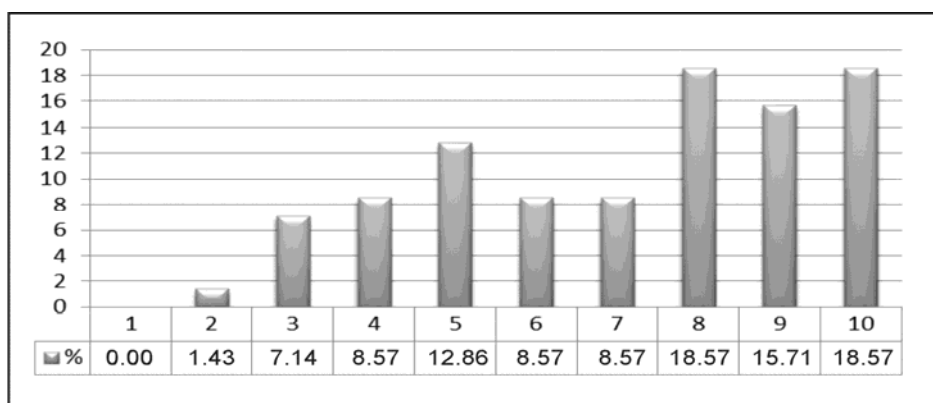
In 2015, transfer prices became a new tool to increase revenues for the state budget, with a significant increase in additional amounts established of 217 mil. EUR (ANAF, 2015), by verifying the way in which the arm’s length principle was applied.

Although during the last year the number of tax audits conducted on transfer pricing compliance in relation to affiliates increased, only 35.71% of respondents believe that transfer pricing is a new “leverage” of attracting additional revenues to the state budget, while 20% maintain a neutral view on this topic.

Regarding the influence of establishing a minimum threshold for transaction value below which the reparation of the transfer pricing documentation is not necessary, more than 72.86% of respondents consider this measure to be beneficial for the economic environment, and also an efficient legislative framework.

However, most respondents believe that the current transfer pricing legislation is ambiguous, concise and open to interpretation. The opinions of respondents are presented in Figure 2.

Figure 2. Centralised data for the question – Do you consider that transfer pricing legislation in its current form, is ambiguous and summary? (1 – strongly disagree; 10 – fully agree)



Source: compiled by the author

¹ The percentages were calculated as follow: 37.14% for the marked field 1, 2 and 3 of the questionnaire; 31.43% for marked fields 4, 5 and 6 from the questionnaire; 31.43% marked fields 7 to 10.

² The percentage 72.86% was calculated from the marked fields 7 to 10 of the questionnaire, where 1 represents low efficiency and 10 represents high efficiency

2.3. The perception regarding the enforcement of transfer pricing legislation

Out of all the respondents, 40% (respondents who provided answers ranging from 8 to 10) believe that the tax authorities do not have sufficient technical knowledge in the area of transfer pricing, applying the law somewhat abusively, while 18.57% (respondents who provided answers ranging from 1 to 3) consider that the tax authorities have sufficient technical knowledge in the area of transfer pricing. Also, 14.29% wished to remain neutral on the proposed topic, probably because they never had contact with tax authorities on transfer pricing issues.

Out of all respondents, 27.14%¹ believe that transfer pricing is not yet an exact science, while only 5.71% believe that the science is well founded. Also 67.14% also provided answers in the range 4 to 7, opting for a neutral opinion on the matter.

2.4. Identifying the degree to which the respondents are familiar with the double taxation convention

Because the last question was an open-answer one, below there is a selection of the three best received answers:

1. In general, an adjustment in terms of transfer pricing will lead to double taxation. The taxpayer is entitled to apply the Arbitration Convention (if it serves his best interest to do so).
2. Transfer pricing adjustments may conflict with the convention regarding the avoidance of double taxation as long as the price of the purchases from the affiliates does not reflect the market value and the price adjustments made affect the income tax;
3. It depends on the prices used in intra-group transactions.

Indeed, a transfer pricing adjustment enters into conflict with the Double taxation convention and can modify the taxable income of affiliated companies (directly or indirectly) from another country. When the company has

¹ The percentages were calculated as follow: 27.14% for the marked field 1, 2 and 3 of the questionnaire; 67.14% for marked fields 4 to 7 from the questionnaire; 5.71% marked fields 8 to 10.

been informed by the tax authorities of a Member State that its income or expenditures will be adjusted, it has the right to require and enforce the Arbitration Convention and to initiate the mutual agreement procedure.

The Convention Model regarding income taxes and taxes on capital provides the mechanism that allows the competent authorities to consult each other and resolve the broader issues of transfer pricing, not only the legal problems associated with the double taxation, but also the economic ones, and in particular those resulting from the inclusion of group profits (OECD, 2010).

Based on the answers centralized we conclude that only 10% of the respondents have above-the-average knowledge on transfer pricing, expressing the opinion that that an adjustment of the taxable value of a company in a group may conflict with the convention for the avoidance of double taxation and that it is the company's choice if it will take measures to reduce the tax base, in the case of companies where have been identified transactions that do not observe the arm's length principle.

Conclusions

The current study was conducted through a questionnaire, on a sample of companies from all the taxpayer categories and a broad spectrum of industries. The questionnaire was constructed using the funnel technique and the questions were grouped into four distinct categories in order to assess the companies' profiles, their perception and ability regarding the need to prepare the transfer pricing documentation, the way transfer pricing legislation is enforced and to what extent the respondents are familiar with the double taxation convention.

Based on the centralized results we consider that the sample is representative, because most companies that answered the questionnaire are included in the class of large taxpayers. Over 60% of companies have at least one shareholder/partner that holds more than 25% of the value/number of shares or voting rights and some of the respondents were previously put in a position to prepare the transfer pricing documentation.

Because the transfer pricing strategies require detailed knowledge of national legislation and the OECD models, 65.71% of respondents replied that they would resort to a specialized consulting firm. Also, 71.43% of the

respondents think that they need a special software license to access a database in order to establish the comparability sample and to set arms' length prices of different types of transactions charged with their affiliated entities.

Complementing the fiscal legislation with a minimum threshold for the value of transactions below which the transfer pricing documentation should not be mandatory is considered by 72.86% of the respondents as potentially beneficial for the economic environment and an effective legislative addition. The new tax code in force starting with January 1st 2016 includes provisions regarding the implementation of thresholds by type of transactions above which it is required to prepare the transfer pricing documentation, and to provide proof that the arm's length principle is observed.

Regarding the above-average knowledge of both the legislation on transfer pricing and the provisions of the Convention to avoid double taxation, we conclude that only 10% of respondents have the necessary knowledge

about the fact that an adjustment to the taxable base in the case of inspection on transfer pricing may lead to a request to reduce the tax base of companies where there have been identified transactions that do not observe the arm's length principle.

The present research is limited because of the small number of respondents who answered the questionnaire (70). Yet, we consider that a presence of 38.57% of large taxpayers in the sample ensures a high degree of representativeness of the sample. At the same time, this scientific approach was focused on specific issues, known both by the people in the companies' financial department, and by their managers or administrators.

The present study can be a starting point for future research aimed at analysing the evolution of the approaches regarding the transfer pricing from the business environment point of view, based on the legislative changes in the field, from the Tax Code in force starting with January 1st, 2016.

REFERENCES

1. Chelcea, S. (2007), Tehnici de cercetare sociologică, [.pdf] Available at <https://alingavreliuc.files.wordpress.com/2010/10/septimiu-chelcea-tehnici-de-cercetare-sociologica1.pdf> [Accessed January 5th, 2016].
2. ANAF (2015), *Press release 855/20.07.2015*, [.pdf] Available at https://static.anaf.ro/static/3/Cluj/855_COM_preturi%20de%20transfer_iul2015.pdf [Accessed January 5th, 2016].
3. Corlaci, A. and Tiron-Tudor, A. (2014), Research on the Perception of Professionals in Romania in the Field of Finance and Accounting Related to Specific Aspects of Transfer Pricing, *Audit Financiar*, vol. XII, no. 109 - 1/2014, pp. 11-17.
4. Ernst & Young (2013), *Transfer Pricing Survey Report – Romania 2013*, [.pdf] Available at: http://mcr.doingbusiness.ro/uploads/513081d86dbf2EY%20TP%20survey%20report%20Romania_FINANCIAL.PDF [Accessed February 13th, 2016].
5. *Government regulation no. 44/2004 for the approval of Methodological guidelines for the enforcement of the Law no. 571/2003 regarding the Fiscal Code*, Bucharest: Official Journal of Romania no. 112/06.02.2004.
6. McKinley, J. and Owsley, J. (2013) Transfer pricing and its effect on financial reporting, *Journal of Accountancy*, October 2013, [online] Available at: <http://www.journalofaccountancy.com/issues/2013/oct/20137721.html> [Accessed January 5th, 2016].
7. Kingsley, O. and Zabihollah, R. (2008), Income shifting and corporate taxation: the role of cross-border intrafirm transfers, *Review of Accounting and Finance*, vol. 7, no. 1, pp. 83-101.
8. *Law no. 571/2003 regarding the Fiscal Code*, Bucharest: The Official Journal of Romania no. 927/23.12.2003.
9. OECD Publishing (2010), *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations*, [online] Available at <http://www.oecdbookshop.org/browse.asp?pid=title-detail&lang=en&ds=&ISBN=9789264090330> [Accessed January 5th, 2016].
10. OECD Publishing (2012), *Dealing Effectively with the Challenges of Transfer Pricing*, [.pdf] Available at: <http://www.oecd.org/site/ctpfta/49428070.pdf> [Accessed January 5th, 2016].

11. OECD Publishing (2014), *Model tax convention (condensed version)*, [.pdf] Available at <http://www.oecd.org/ctp/treaties/2014-model-tax-convention-articles.pdf> [Accessed January 5th, 2016].
12. *Order no. 222/2008 regarding the content of the transfer pricing file*, Bucharest: Official Journal of Romania no. 129/19.02.2008.
13. Pak, S. and Zdanowicz, J. (1994), A statistical analysis of the US merchandise trade data base and its uses in transfer pricing compliance and enforcement, *Tax Management Transfer Pricing*, vol. 3, pp. 50-57.

Benefits and challenges regarding the IFRS implementation: lessons from the emerging economies

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Abstract

The interest shown by the users of financial statements for the convergence or harmonization process in terms of financial reporting has increased in the last decades, not only in the case of the developed countries, but also for the emerging economies. Although analysed in publications in terms of financial reporting less than the developed countries, the emerging countries have become a point of interest, being identified by the international investors as potential areas for extending their businesses. The purpose of this article is to identify the global context regarding the adoption of the International Financial Reporting Standards (IFRS) or the alignment of the national standards with the IFRS and to establish some benefits and obstacles met during this process. The analysis focuses on several emerging countries with experience in IFRS implementation and it also brings forward the case of Romania, which is treated separately.

This paper represents a contribution to the literature in terms of IFRS implementation within the emerging countries, which is still limited, and it focuses on the case of Romania, recently affected by changes of the local regulations for the financial reporting. There are a small number of studies regarding the situation in Romania after the entering into force of the new financial reporting regulations.

The research methodology was based on literature review in order to acquire and to centralize some conclusions regarding the experience of IFRS application in several emerging countries. The focus on the case of Romania consists of collecting information using questionnaire, followed by centralizing and interpreting the results in order to outline some conclusions.

Keywords: IFRS, emerging economies, benefits, obstacles, Romania.

JEL Classification: M41, M48

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Introduction

Since the extension of the globalization process, the interest shown for the harmonization of the financial reporting process by introducing a unitary set of international financial reporting standards at global level has also increased. According to AICPA (2014) and Masoud (2014), the IFRS has become the most popular set of financial reporting standards used globally, the number of the countries which already adopted IFRS at different stages being of 120.

The speeding up of this process of convergence or harmonization of the local regulations with the IFRS was also generated by factors such as the fact that the accounting information disclosed in accordance with the local standards does not always fulfil the informational needs of the market players (Saidi, 2013), or the idea that the existing differences between the local accounting systems represent significant obstacles in the process of foreign investors' understanding of the accounting information disclosed in the financial statements of other countries (Căruntu and Lăpăduși, 2011). The article represents a preliminary stage of a study scoped for analysing the impact of the IFRS implementation in the emerging economies, with focus on the case of Romania.

1. Research methodology

The research methodology used for this article was the literature review which mainly focuses on the analysis of the benefits and obstacles met in the process of adoption of IFRS regulations or of harmonization or convergence with these international standards within the emerging economies, in order to highlight some results generated from the experience of these countries. Among the countries analysed in the studies taken into consideration, there are included: the United Arab Emirates, Turkey, China, Nigeria, Ukraine, Poland, Libya, Malaysia etc.

In order to highlight some features and some expected aspects regarding the Romanian experience in terms of IFRS implementation, the opinion of the financial professionals was reviewed. Thus, for this preliminary stage, a questionnaire was developed, based on which responses were collected from a sample of 17 professionals with higher education, with more than 3 years of professional experience in the financial area

and with relevant knowledge and experience regarding the International Financial Reporting Standards.

2. The global perspective regarding the IFRS application in emerging economies

Although still limited, the research in terms of IFRS application within the emerging countries has been recently extended together with the increase in the interest shown by the international investors for the opportunities identified in this type of economies. International sources present several opinions regarding the use of these standards within the emerging economies. As Kosonboov (2014) quoted by Alsaqqa and Sawan (2013) presents, certain needs of the developing economies may have not been considered by IASB. An example would be the use of the fair value concept which in the case of emerging economies can become difficult to establish without the existence of an active market for the corresponding elements (Alsaqqa and Sawan, 2013). Also, according to Perera (1989) quoted by the same source, the information obtained by implementing the accounting standards specific to the developed economies will not be useful within the decisional process of the emerging economies (Alsaqqa and Sawan, 2013).

Recent research is generally more focused on the positive impact generated by the application of IFRS, even within the emerging countries. Favourable reactions to the application of IFRS are encountered among the companies which were affected by the information asymmetry problem during the period before the IFRS adoption (Armstrong et al., 2008).

It is also expected that the implementation of the IFRS will provide a higher level of quality to the financial information, as opposed to the local accounting standards. In most cases, the implementation of the IFRS results in an increase in the level of comparability between the financial statements used by the investors, especially if it is considered the fact that, currently, investors are interested in the global investment opportunities and a lot of companies are extending their businesses beyond national borders (Odia and Ogiedu, 2013).

However, the number of studies published in the field of the financial reporting within the emerging economies

remains quite limited, especially when compared with the case of the developed economies. In order to successfully implement the IFRS within the emerging economies it is essential that the potential challenges and problems that may occur during and after this process be considered, and to assure that they are mitigated as much as possible.

3. The experience of the emerging countries in IFRS application: benefits and obstacles

For the emerging countries which are in the process of transition from the financial reporting local regulations to the IFRS it is essential to identify and analyse the potential benefits and obstacles which should be expected, in order to reduce, as much as possible, the necessary efforts to avoid the obstacles and to obtain the highest impact from the positive aspects. The experience of the emerging countries already being in the process of IFRS implementation may become an example for other countries which started or are going to start this transition process to the IFRS.

Among the benefits identified in several studies performed for the case of the emerging economies, there are:

- the increase in the level of comparability between the financial statements;
- the increase of the level of quality in terms of financial reporting;
- the improvement of the transparency level;
- benefits from using the fair value concept;
- obtaining a higher level of flexibility.

According to a research performed by Sidik and Rahim (2012), in the case of Malaysia it was noticed that most of the participants in that study consider that the local financial statements aligned with the IFRS lead to the *increase in the level of comparability* between the financial statements of several companies. A result of the IFRS implementation was also the increase in the *level of confidence* of the investors in the financial information disclosed (Sidik and Rahim, 2012). A similar impact was identified in the case of Nigeria (Ikpefan and Akande, 2012) and of Poland (Grabinski, Kedzior and Krasodomska, 2014). Based on a study performed by

Alsaqqa and Sawan (2013) in the United Arab Emirates, it was identified as an advantage the *improvement of the quality* of the financial reporting, by increasing the reliability provided by the financial reporting and by increasing the level of understandability and relevance of the financial information, resulting from the implementation of the international standards (Alsaqqa and Sawan, 2013). Relevant for this benefit is also the case of China, where among the A-share companies it was noticed the quality improvement of the financial reporting after substantial convergence with the IFRSs (Nnadi, n.d.). Similar benefits were also identified in the studies performed on the Mexican regulations adapted to the IFRSs (Palacios-Manzano and Martinez-Conesa, 2014) and also in the case of Turkey (Balsari and Varan, 2014). According to an analysis performed on the listed entities in Poland, the fact that the IFRS implementation led to the increase in the level of *reliability, usefulness* and *transparency* in the financial reporting process was noticed (Grabinski, Kedzior and Krasodomska, 2014). Similar benefits were also identified in the case of the United Arab Emirates (Alsaqqa and Sawan, 2013) and in the case of Malaysia (Sidik and Rahim, 2012). The *fair value concept* is seen as a benefit in the case of India, based on the idea that this can help in presenting the assets in the financial statements of the Indian companies at their real value (Jain, 2011). Similar implications were identified in the case of the United Arab Emirates (Alsaqqa and Sawan, 2013). Regarding the countries that prepare their financial statements in accordance with the U.S. GAAP or in accordance with the local rules-based standards (as opposed to principles-based standards), the transition to IFRSs may lead to *flexibility* in approaching and disclosing the financial elements, considering the nature of each specific transaction and its corresponding circumstances. This advantage was also identified in the case of Ukraine (Kuzina, 2014).

However, several obstacles were also met in the process of the IFRS implementation in the emerging economies, such as the following:

- the lack of relevant specific knowledge and of practical experience;
- the need of training and consultancy services;
- difficulties encountered in using the fair value concept;
- the transition costs.

The absence of the necessary abilities to implement IFRS in the emerging countries was identified as an obstacle in the study performed by Masoud (2014). This obstacle was also noticed in the case of Libya (Zakari, 2014). The absence of the specific knowledge and of the experience regarding IFRS may lead to the need of training and consultancy services provided by the professionals in this field, of which costs may be significant, as identified in the case of Libya (Zakari, 2014) and Malaysia (Sidik and Rahim, 2012). In the absence of an active market for the corresponding elements, difficulties may be encountered in establishing the fair value, as noticed in the studies performed in the cases of the United Arab Emirates (Alsaqqa and Sawan, 2013) and of the Czech Republic (Strouhal and Deari, 2009).

4. Conceptions regarding the impact of implementing IFRS in the case of Romania

In order to analyse the case of Romania regarding the conceptions and expectations in terms of benefits and obstacles generated by the IFRS implementation, the opinion of several professionals in this area was considered. Their opinions were collected using a questionnaire distributed to a sample consisting of persons with higher education, with more than 3 years of professional experience in the financial area and with relevant knowledge and skills in terms of IFRSs. The results are based on the responses collected from 17 professionals.

In order to establish a starting point for the respondents' opinions about the implications of IFRS implementation, the questionnaires also included a section that collected information related to the perceptions about the categories of users of the financial statements.

According to the results of the study, it is considered that the most important users of the financial statements on the Romanian market are the creditors (which obtained a weight of 26% of the total categories of users mentioned in the responses), followed by the local investors (23%), the Government and the fiscal authorities (21%) and the international investors (19%), the other categories mentioned obtaining weights lower than 3%.

The most popular category of users included in the responses regarding the users of the financial statements whose informational needs are best satisfied by the financial statements prepared in accordance with the IFRS was represented by the international investors (obtaining a weight of 52% of the total categories of users mentioned in the responses), 33% of the users mentioned being the creditors (banks and other similar users), while weights of below 6% were obtained by the local investors, the State's institutions and the competitors.

Also, the results of the questionnaires' analysis showed that the financial statements prepared in accordance with the local regulations best satisfy the informational needs of the Government and of the fiscal authorities (42% of the financial statements users mentioned in the responses), followed by the local investors (27%), creditors (21%), while the other categories of the users obtained weights lower than 6%.

A weight of 52.9% of the sample considers that the financial statements are easier to be prepared in accordance with the local regulations, 35.5% believe that the level of effort allocated to preparing the financial statements is similar in the case of the local regulations and the one of IFRS, while according to 11.8% of the responses, it is easier to prepare the financial statements as per IFRS than by using the local regulations in terms of financial reporting.

Regarding the auditing of the financial statements, 41.2% of the respondents considers that the level of effort involved by the auditing of the financial statements is similar in the case of financial statements prepared in accordance with the local financial reporting regulations and in the case of financial statements prepared in accordance with the IFRS. A weight of 35.3% of the sample considers that the financial statements prepared according to the local regulations are easier to audit than the ones prepared in accordance with the IFRS, while a weight of 23.5% considers that the financial statements prepared in accordance with the IFRS are easier to audit than those prepared in accordance with the local regulations.

Using these questionnaires, the professionals' opinion regarding the advantages gained from the transitions of the local financial reporting standards to the IFRS was also assessed. Thus, using the weight of the presence in the responses, the following hierarchy of the advantages was built:

- higher level of comparability between the financial statements of several international companies (29%);
- higher level of the transparency in disclosures (20%);
- flexibility generated by using a framework based on principles (16%);
- higher level of the quality of the accounting information (14%);
- benefits from using the fair value concept (13%);
- cost savings related to the reporting process (where the conformity with several frameworks is required) (9%).

Also, the professionals' opinion regarding the disadvantages incurred in this transition from the local regulations to the IFRS was assessed. They are presented in the following hierarchy, starting from the highest weight in responses:

- the lack of knowledge and experience among accounting professionals regarding IFRS application (27%);
- difficulties encountered in understanding the IFRS by the accounting professionals or by the accounting information users (20%);
- challenges in applying the fair value concept (16%);
- significant costs with consultancy services (14%);
- the update of the accounting information systems (12%);
- significant costs of training (10%).

5. Conclusions

The recent international research focuses on highlighting the favourable impact of IFRS implementation in terms of financial reporting. The experience of the emerging countries which are in the process of transition from the local regulations to the IFRS or which have already completed this process can be used as a lesson for the emerging countries which will deal with this stage in the evolution of the financial reporting. Knowing the benefits and the obstacles met in the transition process is very important for an emerging country, so that it can avoid or mitigate the impact of obstacles as much as possible and get the maximum of benefits that can be obtained from the process.

In the case of Romania, a preliminary analysis shows that the majority of respondents considers that the financial statements prepared in accordance with the IFRS best satisfy the informational needs of the international investors. On the other hand, the financial statements prepared in accordance with the local financial reporting regulations best satisfy the informational needs of the Government and of other fiscal authorities. Also, the financial statements are easier to prepare using the local regulations. The level of effort involved in auditing the financial statements is similar in the case of auditing the financial statements prepared in accordance with the local regulations than it is in the case of auditing the financial statements prepared in accordance with the IFRS.

Regarding the transition from the local financial reporting regulations to the IFRS, in the case of Romania, the most popular advantage mentioned by the respondents is the one related to the increased level of comparability between the financial statements of different international companies, while the most popular disadvantage mentioned is the one related to the absence of the knowledge and professional accountants' experience in using the IFRS.

Although the latest changes of the Romanian regulations regarding the financial statements led to the alignment of some of the aspects with the ones as per IFRS for certain types of entities, significant efforts are still needed in order to achieve a higher level of convergence or harmonization with these international standards. This fact is supported by the idea that it is likely that the IFRS implementation process in the case of Romania is the most complex process the specialists have to deal with since the beginning of the accounting reforms in 1990 (L. Feleagă and N. Feleagă, 2006).

Through this article, there were outlined some general ideas regarding the current context in terms of convergence or alignment with the IFRS in the emerging economies and especially in the case of Romania. Future research will include the focus on the case of Romania and on the impact of implementing the International Financial Reporting Standards for the preparation of financial statements of Romanian companies.

REFERENCES

1. AICPA. American Institute of Certified Public Accountants (2014), IFRS FAQs, [online] Available at: http://www.ifrs.com/ifrs_faqs.html#q3 [Accessed February 9th, 2016].
2. Alsaqqa, I. and Sawan, N. (2013), The Advantages and the Challenges of Adopting IFRS into UAE Stock Market, *International Journal of Business and Management*, vol. 8, no. 19, pp.4-17.
3. Armstrong, C.S., Barth, M.E, Jagolinzer, A.D. and Riedl, E.J. (2008), Market Reaction to the Adoption of IFRS in Europe, Harvard Business School, Working paper 09-032, [online] Available at: <http://www.hbs.edu/faculty/Publication%20Files/09-032.pdf> [Accessed February 9th, 2016].
4. Balsari, C. K. and Varan, S. (2014), IFRS implementation and studies in Turkey, *Accounting and Management Information Systems*, vol.13, no. 2, pp. 373-399.
5. Căruntu, C. and Lăpăduși, M.L. (2011), International Financial Reporting Standards – Overview of Their Adoption and Application for the Company, în *Analele Universității „Constantin Brâncuși” din Târgu Jiu, Seria Economie*, no. 2, pp.89-97.
6. Feleagă, L. and Feleagă, N. (2006), Convergența contabilă internațională prin prisma aderării la Uniunea Europeană, *Economie teoretică și aplicată*, pp. 37-44, [online] Available at: <http://store.ectap.ro/articole/52.pdf> [Accessed February 9th, 2016].
7. Grabinski, K., Kedzior and Krasodomska, M.J. (2014), The Polish accounting system and IFRS implementation process in the view of empirical research, *Accounting and Management Information Systems*, vol. 13, no. 2, pp. 281-310.
8. Ikpefan, O.A. and Akande, A.O. (2012), International Financial Reporting Standard (IFRS): Benefits, Obstacles and Intrigues for Implementation in Nigeria, *Research Journal of Finance and Accounting*, vol. 3, no. 10, pp.143-151.
9. Jain, P. (2011), IFRS Implementation in India: Opportunities and Challenges, *World Journal of Social Science*, vol. 1, no. 1, pp. 125-136.
10. Kosonboov, L. (2004), *The relevance of international accounting standards for developing countries: The case of IAS 41*, PhD thesis, University of Strathclyde, UK, [online] Available at: <http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.405546> [Accessed February 9th, 2016].
11. Kuzina, R. (2014), Implementation of International Financial Reporting Standards in Ukraine, *Accounting and Management Information Systems*, vol. 13, no.2, pp. 400-422.
12. Masoud, N. (2014), Accounting, FRQ, Emerging Countries Transition: How Can a Country Implement an IFRS Standard Change Successfully?, *Global Journal of Management and Business Research: D Accounting and Auditing*, vol. 14, no. 2, pp. 37-55.
13. Nnadi, M. (n.d.), International Financial Reporting Standards (IFRS) and Financial Reporting Quality in Emerging Economies: Evidence from China and Hong Kong, Working paper, [online] Available at: http://www.virtusinterpress.org/IMG/pdf/Matthias_Nnadi_paper.pdf [Accessed February 9th, 2016].
14. Odia, J.O. and Ogiedu, K.O. (2013), IFRS Adoption: Issues, Challenges and Lessons for Nigeria and other Adopters, *Mediterranean Journal of Social Sciences*, vol. 4, no.3, pp.389-391.
15. Palacios-Manzano, M. and Martinez-Conesa, I. (2014), Assessing the Impact of IFRS Adaptation on Earnings Management: An Emerging Market Perspective, *Transformation in Business & Economics*, vol. 12, no. 1 (31), pp. 21-40.
16. Perera, M.H.B. (1989), Accounting in developing countries: a case for localised uniformity, *The British Accounting Review*, vol. 21, no. 2, pp. 141-157.
17. Saidi, F. (2013), Accounting developments in Algeria: The Road to IFRS, *International Research Journal of Applied Finance*, vol. 4, no. 1, pp.125-139.
18. Sidik, M.H.J. and Rahim, R.A. (2012), The Benefits And Challenges of Financial Reporting Standards In Malaysia: Accounting Practitioners' Perceptions, *Australian Journal of Basic and Applied Sciences*, vol. 6, no. 7, pp. 98-108.
19. Strouhal, J. and Deari, F. (2009), Are Czech and Albanian Accounting Systems Really Different from International Referential: Some Issues for Potential Investors, [online] Available at: <http://www.ekf.vsb.cz/export/sites/ekf/frpfi/cs/archiv/rocnik-2009/prispevky/dokumenty/Strouhal.Jiri.pdf> [Accessed February 9th, 2016].
20. Zakari, M.A. (2014), Challenges of International Financial Reporting Standards (IFRS) Adoption in Libya, *International Journal of Accounting and Financial Reporting*, vol. 4, no. 2, pp. 390-412.

The impact of the supervisory board structure on bank performance

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Abstract

The primary research objective of this study is to identify the connections between some supervisory boards' characteristics from the Romanian banking system, on the one hand (namely the size, the character of independence and the gender diversity of their members) and, on the other hand, the banking financial performance, measured by the return on assets (ROA) and return on equity (ROE).

Thus, through this research, the authors aim to provide answers (justified by the results of an empirical research) to the question "Can the structure of the supervisory board affect the financial performance recorded in the Romanian banking system?" The research methodology used is mainly quantitative, based on a statistical deductive analysis, testing and identifying the type cause – effect connections, and in the same time with the assessment of the degree of their significance, representing the main objective of this research.

Keywords: *Supervisory board, financial performance, banking system, corporate governance.*

JEL Classification: *M40, G20, G30*

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Introduction

As a result of the global financial crisis, in the banking industry there was registered a significant increase in the degree of harmonization and regulation of processes and corporate governance systems. Given all these symptoms, this research aims to investigate whether the structure of the banks' supervisory boards (characterized by size, structure and gender diversity) can impact on their performance and, if so, what is their degree of influence.

The failure of the corporate governance processes can generate significant costs for the banks. The occurrence of such costs is due to the banks' role in the national economy, namely the role of financial intermediation, the coverage of the payments needs, of liquidity, of information, of insurance of the savings products (Fama, 1985). In addition, the banks are more intensively regulated, thereby taking measures to prevent the negative externalities caused by the "systemic risk" (Flannery, 1998) and to protect the interests of the banks' depositors.

It is also well known the important role of the banks in facilitating the good governance of the companies, both in their role as creditors and shareholders (Caprio and Levine, 2002). Therefore, banks can contribute not only to ensuring the good functioning of the companies from the non-financial sector, but also to promote an efficient policy of the financial resources allocation across the economy.

The supervisory board of the bank plays an important role in achieving effective corporate governance. Thus, Caprio and Levine (2002) consider that banking corporate governance is significantly determined by the structure of their supervisory boards. However, the authors consider that neither the shareholders nor the market partners can considerably affect the banking corporate governance.

The supervisory boards' importance in terms of banking corporate governance is also emphasized by the banking regulatory authorities. For example, in the consultative paper named "Strengthening corporate governance in the banking sector" (2006), the Basel Committee on Banking Supervision (BCBS) identifies the supervisory board as an essential part of a bank's regulatory reform. Moreover, the second pillar (supervisory review process) of Basel II identifies the

role of the supervisory board as an integral part of the risk management process (BCBS, 2005).

In this context, the aim of our research is very important; the literature on the relationship between the structure of the supervisory board and bank performance is not yet conclusive.

This is also the first study carried out for the Romanian banking system which includes the examination of the effect of the supervisory board's gender diversity on bank performance. The literature regarding the women's presence in the supervisory boards is not yet conclusive (e.g., Adams and Ferreira, 2009; Farrell and Hersch, 2005; Carter, Simkin and Simpson, 2003; Bunea and Turlea, 2015).

1. Literature review

The negative relationship between the size of the supervisory board and the companies' performance is a common finding in the literature regarding the non-financial sector (Hermalin and Weisbach, 2003). The relationship is driven by the agility and the cohesion between the members of smaller supervisory boards and the costs that can be generated by the communication and coordination needs in the case of larger ones (Jensen and Meckling, 1976).

The members of the large supervisory boards could also experience challenges in expressing their opinions during the limited time available during the meetings (Lipton and Lorsch, 1992). Consequently, many studies show a negative correlation between the size of the supervisory boards and the financial performance of the company (e.g., Yermack, 1996; Eisenberg, Sundgren and Wells, 1998).

However, Coles, Daniel and Naveen (2008) argue that this relationship depends to a large extent on the economic environment in which the business operates. For example, the companies with enhanced counseling necessities (such as the companies with high debt and strongly affected by the total debt financing) may register the benefits from the functioning of large supervisory boards (Coles et al., 2008; Linck, Netter and Yang, 2008; Adams and Mehran, 2012).

Regarding the banking sector, the results of research in this area are mixed – some studies show a positive relationship, others a negative or no connection between the size of the supervisory board and the bank financial

performance (e.g., Andres and Vallelado, 2008; Adams and Mehran, 2012).

The large supervisory boards may reflect the complexity of the organizational structures of banks. The supervisory board size could also increase through the incorporation into their structure of members from the management teams of bank subsidiaries in order to facilitate the information flow (Adams and Mehran, 2012). However, if a banking company would register a poor organizational structure, then this would be reflected into an inefficiency of large supervisory board activities. Also, the independence of board members is very important for a bank, because they can help improve the quality of processes and operations in the relationship with business partners (Mishra and Nielsen, 2000; Cornett, McNutt and Tehranian, 2009).

The gender diversity in supervisory boards has been granted increasing attention in recent years within the scientific literature, as well as in public debates (e.g., Gul, Srinidhi and Ng, 2011; Adams and Ferreira, 2009; Farrell and Hersch 2005; Carter et al., 2003). The women representation on the boards has registered a constant (but slow) increase in recent years. This trend of increasing the share of female representatives on the boards is in accordance with the appreciation that women involved in management structures can bring added value to the company. The women managers are considered to be “hard working” and have better communication skills, which help them to improve the problem solving and the ability of decision-making activities of the supervisory boards (Robinson and Dechant, 1997).

According to Eagly and Carli (2003), women can also demonstrate the additional skills that they hold to access leadership positions, which mean that they are very competent and responsible as managers. In addition, women are considered to be more aware of their responsibilities as supervisory board members and are generally better prepared and fully documented when attending the board meetings (Eagly and Carli, 2003). This means that the women work harder in achieving their responsibilities and, consequently, could help improve the effectiveness of the supervisory board regarding the decision-making process and the information flow.

However, the conclusions of the previous research on the direct effect of the gender diversity on the company performance are inconclusive. According to Carter et al. (2003) in non-banking firms there is a positive relationship between gender diversity and business performance.

Also, Adams and Ferreira (2009) demonstrate that the presence of women in supervisory boards increases the frequency of the meetings. However, they do not search for a direct effect of gender diversity on company performance. In addition, Farrell and Hersch (2005) found that women tend to hold leadership positions in the best performing companies, although they reported insignificant abnormal profits around the day of announcement of a woman’s inclusion in the supervisory boards.

2. Study objective and research hypotheses

The primary research objective is to identify the possible connections between some characteristics of the supervisory boards from the Romanian banking system, on the one hand (namely the size, the character of independence and the gender diversity of their members) and, on the other hand, the bank financial performance, measured by the return on assets (ROA) and return on equity (ROE).

Thus, the authors aim to provide answers (justified by the results of an empirical research) to the question “Can the structure of the supervisory boards affect the financial performance recorded in the Romanian banking system?”

Based on the previous research in the scientific literature, the authors formulated the following hypotheses:

- H₁:** *There is a significant association between the structure of the supervisory boards and the return on assets (ROA) of the researched Romanian banking companies;*
- H₂:** *There is a significant association between the structure of the supervisory boards and the return on equity (ROE) of the researched Romanian banking companies.*

3. The research methodology

The research methodology used is mainly quantitative, based on a statistical deductive analysis, testing and identifying the type cause – effect connections, and also appreciating the degree of their significance. This represents the main objective of this research. In order to achieve it, the

authors used the SPSS software for Windows (the correlation tests and the regression analysis).

At the end of the first semester of 2015, there were 40 credit institutions into the Romanian banking system; out

of these, 38 were privately owned banks. 9 are the subsidiaries of foreign banks.

The **Table 1** (BNR, 2015) shows the evolution of the number of banks during the last 7 years.

Table 1. Structure of credit institutions between 2008 and 2015

	2008	2009	2010	2011	2012	2013	2014	Jun. 2015
Number of credit institutions	43	42	42	41	40	40	40	40
Number of credit institutions with mostly private capital	41	40	40	39	38	38	38	38
Number of banks with mostly foreign capital, of which:	37	35	35	34	34	34	34	34
Subsidiaries of foreign banks	10	10	9	8	8	9	9	9
The percentage in total assets of the banks with mostly private capital (%)	94.6	92.5	92.4	91.6	91.6	91.5	91.3	91.6
The percentage in total assets of the banks with mostly foreign capital (%)	88.2	85.3	85	83.0	89.8	90.0	89.9	90.2
The percentage of the first five banks in total assets (%)	54.3	52.4	52.7	54.6	54.7	54.4	54.2	55.3
Herfindahl-Hirschman Index (points)	926	857	871	878	852	821	797	812

Source: National Bank of Romania, 2015

Out of the total number of credit institutions in the Romanian banking system, the research sample comprises a number of 28 credit institutions. According to the information collected from their respective websites as of December 31st 2014, all these are Romanian legal entities. The 9 subsidiaries of foreign banks were not included, since they are not required to make financial disclosures (annual reports) in Romania (such information are disclosed by the group, in the parent company's country of origin). There were also excluded from the research a number of three credit institutions, which have not made publicly available the information on their official websites.

The research data were obtained exclusively from the official websites of the analyzed credit institutions, the National Bank of Romania (BNR) and from the 2014 annual financial reports and the reports on transparency and disclosure requirements developed under BNR – CNVM Regulation 25/30/2014 and supplemented by BNR – CNVM Regulations no. 21/26/2010 and no. 23/15/2011 and BNR Regulation no. 25/10.12.2010.

The banks within the Romanian banking system are administered either through a unitary administration system, the supervision and management being exercised by the board of directors or through a two-tier system of administration, in which the executive management falls to the executive committee or directorate which operate under the supervision of a supervisory board, according to the statute/constitutive act of each credit institution and the banking legislation in force.

The supervisory board sets the strategies and the development guidelines and supervises their implementation, while the executive committee or the directorate provide the operative management and prevent the operational and the compliance risk.

In order to achieve the main research objective there were defined two sets of variables, independent and dependent, which underlie the study and help to identify the potential correlations.

The details related with the independent variables in the study, their definition and measurement techniques are presented in **Table 2**.

Tabel 2. The independent variables

Independent variable	Definition	Symbol	Measurement
Size of supervisory board	Number of members in supervisory board	AC_Size	Number of members
Independence of members	Share of independent members in supervisory board	AC_Ind	Number of independent members in total membership
Gender diversity of members	Share of women members in supervisory board	AC_Divg	Number of women members in total membership

Source: Authors' conception.

The dependent variables in the study, as a synthesis of the financial banking performance, are the *ROA - Return on Assets* and the *ROE - Return on Equity* registered by the Romanian credit institutions

included in the sample.

The details related with the dependent variables are presented in the **Table 3**.

Tabel 3. The dependent variables

Dependent variable	Symbol	Measurement
Return on Assets	ROA	Net result/Total Bank Assets
Return on Equity	ROE	Net result/Bank Equity

Source: Authors' conception.

In order to test the possible correlations between the independent variables and the dependent variable, there was calculated the Pearson coefficient, which is often used to appreciate the level of linear dependence intensity that occurs between two variables. Thus, when the Pearson correlation coefficient has a value of +1 it reflects a perfect direct relationship between the two variables; when it has a value of -1, the Pearson correlation coefficient indicates a perfect inverse relationship. This analysis of possible correlations between the variables provides indications of the meaning and significance of potential interdependencies of these variables, allowing us to accept or reject the research hypotheses.

4. Data processing and analysis

Based on the regression analysis (we used the multiple regression model in SPSS, the Backward method) for the purpose of accepting or rejecting the hypotheses made, the potential influence of

each independent variable has been processed and analyzed.

The results are detailed in the **Tables 4a** and **4b** "The partial correlation matrix". In these tables, we present the correlation coefficients (Pearson Correlation), the significance (Sig.) for each correlation coefficient and the number of cases considered in this study (N).

In order to test the H_1 hypothesis: *There is a significant association between the structure of the supervisory boards and the return on assets (ROA)* of the researched Romanian banking companies, the authors analysed the impact of each independent variable on the bank's profitability.

Thus, the research results regarding the impact of the independent variables on ROA are shown on the

Table 4a "The partial correlation matrix".

Accordingly, it can be noticed that the diagonal coefficient equals 1, because each variable is perfectly correlated with itself.

Table 4a. The correlation matrix

		ROA	Size	Gender diversity	Independence
Pearson Correlation	ROA	1.000	0.257	0.033	0.545
	Size	0.257	1.000	0.350	0.057
	Gender diversity	0.033	0.350	1.000	0.227
	Independence	0.545	0.057	0.227	1.000
Sig. (1-tailed)	ROA		0.093	0.434	0.036
	Size	0.093		0.034	0.386
	Gender diversity	0.434	0.034		0.123
	Independence	0.036	0.386	0.123	
N	ROA	28	28	28	28
	Size	28	28	28	28
	Gender diversity	28	28	28	28
	Independence	28	28	28	28

Source: Conception of the authors using SPSS.

It is noted that the most significant relationship is between the banks return on assets (ROA) and the independence of the supervisory board members. There is a positive significant relation between the dependent variable ROA and the independent variable *Independence of members*. The Pearson coefficient determined is 0.545 and Sig. less than 0.05 (0.036).

Thus, we can accept the H1 hypothesis: *There is a significant association between the structure of the supervisory boards (Independence of members) and the*

return on assets (ROA) of the researched Romanian banking companies.

In order to test the H2 hypothesis: *There is a significant association between the structure of the supervisory boards and the return on equity (ROE) of the researched Romanian banking companies*, we analysed the impact of each independent variable on the *Return on equity (ROE)* of the banks included in the sample.

In the **Table 4b** "The partial correlation matrix", the research results related to the influence of the independent variables on the ROE are presented.

Table 4b. The correlation matrix

		ROE	Size	Gender diversity	Independence
Pearson Correlation	ROE	1.000	0.171	0.132	0.282
	Size	0.171	1.000	0.350	0.057
	Gender diversity	0.132	0.350	1.000	0.227
	Independence	0.382	0.057	0.227	1.000
Sig. (1-tailed)	ROE		0.193	0.252	0.073
	Size	0.193		0.034	0.386
	Gender diversity	0.252	0.034		0.123
	Independence	0.073	0.386	0.123	
N	ROE	28	28	28	28
	Size	28	28	28	28
	Gender diversity	28	28	28	28
	Independence	28	28	28	28

Source: Conception of the authors using SPSS.

It is noted that there is no significant association between the dependent variable *ROE* and the independent variables, because the Pearson correlation coefficient is between 0.132 and 0.382, and the recorded Sig. is greater than 0.05 (0.073, 0.252 and 0.193).

Finally, the H2 tested hypothesis is rejected, based on the research results. We consider that there is no significant association between the *structure of the supervisory board* and the banking *return on equity (ROE)*.

Conclusions

The primary research objective was to identify potential interdependencies between the structure of the supervisory boards in the Romanian banking system, on the one hand and, on the other hand, the banks' financial performance, measured by the *Return on assets (ROA)* and *Return on equity (ROE)*, for the banks included in the research sample.

Testing the potential influences of the structure of the supervisory boards on company value was performed, over time, in a large number of studies. In contrast to that situation, the current research covers a different approach to this issue in a specific field of activity, namely the banking sector. The segment was not sufficiently explored so far from this perspective. Also, the hypotheses and the relationship between independent and dependent variables included in the study offer a touch of originality to the research and, by default, bring added value to the paper.

At the same time, this research has some limitations, mainly caused by the size of the sample and by the fact that the analysis was conducted using the information in only one financial year (2014). Despite these limitations, the authors consider that this study can represent a useful source of reflection and information for the practitioners from the banking sector, and it can be a challenge for the future research in this field.

REFERENCES

1. Adams, R.B. and Ferreira, D. (2009), Women in the boardroom and their impact on governance and performance, *Journal of Financial Economics*, vol. 94, pp. 291-309.
2. Adams, R.B. and Mehran, H. (2012), Bank board structure and performance: evidence for large bank holding companies, *Journal of Financial Intermediation*, vol. 21, no. 2, pp. 243-267.
3. Andres, P. and Vallelado, E. (2008), Corporate governance in banking: the role of board of directors, *Journal of Banking and Finance*, vol. 32, no. 12, pp. 2570-2580.
4. Bunea, M. and Țurlea, E. (2015), Study of the Women Presence into the Board Directors and Audit Committees Level of Romanian Banks, *Audit Financiar*, vol. XIII, no. 122-2/2015, pp. 97 – 105.
5. Caprio, G. and Levine, R. (2002), Corporate governance of banks: concepts and international observations, *Global Corporate Governance Forum Research Network Meeting 2002*.
6. Carter, D.A., Simkins, B.J. and Simpson, W.G. (2003), Corporate governance, board diversity, and firm value, *The Financial Review*, vol. 38, no. 1, pp. 33–53.
7. Coles, J.L., Daniel, N.D. and Naveen, L. (2008), Boards: does one size fit all?, *Journal of Financial Economics*, vol. 87, no. 2, pp. 329–356.
8. Cornett, M.M., McNutt, J. and Tehranian, H. (2009), Corporate governance and earnings management at large U.S. bank holding companies, *Journal of Corporate Finance*, vol. 15, no. 4, pp. 412–430.
9. Eagly, A. and Carli, L. (2003), The female leadership advantage: An evaluation of the evidence, *The Leadership Quarterly*, vol. 14, no. 6, pp. 807–834.
10. Fama, E.F. (1985), What's different about banks?, *Journal of Monetary Economics*, vol. 15, no. 1, pp. 29–39.
11. Farrell, K.A. and Hersch, P.L. (2005), Additions to corporate boards: The effect of gender, *Journal of Corporate Finance*, vol. 11, no. 1-2, pp. 85–106.
12. Flannery, M.J. (1998), Using Market Information in Prudential Bank Supervision: A Review of the U.S. Empirical Evidence, *Journal of Money, Credit and Banking*, vol. 30, no. 3, pp. 273–305.
13. Gul, F.A., Srinidhi, B. and Ng, A.C. (2011), Does board gender diversity improve the informativeness of stock prices?, *Journal of Accounting and Economics*, vol. 51, no. 3, pp. 314– 338.

14. Hermalin, B.E. and Weisbach, M.S. (2003), Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature, *FRBNY Economic Policy Review*, vol. 9, no. 1, pp. 7–26.
15. Jensen, T. and Meckling, S. (1976), Theory Of The Firm: Managerial Behavior, Agency Costs And Ownership Structure, *Journal of Financial Economics*, vol. 3, no. 4, pp. 305-360.
16. Eisenberg, T., Sundgren, S. and Wells, M.T. (1998), Larger Board Size and Decreasing Firm Value in Small Firms, *Journal of Financial Economics*, vol. 48, no. 4, pp. 35–54.
17. Linck, J.S., Netter, J.M. and Yang, T. (2008), A large sample study on board changes and determinants of board structure, *Journal of Financial Economics*, vol. 87, pp. 308–328.
18. Lipton, M. and Lorsch, J. (1992), A modest proposal for improved corporate governance, *Business Lawyer*, vol. 48, no. 1, pp. 59–77.
19. Mishra, C.S. and Nielsen, J.F. (2000), Board independence and compensation policies in large bank holding companies, *Financial Management*, vol. 29, pp. 51–70.
20. Robinson, G. and Dechant, K. (1997), Building a Business Case for Diversity, *Academy of Management Executive*, vol. 11, no. 3, pp. 21–30.
21. Yermack, D. (1996), Higher market valuation of companies with a small board of directors, *Journal of Financial Economics*, vol. 40, no. 2, pp. 185–212.
22. National Bank of Romania and Financial Supervisory Authority (2006), *Regulation 25/30/2006 regarding the requirements for transparency and disclosure for credit institutions and investment firms*, [online] Available at: <http://www.bnr.ro/apage.aspx?pid=404&actId=69> [Accessed February 13th, 2016].
23. National Bank of Romania and Financial Supervisory Authority (2010), *Regulation of the National Bank of Romania and the Financial Supervisory Authority no. 21/26/2010, approved by the Orderl no. 20/91/2010*. [online] Available at: <http://www.bnr.ro/apage.aspx?pid=404&actId=323793> [Accessed February 13th, 2016].
24. National Bank of Romania (2015), *Report on financial stability 2015* [pdf] [online] Available at: www.bnr.ro/files/d/Pubs_ro/RSF/RSF2015.pdf [Accessed February 13th, 2016]

Accounting practice regarding discounts. Limitations and actions for a modern legislation

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Abstract

Revenue is an important indicator for the users of financial statements in their assessment of an entity's financial position and performance. Therefore, the applicable regulations regarding the recognition and measurement of revenues play an important role in shaping the corporate image.

This article focuses on some specific accounting transactions under Romanian GAAP (The Order of the minister of public finance no. 1802/2014) by comparing the accounting treatment with that in compliance with IFRS 15 Revenue from contracts with customers. Whenever it was considered necessary, there were presented the new tax requirements - according to the new Tax Code in force from January 1st, 2016. This new standard intends to cover the gaps from other previous standards (IAS and IFRS) or their respective interpretations (SIC and IFRIC) such as IAS 18 Revenue and IAS 11 Construction contracts.

Keywords: Prompt payment discount, significant financing component, consideration paid or payable to a customer, right of return.

JEL Classification: G32; H32; M41

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Introduction

Given the importance assigned by the users of financial statements to financial performance indicators, in general, and particularly revenues, the legislation affecting the value and structure of revenues impact an entity's performance evaluation. At this time, Romanian companies organize their accounting system either on the basis of the local accounting regulations, in accordance with the European Directives, or by conforming to the International Financial Reporting Standards. Any and all differences between the two accounting and reporting systems are able to affect the users' assessments of company performance, especially if they are associated with an important component of revenues, such as revenues from contracts with customers.

The IFRS 15 Revenue from contracts with customers encloses a better revenue recognition model and it offers more information and guidelines than the previous standards. It also covers areas that were not treated with sufficient clarity or not completely covered by the provisions from the previous standards. This new standard supersedes some of the previous ones, such as IAS 11 Construction Contracts, IAS 18 Revenue, IFRIC 13 Customer Loyalty Programs, IFRIC 15 Agreements for the Construction of Real Estate, IFRIC 18 Transfers of Assets from Customers and SIC-31 Revenue - Barter Transactions Involving Advertising Services. The Romanian accounting regulations, applicable to entities that did not implement the International Financial Reporting Standards, also include new provisions that affect the recognition of revenues from contracts with customers, and particularly the discounts granted to customers.

Consequently, in the content of the paper there are presented some particular cases about the recognition of revenues from contracts with customers, aiming to provide a practical and recent perspective on this topic. The analysed examples focus on the matter of discounts, since it was significantly affected by the recent legislative change. The article is ended with the authors' interpretations, conclusions and recommendations, based on their research and professional experience.

1. Transactions involving financial discounts

In the following paragraphs, there are presented some of the transactions that are common and frequent in marketing practice. Taking into consideration the vastness of the topic, the choice was made to present only some of the transactions, aiming to provide a thorough analysis, to answer certain questions and, at the same time, to initiate debates. The selected transactions are presented from both the perspective of Romanian accounting regulations (the updated Order of the Minister of Public Finance No. 1802/2014 – OMPF 1802/2014) and in terms of International Financial reporting standards, namely the IFRS 15. Whenever it was considered relevant, there were presented the main aspects of a fiscal nature, in accordance with the new Fiscal Code in force starting with January 1st, 2016.

1.1. Sales of goods or services involving the granting of discounts for immediate payment or payment before maturity

Within the commercial relationships between suppliers and customers, parties may enter clauses into the commercial agreements which grant customers a discount for payment within a well-defined timeframe. The manner in which such discounts can be treated by the entities observing the local regulations in accordance with the European Directives and by the entities which implemented the IFRS is presented in full detail in the following paragraphs.

Accounting treatment from the IFRS 15 perspective

If the seller gives a discount for immediate payment or payment within a certain period of time, then a part of the amount that would be collected is variable, due to the fact that there is no certainty about the payment in the conditions that generate receiving the discount. The company's management will estimate the discount to be applied, based on previous experience and on the number of customers. Typically, these values are not significant from the perspective of financial statements. This discount affects the seller's turnover or the buyer's purchase cost.

Accounting treatment from the national regulations perspective

According to art. 77, para. (1) of the appendix to the order 1802/2014, the financial discounts are granted for settlement and payment of debts before the normal date of maturity. Whatever the period covered by the discounts, in the accounting records of the supplier they are accounted for as expenses of the period (account 667 Expenses on discounts granted), while in the accounting of the customer they represent income of the period (account 767 Income from discounts obtained). In other words, the reductions granted/received for the receipt/payment of debt before maturity - no matter the period covered by the discounts – are not diminishing the turnover, in the case of the seller, or the purchase cost, in the case of the buyer. They are only impacting the accounting results of the financial activity.

1.2. Sales of goods or services involving a significant financial component

Accounting treatment from the IFRS 15 perspective

There may be situations where there is a significant gap between the moment of transferring goods/services to the buyer and the moment of the payment. The standard requires the management of the company to adjust the transaction price, when the transaction incorporates a significant financial component, in order to reflect the time value of money, so that the amount recognized as income from sales/services to be comparable with the price that would be used if the buyer would pay at the moment of transfer of risks and benefits of the goods or when considering that the service was actually rendered as agreed (IASB, para. 60).

The transaction under review should include a *significant financial component*, a fact that the entity must determine by considering various factors, among which we can mention the following (the list does not have a limitative character):

- (i) The amount to be paid by the customer is substantially different from the amount which would be paid when the transfer of goods takes place or immediately, under the existing contractual agreement;
- (ii) The elapsed time between the delivery of goods and the payment;

- (iii) The interest rate, implicit or explicit, specified in the agreement between the parties by comparison with the market interest rate (IASB, para. 61). If there is a financial component, then this will have to be reflected separately or as financial income or expense. The amount of the financial component will be determined in accordance with IFRS 9.

Accounting treatment from the national regulations perspective

The order no. 1802/2014 does not explicitly require that the time value of money be part of the adjustment of the income from sales of goods/ providing of services and the financial component to be shown separately.

2. Transactions involving trade discounts

There may be contractual agreements whereby the seller:

- a. Pays the buyer various amounts of money for services provided by the buyer (e.g. shelf fees, fees for favourable display positions, fees for providing sales reports regarding the points of sale etc.);
- b. Grants trade discounts which are reflected in shelf prices, so that the final consumer can purchase products at lower prices, or grants trade discounts on the basis of vouchers;
- c. Participates in marketing and advertising campaigns alongside the customers;
- d. Provides free products to stimulate sales (2 pieces for the price of one) or for product testing at the point of sale (e.g., provision of samples, testers etc.).

Marketing practices may be different and sometimes complicated, which generates difficulties in terms of the accounting recognition of the associated transactions. There are also tax implications, as it will be subsequently discussed.

2.1. Transactions requiring the seller to make payments to the customer

Accounting treatment from the IFRS 15 perspective

The standard requires the entity to determine whether those amounts paid or payable represent either a price

discount, or payment for a service or good received by the seller from the customer. The standard provides guidance on which entity determines the category of the transaction (IASB, para. 26-30).

It can be stated that the good or the service is deemed to be distinct if the customer sells it separately and on a regular basis or the entity may receive the good or the service, either on their own or together with other resources available to him. In these cases, the accounting of the service or asset received will be as such as it would have been acquired from a third party in the normal course of business. Services will be recorded as expenses or, where appropriate, capitalized in accordance with IFRS.

In all the other cases, the payments made or to be made by the vendor are considered trade discounts.

Accounting treatment from the national regulations perspective

The accounting and the disclosure of the items from the Balance Sheet and from the Income Statement are performed taking into account the economic substance of the transaction or of the commitment. Compliance with this principle aims at the faithful/fair representation in accounting and in the financial statements of transactions, in line with the economic reality, highlighting the rights, the obligations and the risks associated with them according to art. 57, para. (1) of the appendix to the Order no. 1802/2014.

The legal form of a document must be consistent with the economic reality. According to art. 57, para. (3) of the appendix to the Order no. 1802/2014, whenever there are differences between the substance or the economic nature of a transaction and its legal form, the entity will account for the transaction in compliance with their economic substance.

At art. 76, para. (7) of the appendix to the Order no. 1802/2014 there are exemplified the following categories of trade discounts:

- (i) rebates - received for quality defects and are determined by reference to the selling price;
- (ii) remises – received for higher volumes in sales than the volumes agreed with the seller, or if the buyer has a preferential status; and
- (iii) allowances - discounts which are determined based on the entire volume of transactions with the same third party, during a given period of time.

It can be noticed that there are no mentions and examples leading to the recording of payments, made or to be made by the seller, for services or goods received from customers as trade discounts. Therefore, it must be considered the economic reality and the economic substance of the transaction.

The Romanian tax legislation perspective

According to art. 319, para. (20), letter i) of the new Fiscal Code, it is mandatory that the invoice includes the following information: [...] the tax base of goods and services or, where appropriate, the advances invoiced for each share, exemption or non-taxable transaction, the unit price, excluding tax, and rebates, remises, allowances and other discounts, if they are not included in the unit price.

Also, the art. 286, para. 4a) of the Fiscal Code states that the tax base of VAT does not include rebates, remises, allowances, financial discounts and other types of discounts granted directly by suppliers to their customers on the date the tax becomes chargeable. For the price discounts granted after invoicing, art. 287c) of the Fiscal Code provides that the taxable amount is adjusted/reduced if the rebates, remises, allowances and other types of discounts are granted after the delivery of goods or services. Moreover, the methodological norms in force for the application of the art. 286 of the Fiscal Code are conditioning the non-inclusion in the taxable base only *if there are granted directly to the benefit of the customer and they are not, in fact, the remuneration for a service or a delivery*. In other words, the seller *will not record as discounts* the payments made or to be made for services or deliveries made by the client; the seller is required to record the services received or the deliveries of goods as expenses in accordance with the *contractual terms, support documents and the invoice issued by the customer*. According to the example from the legislation, the seller may grant - during promotional campaigns – trade discounts to the final consumer, via traders, only based on vouchers.

2.2. The seller pays the customer a certain amount to get a favourable position in the sale outlets

Such a transaction arises, for example, when it is intended to acquire a 3 shelves display in each sale outlet for a certain make-up brand (X).

Accounting treatment from the IFRS 15 perspective

Analysing the Standard's provisions in relation to the conditions under which it can be considered that a distinct service/good was received, it can be concluded that, in this case, the seller does not receive a distinct service and therefore he can treat these payments as a price discount.

Accounting treatment from the national regulations perspective

The order no. 1802/2014 does not include separate provisions to determine the conditions under which it may be considered that a distinct service/good was received. Therefore, it would be appropriate for such payments to be recorded as expenses when they are incurred, taking into account the accrual accounting convention.

The fiscal perspective in accordance with Romanian regulations

If we consider the foregoing stipulations of the Fiscal Code, we cannot reduce or adjust the VAT base if the discounts constitute, in fact, *the remuneration for a service or a delivery*. In order for these expenses to be deductible for tax purposes, the principle introduced by art. 25 para. 1) of the new Fiscal Code must be applied; establishes the deductibility rules for the expenses incurred during the normal course of business, as well as the contractual terms agreed upon by the parties and the support documents that justify the actual rendering of services.

2.3. The seller and the customer jointly participate in campaigns to promote products by publishing advertisements in magazines

The case under review is that when the customer initially bears the entire cost of the advertising campaign, and subsequently is expected to send an invoice to the seller to cover part of the costs.

Accounting treatment from the IFRS 15 perspective

Analysing the provisions from the Standard regarding the conditions under which it can be considered that a distinct service/good was received, it can be concluded

that, in this case, the seller receives a distinct service because the customer used a third party service. The seller could have obtained directly the service from the entity that publishes the magazine. In conclusion, the services will be recorded as expenses as they are incurred.

Accounting treatment from the national regulations perspective

The previous observations (2.2) are also valid in this case, meaning that these services will be registered as expenses when they are incurred. In our opinion, for these cases, it is relevant to analyse some tax issues that depend on the price used by the customer for the re-invoicing of the services, meaning that there may be two options:

- a. The customer uses the same price for which he acquired the advertisement from the third party when he sends the invoice (a situation known as "commissioner structure" from the VAT perspective) and
- b. The customer invoices directly, at a higher price.

In our opinion the first situation is the one that may cause some problems in practice, which makes us to provide details for the following aspects. In the case of a *commission contract*, the commissioner is, in fact, an intermediary between a seller (supplier) and a buyer. The commissioner may:

- a. Only issue commission for any intermediation service to any of the two parties or to both;
- b. Receive *invoices on his own behalf* from the supplier and subsequently *issue invoices addressed to the buyer*. In this case the commissioner becomes a buyer-reseller ("commissioner structure").

The *cumulative conditions* under which the commissioner structure can be applied are important, as it follows (p. 31 (5) - (6) of the application norms of art.286, para. 3 of Fiscal Code):

- (i) re-invoiced deliveries of goods or rendering of services *are not part of the commissioner's economic activity* ;
- (ii) the commissioner *does not recover more than the expenditure incurred*, but he may recover less;
- (iii) to the extent that the commissioner can prove that the only goal is the re-invoicing of expenses, then he is not bound to have previously declared as an

operating activity the rendering of services which he re-invoices.

In the case of the commissioner structure, the buyer-reseller has the right to deduct the VAT related to the rendering of services/purchases of goods that will be re-invoiced, in accordance with the legislative provisions, and is required to collect the VAT for the taxable transactions. Please note that there may be situations - such as those involving tax expenses or incidental expenses, which fall under the commissioner's responsibility for the operations carried out - when the commissioner structure does not apply.

The commissioner will also consider the p. 432 of the appendix to the Order no. 1802/2014, according to which "amounts collected by an entity on behalf of third parties, including the case of agent contracts, commission or commercial mandate contracts signed in accordance with the law, do not constitute income from the operating activity, even if in terms of VAT the persons acting on their behalf are considered buyers - resellers. In this situation, the revenues from the operating activity are the fees payable".

2.4. The seller (distributor) agrees to bear part of the costs of a price discount campaign practiced by the customer (reseller) in their own stores

As a result of such an agreement, the final consumer (the direct customer of the reseller) receives a discount to the price commonly applied to the shelf.

Accounting treatment from the IFRS 15 perspective

Analysing the provisions of the Standard, it can be concluded that such a payment may be recorded by the seller (distributor) as if it were a trade discount granted directly to his customer (reseller). In other words, payments related to such discounts - granted indirectly, through the reseller, to the final consumer (the reseller's customer) - are not treated differently from those that are granted by the seller (distributor) directly to its customer (reseller).

Accounting treatment from the national regulations perspective

The Order no. 1802/2014 makes no distinct reference to the situation when a seller (distributor) grants indirect

trade discounts – through his client (reseller) – to the final consumer, which is, in fact, the reseller's customer.

However, some stipulations of the Fiscal Code should be taken into account to avoid potential tax risks. Thus, returning to the previous aspects on the reduction or adjustment of the VAT tax base, we emphasize the following issues that must be considered cumulatively:

- Price discounts are not included in the taxable amount *if they are granted directly for the customer's benefit* – in our case it might be interpreted that these discounts are not given directly to the customer (reseller), but in fact are granted indirectly – through the reseller – to the final consumer, who benefits from an "in store" discount;
- Price discounts are not included in the taxable amount if they are granted directly for the customer's benefit and *are not*, in fact, *remuneration* for a service or a delivery – in our case it might be interpreted that these discounts represent *the payment for a delivery namely the delivery which the customer (reseller) makes to the final consumer*, in the sense of offering to the latter a product at a lower price;
- There is an example in the content of the rules for the application of art. 286 from the Fiscal Code where manufacturers/distributors may grant, based on vouchers and in certain conditions, trade discounts to final consumers via traders (buyers - resellers).

In our opinion, this type of operation, common in marketing practice, should be regulated more clearly to avoid any risk of wrong calculation of debits and accessory amounts for VAT and income tax purposes.

2.5. The seller delivers goods to customer and the customer has the right of return

Within the marketing practice there can be found contractual agreements between the buyer and the seller in which, together with the transfer of rights and obligations on property, the customer is granted the right to return the product for various reasons, such as: deterioration of the product over time, changing the product range with a new one, ending of the contract etc. The return operation can generate several situations:

- a. The client is entitled to return, entirely or part of the amount originally paid for the goods;
- b. The customer can receive a discount invoice (a *credit note*) which will diminish future payments made within his relationship with the seller;
- c. The client is entitled to receive another asset in exchange for the returned one; or
- d. A combination of the above.

In these cases, it is important to determine the amount of revenues recognized by the seller, taking into account his client's rights of return and the probability of return.

Accounting treatment from the IFRS 15 perspective

The Standard encloses, within the appendix (The Implementation Guide) stipulations related to sales accompanied by the right of return (para. B20 - B27). In the case of transfers of goods, when the right of return exists, or the rendering of certain services, subject to a possible refund, an enterprise should recognize the following:

- (i) Revenues for the assets transferred in the amount of the value that the entity considers it is entitled to; therefore, the entity would not recognize revenue for the goods expected to be returned;
- (ii) A debt to be repaid; and
- (iii) An asset, simultaneously with the cost of goods sold, to reflect the seller's right to collect the goods from the customer in order to establish the debt to be repaid.

The entity must also consider the possibility that the condition of returned goods may be significantly different from their condition at the time of delivery, even with the risk that the goods cannot be used further. Under these circumstances, the value of the recognized assets will have to be the carrying amount of the assets at the time of sale, minus any impairment or necessary costs of recovery. The debt to be repaid and the asset recognized at the date of return must be presented as separate items in the financial statements. The entity *will measure and adjust accordingly*, at the date of the financial statements, the expected level of returns and related debt, by appropriately changing the level of income.

Moreover, the value of the recognized asset will change whenever the debt changes, or whenever there are indications that an impairment of value exists. If the entity cannot estimate the level of returns, revenues will not be recognized until the date on which the estimation can be reasonably made, date that may correspond with the end of the period within which a customer has can return the goods.

Accounting treatment from the national regulations perspective

In terms of returns, we considered the provisions of point 330, para. (1) and (2) of the appendix to the Order no. 1802/2014, relating to the accounting treatment for goods for resale/finished goods returned by the customers. Thus, if the return of goods takes place in the same financial year in which the selling transaction took place, than there must be adjusted the amounts recorded at the time of sale and removal from stock in the receivables, revenues, expenses and inventories accounts.

If the amounts involved are known at the balance sheet date, then the adjustment must be recorded at the balance sheet date, even in the absence of an invoice. VAT treatment in these cases is specified by the legislation.

In respect of the presentation value of an asset in the financial statements, it is indicated that the carrying amount of an asset is the amount after deducting the accumulated depreciation/amortization and the accumulated impairments (see section 82 from the appendix to the Order no. 1802/2014).

It is noted that the international standard is more restrictive than the national legislation, in the sense that management is required to make an estimate of returns. National legislation calls for the recording of returns only if the amounts involved are known at the balance sheet date.

2.6. The seller delivers goods to the customer and the customer seeks to replace the goods with similar ones, in terms of quality and price

Accounting treatment from the IFRS 15 perspective

The standard clearly states that the change made by the client of a good with another one of the same kind,

quality, condition and price is not considered a return and therefore it does not involve any adjustment to the transaction price (IASBa, para. B26). The right to change one good with another, in the aforementioned conditions, must be perceived as the right to return, under warranty, a product that does not function properly.

Accounting treatment from the national regulations perspective

The accounting regulation (order no. 1802/2014) does not distinctly present the case, but it mentions that any transaction is recorded at the time it is carried out in a support document (p. 314, para. 2-3). It is also mentioned that revenues and expenses that resulted directly and simultaneously from the same transaction are recognized in the accounts simultaneously, through direct association between the costs incurred and the revenues gained, with distinct disclosures of such revenues and expenses (p. 53, para. 3).

In practice, this operation is reflected by a return, followed by a delivery. There are no changes in revenues, due to the fact that the selling price is the same, but there may occur changes in the cost of goods sold if the acquisition cost of the goods is different (for example, the goods were purchased from external partners, at different times, and the exchange rate used and the date of receipt is different).

Conclusions

Each entity must establish its own business strategy, by ensuring that in drafting the commercial contracts there are primarily identified the limits and conditions outlined by the commercial legislation. Typically, an entity's trade policies cannot be limited to any accounting or tax legislation, since it is the result of implementing the best trade rules and practices, in compliance with the relevant legislation. Therefore, a major role in shaping trade policies is awarded to the legal department. Even if both the tax and the accounting legislation have defined substance over form as a fundamental principle, we believe that any valid contractual stipulation must be applied strictly throughout the duration of the commercial contract. In addition, the accounting and tax treatments must be configured from the design phase of the

commercial contract, precisely to ensure the conformity of the transactions carried out by the entity with the provisions of the Tax Code and the Order no. 1802/2014.

The next step entails the introduction of the aforementioned treatments into the accounting and tax policies textbooks, starting from the taxonomy of discounts used in transactions, and continuing with the procedures for the preparation, circuit and use of the corresponding accounting and financial documents, the measurement and the entering of discounts into the accounting records etc.

From a fiscal perspective, there should be considered at least the aspects related to the impact of price discounts on the taxable amount in terms of VAT and income tax, because the discounts adjust by diminishing the value of goods and services, either at the time of the original transaction, or subsequently.

A comparative analysis of the stipulations of IFRS 15 and the national accounting regulations leads us to discover significant differences in the regulation of practical issues, by reference to the actual conditions in the economy. Therefore, we provided various solutions for the recognition and measurement of price discounts.

Even if the Romanian legal and economic practices are saturated with the use of numerous types of discounts, we consider that legislation appears to be dense, rigid, inadequate and generally interpretable. For example, most marketing practices and general rules of marketing are regulated by the Government Ordinance 99/2000 on the marketing of products and services. The terminology and marketing practices are not assimilated into the accounting legislation, which is far from being connected with the current economic realities, and it is also providing limited and general exemplifications. Additionally, the new provisions in the accounting regulations in terms of trade and financial discounts that cover the entire value of goods and services may lead to erroneous interpretations regarding the sale at a loss, and also to the mistaken separation of current and accrued revenues. Taxation enforces different and uncorrelated regulations that may lead to the impossibility of using modern and flexible marketing practices, and also to major risks of tax and contributions adjustments.

REFERENCES

1. Hotărârea Guvernului nr. 1 privind Codul Fiscal (2016), București: Monitorul Oficial al României nr. 22/13/01.2016.
2. International Accounting Standards Board (2014), *IFRS 15 Revenue from Contracts with Customers*, IFRS Foundation.
3. Legea contabilității nr. 82/1991 republicată, cu modificările și completările ulterioare, București: Monitorul Oficial al României nr. 454/18.06.2008.
4. Legea nr. 227 privind Codul Fiscal, cu modificările și completările ulterioare (2015), București: Monitorul Oficial al României nr. 688/10.09.2015.
5. Ordinul ministrului finanțelor publice nr. 1802 pentru aprobarea Reglementărilor contabile privind situațiile financiare anuale individuale și situațiile financiare anuale consolidate, cu modificările și completările ulterioare (2014): București, Monitorul Oficial al României nr. 963/30.12.2014.

