

Anul XX

audit

FINANCIAR

Nr. 1(165)/2022

- Profesia contabilă și de audit în era digitalizării
- Accounting and Auditing Profession in the Era of Digitalization



- Influența reputației auditorului și a gradului de concentrare a acționariatului asupra calității informațiilor financiare
- Percepția auditorilor financiari cu privire la valoarea adăugată a serviciilor de audit intern
 - Relația auditor-client: interferențe, influențe și asocieri
 - Auditul informațiilor nefinanciare – provocări și oportunități

- The Influence of Auditor Reputation and Degree of Ownership Concentration on the Quality of Financial Reporting
- Financial Auditors' Perception on the Added Value of Internal Audit Services
- Auditor-Client Relationship: Interferences, Influences and Associations
- Assurance on Non-Financial Information – Challenges and Opportunities

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- the language the article is drafted in is English
- the optimal size of the article is: 7-10 pages with 2000 signs/page, spaces included;
- the article must mention the title, the research methodology used, authors' contributions, the impact on the accounting profession and the references;
- an Abstract is compulsory, which must be written at the 3rd person plural, presenting the subject of the research, the main problems and authors' contributions;
- 4-5 Keywords;
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The review of the articles is performed by members of the Scientific Assessment Council of the „Audit Financiar” Journal, by means of the „double-blind review” method, that is, the reviewers do not know the names of the authors, nor the authors know the names of the reviewers.

Assessment criteria for articles: innovative input, topicality, importance and relevance for the subject matter; the quality of the research methodology; clarity and pertinence of the presentation and argumentation; the relevance of the bibliographic sources used; contribution made to the research in the area.

The resolution of the Scientific Assessment Council of the journal can be: acceptance; acceptance with revisions; rejection. The results of the assessments are communicated to the authors and only the articles approved by the Scientific Assessment Council are published.

More details can be found on our website auditfinanciar.cafr.ro, section „For Authors Only”.



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Event

“Audit Financiar” Journal – 20 A Prestigious Publication of the Professional Organization of Financial Auditors of Romania

Adrian POPESCU,

President of the Chamber of Financial Auditors of Romania

“Audit Financiar” journal, published by the Chamber of Financial Auditors of Romania, has on the cover the relevant fact that it has entered its twentieth year of uninterrupted publication. From the very beginning until now, the aim of the publication has been to support the efforts of our organization aimed at ensuring a high-quality financial auditing profession at the level of international standards and European legislation in the field, to assert the prestige of this profession in the country and worldwide.

Anchored in present times, but focused on evaluating the next steps, the journal has an important role in promoting analysis and studies to reveal the most appropriate solutions to modernize the profession and equip financial auditors with appropriate tools and techniques to meet the current economic and social challenges generated by the critical conditions of the pandemic crisis we are going through.

In fact, it can be said about “Audit Financiar” journal that it is an integrated subset synchronized in carrying out the research and development function of the professional organization. Often the researches undertaken to write the articles published here proved to be valuable sources of ideas, a highly informative raw material for the construction of programs and the illustration of training courses for members and trainees.

Topics such as the adoption of emerging information technologies in auditing, adapting to the increasingly rigorous technical and ethical requirements related to the quality and responsibility of audit engagements or the implementation of the modern concept of sustainability are just some of the topics of study that our publication constantly addresses. For example, at the recent Congress of the Romanian financial auditor profession, half of the topics presented were based on scientific researches from the reports of the laboratory of the editorial board of the “Audit Financiar” journal. There are papers intended for full publication, in several successive issues of the journal, to be disseminated as widely as possible to the members of our organization and to the users of financial audit services.

In this context, it should be noted that the high standard of the publication is ensured by the excellent cooperation with the profile universities with which CAFR has concluded collaboration protocols that have been working with good results on several levels, including the publishing field. The “Audit Financiar” journal offers to the academic environment the stimulating publishing framework for the promotion of the scientific activity, as well as of the teachers and of the young researchers in the process of formation and affirmation.

As the journal is also published in a language of international circulation, through its journalistic approach the journal is another concrete proof of the involvement of Romanian professionals in the proactive, practical approach, with observations and solutions, of the pressing issues that concern the profession internationally.

The CAFR Council has a high appreciation of the editorial process and continues to rely on

the professionalism and determination of the editorial team, which was joined by important creative forces of the academic community in the main Romanian university centers, to always keep the performance bar high by publishing articles, scientific research on topical issues, for the direct benefit of the financial auditor profession.

Time landmarks

- Editor: Chamber of Financial Auditors of Romania (CFAR)
- The launch of the publication took place in the first quarter of 2003, the idea of its realization belonging to the President of the Chamber at that time, Professor Florin Georgescu, Ph.D.
- Since 2006, at the initiative of the then president, Professor Ion Mihăilescu, Ph.D., the CFAR Council oriented the content of the publication mainly towards scientific research.
- Since its first publication more than 1000 articles have been published, most of them with scientific research in the field of accounting and auditing, but also in adjacent areas, such as computer science, corporate governance, evaluation, taxation, financial analysis.
- The articles are signed by well-known professionals in Romania and worldwide, but they also belong to young people employed on the difficult but exciting path of scientific research.
- An elite group of personalities of the Romanian and international profession form the Scientific Editorial Board, the board of the journal, which oversees and guarantees the orientation of the journalistic production.
- The journal is published in accordance with the technical criteria used in international practice for journals specialized in scientific research.
- The evaluation of the articles is provided by a Scientific Council, consisting of over 40 experts and teachers with experience in research.
- The bilingual – Romanian and English publication is posted on the web site in open access mode and is also edited in printed format and is indexed in 11 international databases.

2003: Launch of the publication

The Council of the Romanian Chamber of Financial Auditors has decided to support its members by setting up the journal "Audit Financiar", which aims to be an effective vehicle for facilitating the exchange of views between professionals in the field of financial audit, beneficial for CFAR members and to bring to the focus of the professionals from our country the changes that take place in the international plan regarding the regulation and development of the profession.

I take this opportunity to invite you, dear colleagues, members of the Chamber of Financial Auditors of Romania, to become active participants in the elaboration

of this journal, which belongs to you, whose publication we inaugurate through this first issue.

Professor **Florin GEORGESCU**, Ph.D.,
first CFAR President

2006: Orientation towards scientific research

The auditors' journal kept up with the evolution of the audit activity. The Council of the Chamber took care that, permanently, the editorial staff and the academic and university persons attracted in the Scientific Editorial

Board take this journal to high levels. I would like to thank this way the Scientific Board, the editorial staff and the other collaborators who managed to make our journal, of the financial auditors, well rated from a scientific point of view. People working in academia can publish in the "Audit Financiar" journal their results of research, information obtained from scientific research, to be widely known. The journal is presented at high quality levels.

Pay close attention to it because it is a primary mean of professional communication between the Chamber and the financial auditors!

*Professor **Ion MIHĂILESCU**, Ph. D.,
second President of CFAR*

Testimonials

Firmly rooted in profession' challenges

I had the chance to be part the very first issue of "Audit Financiar" journal with a very current article at that time, entitled "The process of harmonization of Romanian accounting with European directives and international accounting standards". A journalistic material on a topic that could be said I felt to be "at home", because at that time I had the privilege of being directly involved with my colleagues from the Ministry of Finance in this important country project, which had as general objective the realization of the long-term strategy of harmonization, convergence and then of conformity of the Romanian accounting and of the specific professions to the European and international foundations of this field. Here and now, we can state unequivocally that the objectives assumed and the actions taken have passed the "test of time".

Thus, the evolution of the national legislative framework, the assimilation of all European regulations and the professional and ethical standards and norms of the accounting and its specific professions have provided the basic pillars that position both accounting and regulated professions, in full agreement with the developments and concerns at European and international level.

And it should be noted that the steps of this extensive process have been constantly reflected in the pages of the journal, through relevant articles, anchored in the immediate reality, resulting from thorough scientific research, through which were analyzed the practices in the field, were made critical comments and have been proposed solutions.

In all these years I have been happy to collaborate with the editorial staff of the journal both through published materials, but also as a member of the Council of the Chamber, or of the Scientific Editorial Board.

The profound and complex developments taking place at European and international level in the field of the accounting and auditing profession, their depth and complexity pose challenges to the profession for planned and systematic actions to support this field, constantly confronted with novelty elements imposed by the strongest possible protection of the economic environment as a whole.

And, as demonstrated by a number of papers proposed by the editorial staff to be presented at the recent Congress of the Financial Auditor Profession, the journal is fully connected to support the interests of the profession.

In this context, my message addressed to the wonderful team of professionals of the "Audit Financiar" journal and the members of its Editorial Board is: *Sincere congratulations for the professional achievements so far and full success in all future actions and endeavors! See you in good health and without pandemic problems!*

*Professor Emeritus **Maria MANOLESCU**, Ph. D.
Bucharest University of Economic Studies*

An enviable reputation

I have the honour of being a member of the Scientific Editorial Council of "Audit Financiar" journal since 2007 and being its oldest international member. Today, I have the pleasure of staying along in this Board with colleagues and friends from Australia and the United States, as well as from Moldova and Poland. Step by step, the journal

has acquired an enviable reputation in the academic community beyond Romania.

Since then, I have published alone or as a co-author, notably with Professor Maria Niculescu, 13 articles in "Audit Financiar" Journal. Why in this journal and not in another? I have two reasons that I consider essential:

1. "Audit Financiar" systematically publishes in English and Romanian languages. I am an activist for multilingualism because if English language allows a paper to be read in a great number of countries, Romanian language, just like French, allows to express different nuances and to reach other audiences.
2. "Audit Financiar" is addressed to practitioners and academics. I am also an activist for the dialogue between these two communities. Academics must be able to conceptualize practices, but if they are not read by practitioners, then it is their social utility that is called into question.

Finally, I can testify on the fact that few professional organizations, such as The Chamber of Financial Auditors of Romania, are so keen to build constructive relationships with the international accounting and auditing community. I thank them very much for that!

*Professor Emeritus **Alain BURLAUD**,
Conservatoire national des arts et métiers, Paris*

Active scientific presence

"Audit Financiar" journal proves to be one of the most active scientific publications issued by a body of the accounting profession not only in terms of the scientific relevance of published topics, but also in regard to the scope of authors concerned with current issues connected to the realities of the present, but even more of the future. Being indexed in international databases, the "Audit Financiar" journal has generated an increase in attractiveness for many researchers in the field of accounting and auditing from the perspective of national and international exposure.

I want to mention the special collaboration between the School of Accounting and Auditing of the West University of Timișoara and the "Audit Financiar" journal as both teachers and Ph.D. students have fully benefited from disseminating the results of their research by publishing

them in its pages. Last but not least, I would like to point out the collaboration in the publication of some special papers at the "Accounting and Auditing Perspectives" Conference, organized by the Accounting and Auditing Department. At this anniversary moment, I wish you to publish many issues with interesting articles that allow the best possible scientific and professional visibility!

*Professor Habilitated **Ovidiu Constantin BUNGET**, Ph. D.,
West University Timisoara*

Open road for many young researchers

I collaborated for a significant period of time at "Audit Financiar" journal. I believe that since its foundation, the journal has grown both quantitatively and qualitatively.

The quantitative level is reflected in the impressive number of articles, research topics, information and presentations of events that have been included in the content of the journal.

The quality level is reflected by the scientific content of the materials presented. It should be noted that the journal has published in its issues significant articles from the point of view of the scientific research at national and international level.

I note again that the journal has paved the way for many young researchers in the field of economics, publishing in its pages debut papers, but also large works of young researchers, of important value from a scientific point of view.

The journal was present where scientific research in the economic field was also present.

The quality of the evaluations of the materials presented in the pages of the journal determined a strict selection of the submitted papers and sometimes an improvement of their content, being admitted for publication only after fulfilling the criteria required by the standards of the journal.

The event on the occasion of the twentieth year of publishing offers me the opportunity to wish many fruitful years in its future existence.

*Professor **Vasile RĂILEANU**, Ph. D.,
Bucharest University of Economic Studies*

Vivat, crescat, floreat!

The "Audit Financiar" journal has entered its 20th year of existence. It is an excellent opportunity to think about what this journal represents. Of course, we can say without hesitation that "Audit Financiar" is a reference journal for the auditing profession, offering its readers significant research on various topics in the broad field of accounting and auditing, including theoretical, empirical and experimental work. But I think this journal is more than a combination of skills. All these years it has tried to be a community, a space for the exchange of ideas and challenges, a place of debate where the only imperative was the constant search for the best solutions for its readers.

In addition, I believe that the intellectual adventure that this journal represents has been permanently doubled by a human adventure. Because the developments that the journal has considered, even since its creation, require, beyond the plurality of specializations and competencies of the authors or their loyalty to certain schools of thought, a full adherence to the principle of "otherness". Congratulations "Audit Financiar"! Vivat, crescat, floreat!

Professor **Liliana IONESCU-FELEAGĂ**, Ph. D.,
Bucharest University of Economic Studies

At anniversary times

At the age of wisdom, I am honored to have the chance to express a thought at this anniversary time. "Audit Financiar" journal entered the year that marks the end of the second decade of its existence. Apparently, a relatively young publication, in an austere field, in which the "glacial" language of numbers operates. Coming to the proof of the proven fact in the century of change and of the ubiquitous fake news, I have all the arguments to say "Congratulations for everything you have done so far!"

An educated and cultivated nation in the promotion and validation of the truth, in all the springs of its existence, has the legitimate right to hope for a future according to it.

Professor Emeritus **Emil HOROMNEA**, Ph. D.,
"Alexandru Ioan Cuza" University of Iasi

A journal in a qualitative upward trend

Since its first publication and until now, due to the topics addressed and the quality of the articles published, the journal "Audit Financiar" represents a valuable scientific landmark both for the Romanian academic environment and for professionals practicing in financial audit, internal audit, accounting and taxation.

During all its years of activity, "Audit Financiar" journal has hosted highly topical issues for the accounting profession, both nationally and internationally, in the area of financial auditing and related services, ethics of the profession, financial and non-financial reporting, digitalization, gender balance in the profession, education of future professionals, topics in which both renowned accounting professionals and academics from universities have participated, often together.

I have collaborated over the years with the journal "Financial Audit" as an author, combining the two roles, as a university professor Ph. D. and as a practicing financial auditor, and occasionally as a reviewer, and from this point of view I appreciate the professionalism of the entire editorial team, both at the front and at the back of the journal.

Looking to the future, I am firmly convinced that this upward trend in the quality of the "Audit Financiar" journal will continue, and as Chair of the *Steering Group of the Common Content Project*, now renamed *Professional Accountancy Education Europe (PAEE)*, which brings together the efforts of nine leading European professional bodies, I assure you of my full support and fruitful collaboration. As before, I will be present in the pages of the magazine from now on with topics that focus on the common effort of the *PAEE* member professional bodies towards an improvement of the professional qualifications they offer and as a common voice promoting quality and up-to-date professional education for its members.

I wish you much success and dedication and I look forward to reading the next issues of "Audit Financiar".

Professor **Adriana TIRON-TUDOR**, Ph. D.,
"Babeş-Bolyai" University, Cluj-Napoca

With patience and passion, towards performance

Although it marks 20 years of existence, if we compare it with other specialized journals, we can say that "Audit Financiar" is a young journal, but which, during this time, has become very well-known and appreciated by specialists in the field of accounting. The journal has also evolved progressively, from a theoretical and regulatory approach to the financial auditing profession, at its beginning, to a practical approach, directly involved in the financial audit activity, thus becoming a meeting place and debate for professionals in this field.

Since 2006, with the access into the Scientific Editorial Board of professors and researchers from prestigious universities at national and international level, the journal has evolved in the direction of scientific research, being recognized internationally by indexing in important databases in the field. In addition, by publishing the journal also in English language, it has now achieved remarkable international prestige. The journal has become highly sought after and frequented by young researchers, PhD students in accounting, who have thus managed to better capitalize on the results of scientific research and to advance in their university careers.

These outstanding results, which were obtained in a relatively short time, are due to the CFAR management, which, over the years that have elapsed since the first publication of this journal, has managed to support it, to encourage it through all the steps of the development of the professional organization. In addition, the Scientific Editorial Board and the editorial staff deserve all the praise, because with a lot of patience and passion, are concerned that the performance and quality of the journalistic approach grow with each issue.

Congratulations!

Professor **Pavel NĂSTASE**, Ph. D.,
 Bucharest University of Economic Studies

Soul thoughts

It is said that in scientific research you must be brave to step boldly into the field of "It does not exist!" You hope that you will carry on the legacy of the Masters and you will continue the idea of School in the bosom of "Alma Mater". However, you also need a space for manifestation, a favorable place for your ideas and results to be disseminated and shared with colleagues in order to respond with concrete solutions to the problems facing

society, the profession or the general public. Such a space, at least for me, was represented by "Audit Financiar" journal and I can confess that I grew up and formed with it.

Starting as a simple author (in issue no. 55/2009, at that time I was a masters student), under the careful coordination of distinguished Professor Elisabeta JABA, Ph.D. (to whom I owe a lot of gratitude in my training as a researcher and not only), I gradually went through important academic phases in professional development, from master student, Ph. D. and double Ph. D., postdoc, assistant lecturer, associate professor and habilitated, confident that the results of the articles by the authoring teams I have collaborated with will help to provide solutions both in the field of practice, but especially in promoting the scientific status of accounting and financial auditing, launching a new field, namely "Auditometry".

I found in the editorial office of "Audit Financiar" journal a team of professionals who know how to coordinate and keep alive the breadth of knowledge in our field, which led me to advance even stronger, from author, reviewer, translator and member of the Scientific Editorial Board, which honors me equally. Congratulations to the entire team of "Audit Financiar" journal and we wish it numerous indexes, prestigious citations and as many issues as possible with valuable articles!

With much appreciation,

Associate Professor habil. **Ioan-Bogdan ROBU**, Ph. D.,
 "Alexandru Ioan Cuza" University of Iasi

A valuable source of information, a quality professional guide

In all its years of publication, "Audit Financiar" has been a professional guide for financial auditors facing overnight the demands, challenges and opportunities of a new economy, and is a valuable source of information not only for practitioners, but also for young researchers, generously hosting a wide variety of opinions, respectively stimulating and encouraging debates and exchanges of ideas. In my opinion, through the principles and high standards assumed and maintained, the journal represents an important landmark of the auditing profession, being one of the most influential publications in the financial-accounting field.

Romania's economy has gone through many challenges in the last two decades – transition, socio-economic crisis, economic boom, privatization, hard lessons and some

successes. In all these turbulent times, the publication "Audit Financiar" was there and did the right thing. The current context generated by the COVID-19 pandemic but also digitalization bring to the fore the need of professional accountants in general, respectively of financial auditors in particular, to be informed clearly, correctly and quickly. I appreciate the fact that the journal "Audit Financiar" has understood this responsibility and has kept to a high standard both the professionalism and the quality of the information and I am convinced that it will continue on this path. I also appreciate the experience and work of the researchers, but also of the editorial staff, in transmitting current, relevant, undistorted and interesting information, which makes you a real and credible source of information.

"Audit Financiar" is a support for the continuous stimulation and affirmation of scientific and academic research in the field of financial audit. The topics discussed in detail have stated your publication as a benchmark and a starting point in all the analyzes I have done throughout my career as a professional accountant and auditor, no matter where I have worked.

As a teacher and researcher, but also as a professional practitioner in my own consulting firm, I reiterate the fact that I enjoy a fruitful collaboration both with the entire editorial team and as a member of the Scientific Evaluation Council and with CFAR, as a collaborator on the teaching part of the Professional Training Courses for financial auditors.

Thus, I thank you for your trust and for your continued interest in the scientific endeavors initiated, being grateful for hosting my articles in the pages of the journal, but also for appreciating their quality, granting me two consecutive awards for excellence in research, at the last two Congresses of the financial auditor profession in Romania.

First of all, I would like to wish you *as many years as possible* in the continuation of your journalistic and research efforts, to maintain the same standards in disclosing truthful information, directly from the source to audit professionals and that you concentrate your efforts on maintaining and at the same time increasing the audience of the journal you have successfully served.

I wish you to continue to support, as before, CFAR's efforts to increase the professional quality of financial auditors and to mark many exceptional achievements in the coming years, and I am convinced that our collaborative relationship will continue on the same coordinates of professionalism, trust and mutual respect!

Congratulations to the management team for their perseverance and results during all this time, as well as for the great editorial projects, the wonderful events and the dedication to the readers and to all the partners and collaborators!

Happy anniversary, full of energy, passion, inspiration and motivation to continue your mission!

Delia DELIU, Ph. D.,
Financial Auditor – Analitic Expert SRL
Associate Professor – West University of Timisoara

Ant toil

We were working on the journal, when our colleague Nicolae Login, who, with talent and skill, has been providing graphics and design since the first edition, struck our attention that, with the issue in preparation, the publication enters its twentieth year. Thus, step by step, 165 volumes were collected, each in itself a real specialized book, intended to be useful to the professionals involved in the field of accounting and financial audit.

If we add up the signatures of the authors, or the number of titles of the articles, we reach impressive values, but also relevant conclusions, even flattering, on the quantity and quality of the papers proposed and selected to know the taste and to try the magic of printing ink or electronic posts to all who are interested. Treasures of information, ideas, analysis, solutions and predictions.

What is less known, however, is the tenacious, sometimes tense work of an ant team, which – under the trajectories designed by the publisher or the scientific board – investigates and stimulates journalistic creation, besieging and inciting potential professional authors and collaborators. After which, they thoroughly and objectively evaluate the texts submitted for publication, an operation that often results in ways to raise the quality of research and writing, or of translations, or the finishing of the presentation form.

Sometimes tensions arise in this process, but with tact and communication, in the end no one gets upset, even if it happens that the texts circulate several times on the virtual interface between authors, reviewers, translators and editors, but also within the editorial team, at least for details such as page layout, graphics, printing or posting on the site and on international databases.

Finally, after this ant toil, "Audit Financiar" journal appears, as we know it. We should therefore mark on this occasion the satisfaction and the feeling of professional pride, real, although discreet, of the members of the editorial team, of all those who put their shoulder to the construction of this editorial product from the first issue until today's issue of the journal "Audit Financiar".

Cornelia Cristiana RUS, Editor in Chief
Corneliu CÂRLAN, Ph. D., Editorial Director



The Influence of Auditor Reputation and Degree of Ownership Concentration

on the Quality of Financial Reporting

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Abstract

The quality of financial information reported by companies is determined by a number of factors designed to help make it more useful to investors. This paper aims to assess the contribution of auditor reputation and ownership concentration to share price formation, thereby evaluating the relevance of these characteristics for investors. Using information specific to companies listed on the Bucharest Stock Exchange (BSE) for a period of 10 financial years, the study identifies a significant influence of auditors' reputation when the latter belong to the Big4 group; meanwhile, after forming categories per the legal form of organization, it was revealed that the market does not distinguish between auditors organized as audit firms or those who provide the specific services as independent professionals. The study also reveals a significant influence of financial information on the share price at the highest level of ownership concentration compared to the other levels introduced in the analysis. Following the introduction of control variables, such as listing market segment, size, industry or leverage into the study, the sense and significance of the influences were preserved, and the results also remained robust following the sensitivity analysis conducted on the influence of auditor reputation function of ownership concentration and BSE section.

Key words: value relevance; audit quality; ownership concentration; accounting information quality;

JEL Classification: M410

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Introduction

Although the literature is replete with papers that address the quality of accounting information in general and earnings information in particular, the subject of factors that influence the quality of earnings reported by companies is far from settled. The value relevance of accounting figures is extremely important for users, especially investors, as it forms the basis of all the judgements and decisions they make (Lee and Lee, 2013).

A synthesis by Dechow et al. (2010) highlights that the approach to accounting quality in academic work is less comprehensive than in the standards issued by IASB because the quality of the earnings is analyzed separately and not through qualitative characteristics that relate to accounting information in general.

Users of accounting information – particularly investors – are put in the position of forecasting future earnings of the company based on past performance; therefore, one dimension of the quality of earnings relates to their persistence (associated with the absence of manipulation), which means that the results should not vary significantly from one period to another, otherwise they have a limited usefulness for estimating cash flow. Another quality dimension relates to the timeliness of loss recognition (Dechow et al., 2010; Ball et al., 2008), explained by the desirability of accounting for *bad news* quickly (*time loss recognition*). In this context it is worth noting that after conducting a study, Ball and Shivakumar (2005) concluded that in the UK loss recognition is faster in listed companies than in non-listed companies. The absence of accounting manipulation and the value relevance of reported information can also be mentioned in addition to these dimensions.

Accounting information quality is a subject that has been debated over time from different perspectives. In terms of the works on *value relevance*, it examines the usefulness of accounting figures reported by companies for investors, as well as their capacity to influence their share price decisions (Barth, Beaver and Landsman, 2001; Beisland, 2009; Oliveira, Rodrigues and Craig, 2010; Gong, Sophia and Wang, 2016; Barth, Li and McClure, 2021). Although the issue has generally been investigated based on economic and financial indicators, over the course of time researchers have also focused on *value relevance* analysis via certain non-financial information. For example, a significant number of papers has studied the

capacity of environmental information disclosed by firms, both voluntary and mandatory, to influence the market value of companies (Amir and Lev, 1996; Hassel, Nilsson and Nyquist, 2005; Moneva and Cuellar, 2009; Fazzini, and Dal Maso, 2016; Cordazzo, Bini, and Marzo, 2020). Hirschey, Richardson, and Scholz (2001) identified that disclosure of patent quality information for firms operating in the high-tech sector could be useful to investors in evaluating companies. Gamerschlag (2013) analyzed human capital information voluntarily disclosed by German companies and found that it is positively associated with firm value (especially information on employee qualifications and skills). The presence of women in the board of companies also proved to have a positive influence on the value of earnings and equity information, and thus leads to higher quality financial reporting (Cimini, 2021). From another perspective, a recent paper showed that Romanian companies listed on the Bucharest Stock Exchange with connections to offshore jurisdictions tend to have lower value relevance of accounting information as opposed to those without such connections (Afrăsinei and Georgescu, 2020). Another factor that can significantly influence the relevance of financial information is the auditor's reputation or the quality of audit services. In this regard, Lee & Lee (2013) found that, for companies audited by Big 4 firms, the earnings and book value of equity have a higher relevance for stock valuation, as opposed to firms with other auditors.

In general, the studies that measured the capacity of corporate disclosures to influence investors' stock price decisions have relied on the Easton and Harris (1991) and Ohlson (1995) models to track the relationship between market price and accounting valuation of earnings and equity, respectively (Alali and Foote, 2012; Ragab and Omran, 2006; Hellström, 2006; Harris, Lang and Möller, 1994).

This paper aims to analyze the influence of auditor reputation on the relevance of financial information reported by companies listed on the Bucharest Stock Exchange. The connection is studied by reference to the degree of ownership concentration, an element with a significant impact on the auditor-client company relationship, as well as by using control variables suitable for the stated relationship, such as: field of activity, listing market, leverage and company size. The study contributes to the literature in two directions. Firstly, the results that reveal an increased relevance of the information reported by BSE listed Romanian companies audited by a Big 4

firm are consistent with previous research in the field. Secondly, to investigate the influence on the market price, the study takes into account not only the auditor's reputation, estimated according to several grouping criteria, but also their Big 4 group status (Big 4 vs. Non-Big 4), the legal form of organization (audit firm or independent professional) and the degree of ownership concentration, respectively.

The whole research approach of this paper is structured into several sections presenting the research hypotheses determined based on the literature review, the research methodology, the results obtained, and the conclusions.

1. Literature review and hypotheses development

There are numerous studies that have focused on the relationship between audit quality and accounting information quality. The connection between the choice of a reputable auditor and the level of manipulation of the audited company's earnings was analyzed in this context. Thus, while the study by Becker et al. (1998) showed that US companies audited by Big 6 auditors (at that time there were 6 large audit firms) had a lower magnitude of discretionary engagements than the firms audited by non-Big 6 auditors, Lennox and Pittman's (2010) study found that companies audited by Big 5 auditors were less involved in SEC-sanctioned fraudulent financial reporting compared to firms whose accounting reports were certified by smaller auditors. Another aspect under analysis is the positive influence of audit quality on the predictive capacity of accounting information; therefore, the results of the study by Behn et al. (2008) led to the conclusion that analysts' predictions are more accurate when companies are audited by Big 4 auditors.

Normally, the decision to choose the auditor should rest with the shareholders, but in reality, it is the managers who decide. The literature includes studies designed to identify the factors that influence these decisions, as well as the reasons for changing the auditor. They have highlighted that there are two categories of reasons that support the preference of companies towards an auditor within the international Big 4 network (Raffournier, 2018), namely: the intention to attract investors and reducing the risk of political costs by publishing financial statements of unquestionable reliability. We can thus hypothesize that the companies audited by Big 4 firms are those that tap into financial markets and they are large companies.

Choosing a Big 4 auditor may also be the consequence of agency relationships within the firm, and is more likely where the shareholding is dispersed, the firm is more leveraged, and managers are directly interested in the earnings. Thus, the study by Hope et al. (2012) confirmed the influence of agency relationships on the choice of auditor type (Big 4 or non-Big 4) for companies in Norway, and the results obtained by Broye and Weill (2008) following a research conducted on a sample of European companies showed that the relationship between leverage (debt level) and auditor type varies across countries, supporting the idea that the higher the level of creditor protection, the stronger the relationship.

On the other hand, choosing a reputable auditor, such as Big 4 ones, means higher fee expenses for the client company, but also a higher probability that the audit will detect irregularities in the financial statements. Therefore, we can infer that companies using such auditors do not intend to influence the financial statements via questionable accounting practices. The disadvantage of high costs for quality audit services must be offset by certain advantages, such as a firm's going public. In this context, it is worth noting that most studies targeting US companies have concluded that there is a correlation between auditor reputation and stock undervaluation at IPO (Raffournier, 2018), while a study by Broye and Weill (2008) shows that in France choosing a reputable auditor helps reduce stock undervaluation, and research by Chang et al. a. (2008), on the contrary, finds a positive correlation between choosing a Big 4 auditor and the undervaluation of stocks for IPO companies.

H1: Auditor reputation significantly influences the relevance of financial information.

The influence of the degree of ownership concentration has been studied in the literature from several perspectives, but most of the work has focused on the analysis of the relationship between ownership structure and firm performance (Balsmeier and Czarnitzki, 2017; Alimehmeti and Paletta, 2012; Chen et al, 2005; Thomsen and Pedersen, 2000; Wruck, 1989). Research on this topic has shown that in some countries there is an influence of ownership structure on firm performance (Machek and Kubiček, 2018; Scafarto et al., 2017; Foroughi and Fooladi, 2011), while in others there is no significant association (Yasser and Al Mamun, 2015; Laporšek, Dolenc, Grum and Stubelj, 2020). A recent study (Horobet et al.,

2019) on a sample of firms operating in the manufacturing sector across the European Union found that, in the case of Western European companies, there is a positive connection between ownership concentration and company performance, while in the case of Eastern European companies the relationship is not statistically significant.

Ownership concentration can also have a significant influence on the use of high-quality external audit services and reputable auditors, respectively. In terms of audit quality, previous work in the literature finds that Big 4 firms provide higher quality audit services than other audit firms (Van Tendeloo and Vanstraelen (2008) and also enjoy higher credibility (Lee and Lee, 2013). Thus, the quality of the audit endeavor varies by audit firm size, and large firms, having a lot of clients, are thought to be more concerned about not committing errors because they “have more to lose” (De Angelo, 1981). In this regard, Darmadi (2016) found that companies with a high concentration of shareholders tend to use the services of a Big 4 audit firm. Family-owned firms are at the other side of the spectrum, as they prefer to use audit services deemed to be less qualitative. The same authors showed that the correlation between the degree of concentration of firm ownership and the pursuit of quality audit services is negative for family-owned firms.

To delineate the degree of ownership concentration, Horobet et al. (2019) used an indicator whereby firms were classified into four categories according to the number of shareholders and the proportion of shares held individually or collectively. The first category -**A**- presents a low concentration of ownership and includes the companies with shareholders that hold less than 25% of the total number of shares. The second category -**B**- presents a medium to low concentration of ownership and includes the companies with shareholders that hold less than 50% of the total number of shares, but at least one shareholder holding more than 25%. The third category -**C**- presents a medium to high concentration of ownership and includes the companies with shareholders that hold in total more than 50% of the shares. The fourth category -**D**- presents a high concentration of ownership and includes the companies with shareholders that

directly hold more than 50% of the shares. In another paper (Scafarto et al., 2017), the analyzed firms were divided by degree of ownership concentration into just two categories, based on the median. Thus, one category includes firms with an ownership concentration above the median, while the other category includes firms where the value of this indicator is below the median. Other studies have measured the degree of ownership concentration considering the ratio of shares held by a certain number of the largest shareholders (e.g., the top 5 or 10), respectively using the Herfindahl index as a proxy variable for the degree of ownership concentration (Demsetz and Lehn, 1985; Leech and Leahy, 1991; Demsetz and Villalonga, 2001; Goergen, and Renneboog, 2001; Fazlzadeh, Hendi and Mahboubi, 2011). In the same vein, to measure ownership concentration, Thomsen and Pedersen (2000) only considered the share ratio held by the largest shareholder. Yasser and Al Mamun (2015) used five variables in their study for classifying the degree of ownership concentration based on the share ratio held by the largest shareholder, the two largest shareholders, the three largest shareholders, the five largest shareholders, and the 10 largest shareholders.

H2: The degree of ownership concentration significantly influences the decisions of investors.

2. Methodology

This paper examines the role of auditor reputation and ownership concentration in enhancing the quality of financial information from the perspective of its relevance to investors on the BSE.

2.1. Sample and data

The analyzed population is represented by companies listed on the Bucharest Stock Exchange (BSE), excluding financial companies. The data was collected from the Amadeus database, as well as from the financial statements published by companies on the BSE website. The study was conducted over the span of 10 financial years (2010-2019), using information from 341 entities.

The variables used to test the stated hypotheses are presented in **Table no. 1**.

Table no. 1. Variables used in the study

Variable	Symbol	Description
Share price	P	Share price of a stock
Equity per share	Cpr	Equity per share for an ordinary share (the mathematical value of a share)
Net earnings per share	EPS	Net earnings divided by the number of issued shares
Reputation of auditor 1	BIG4	Dummy variable that takes the value 1 if the auditor is a BIG4 company and 0 otherwise
Reputation of auditor 2	Firm	Dummy variable that takes the value 1 if the auditor is a company and 0 if the auditor is an independent professional
Ownership concentration	Act	Variable that reflects the degree of ownership concentration. Dummy variable that takes the value 1 when the degree of ownership concentration falls under the D category and 0 otherwise.
BSE segment	SegB	Dummy variable that takes the value 1 if the entity is listed on the main market of the BSE and 0 if it is listed on the AeRO section
Domain of activity	Dom	Dummy variable that takes the value 1 if a company carries out an industrial activity, and 0, respectively, for the other domains
Company size	Dim	Log of total asset
Leverage (debt level)	LF	Financial leverage (total debt/equity capital)

Source: Authors' processing, 2021

Table no. 2 synthesizes the distribution of observations regarding

auditors, function of their relevant category.

Table no. 2. Distribution of observations regarding auditors by categories

No.	Auditor category	Number of observations	Ratio of total observations – %
1	BIG4	340	9.97
	Non-BIG4	3069	90.03
2	Audit firms	2899	85.03
	Independent professionals	510	14.97
	Total	3409	100

Source: Authors' processing, 2021

2.2. Data analysis methods

Correlation analysis and regression analysis with multiple alternative variables were used to study the relationships between the variables involved. Econometric models derived from the Ohlson (1995) model, representative for the field of assessing the extent to which company reporting influences investors' decisions, were used in analyzing the influence of auditor reputation and ownership concentration on the quality of reported financial information.

Thus, equation no. 1 captures the model used for individual testing of the influence of auditor reputation and ownership concentration, respectively, on stock market indicators:

$$P_{t+1/2} = \alpha_0 + \alpha_1 \times Rep_t + \alpha_2 \times Act_t + \alpha_3 \times Ctr_t + \varepsilon_t \quad (1)$$

where P_t is the price of a share at the middle of the year $t+1$; Rep_t auditor reputation in the year t , representing alternatively the *BIG4* and *Firm* variable, respectively; Act_t reflects the degree of ownership concentration in the year t ; Ctr_t includes control variables, as well as the market segment the company is listed on (*SegB*), the domain of activity (*Dom*), the size (*Dim*), and the leverage of the company (*LF*); $\alpha_0, \dots, \alpha_i$ are parameters associated to the variables in the model, while ε_t is the residual component.

The sensitivity analysis for auditor reputation function of ownership concentration and BSE section is tested using the model captured in equation no. 2:

$$P_{t+1/2} = \beta_0 + \beta_1 \times Rep_t + \beta_2 \times Rep_t \times Act_t + \beta_3 Act_t \times SegB_t + \beta_4 \times Rep_t \times Act_t \times SegB_t + \beta_5 \times Ctr_t + \varepsilon_t \quad (2)$$

where $Rep_t \times Act_t$ indicates the influence on the investors' decisions on the existence of an auditor in the BIG4 category (respectively legally organized in the form of a company), in the context of a high degree of ownership concentration; $Act_t \times SegB_t$ reflects the effect of the degree of ownership concentration function of market segment that the company is listed on; $Rep_t \times Act_t \times SegB_t$ shows the impact of the auditor's reputation function of the degree of ownership concentration and the stock exchange market segment that the company is listed on.

3. Interpretation of the results

Table no. 3 provides a snapshot of the correlation analysis between the variables involved in the study, noting the existence of significant connections between the dependent variable and independent characteristics. Also, no connections are identified between independent variables that would highlight potential collinearity relations. These elements support the conduct of the regression analysis according to the stated hypotheses.

Table no. 3. Correlation matrix

Variables	EPS	P	Cpr	LF	Big4	Firm	SegB	Act	Dom	Dim
EPS	1	.482**	.367**	-.024	.065**	.037*	.055**	-.011	-.071**	.102**
P		1	.668**	.001	.058**	.026	.048**	.020	-.095**	.168**
Cpr			1	-.012	.010	-.003	-.048**	.013	-.123**	.193**
LF				1	.064**	.042*	.111**	.003	.142**	.172**
Big4					1	.140**	.262**	-.040*	.081**	.355**
Firm						1	.162**	.084**	.095**	.202**
SegB							1	.001	.178**	.505**
Act								1	-.018	.153**
Dom									1	.253**
Dim										1

Source: Authors' processing, 2021

Table no. 4 reflects the influence of the auditor's reputation from the perspective of their Big4/Non-Big4 status. Thus, we note an increased relevance of the information reported by entities audited by a Big4 company. Investors associate higher quality of financial information with auditor reputation ($\alpha_{Big4_modelP1} = 0.662$). In this context, the degree of ownership concentration positively influences the price of shares ($\alpha_{Act_modelP3} = 0.195$), interpreting that a maximum focus on strategic decisions contributes to increasing the quality of financial

information. From the stock market segment perspective, the information published by companies listed on the main section of the BSE are more relevant (help in share price formation to a greater extent) compared to the information reported by companies listed on the AeRO market ($\alpha_{SegB_modelP4} = 0.880$). The control variables introduced in model P4 (Dim, Dom, and LF) do not significantly influence the price of shares, while the sense of the connections specific of the main independent variables are maintained in all the proposed models.

Table no. 4. Influence of auditor category – Big4/Non Big4 – on investment performance

Independent variables	Dependent variable – P			
	P1	P2	P3	P4
Constant	-0.009 (0.209)	-0.057 (0.424)	-0.135 (0.137)	-0.628 (0.076)
Cpr	0.336 (0.000)	0.335 (0.000)	0.336 (0.000)	0.332 (0.000)
EPS	1.635 (0.000)	1.651 (0.000)	1.636 (0.000)	1.633 (0.000)
Big4	0.662 (0.004)		0.675 (0.003)	0.516 (0.038)
Act		0.178 (0.112)	0.195 (0.073)	0.152 (0.098)
SegB				0.880 (0.000)
Dom				-0.195 (0.179)
Dim				-0.025 (0.612)
LF				0.001 (0.397)
N	3409	3409	3409	3409
Rsquare	0.513	0.512	0.513	0.517
Sig F change	0.000	0.000	0.000	0.000

Note: The regression coefficients are presented with values associated sig. in parentheses. In the data processing, a 5% risk was considered in terms of the degree of significance of the results.

Source: Authors' processing, 2021

Table no. 5 synthesizes the role of the auditor's reputation in terms of their company/independent professional status in the formation of share prices. To this end, the regression coefficient $\alpha_{Firm_modelP1} = 0.288$ reflects a greater contribution to substantiating the investment decisions via the information published by entities whose financial statements have been audited by an audit company, compared to where the auditor was an independent professional. However, when the degree of ownership concentration (P4 model) is also included in the analysis, the significance of this

relationship decreases (Sig $\alpha_{Firm_modelP4} = 0.288$), indicating that in the context of a combination of factors the market does not differentiate (from the perspective of this grouping) the quality of financial information according to the reputation of the auditor. The market segment in which the company is listed maintains its significance and sense of influence, in the main market the financial and non-financial information introduced in the study contributes to a greater extent to share price formation (compared to the AeRO market).

Table no. 5. The impact of auditor category – company/independent professional – on share price

Independent variables	Dependent variable – P			
	P1	P2	P3	P4
Constant	-0.188 (0.192)	-0.057 (0.424)	-0.276 (0.156)	-0.222 (0.368)
Cpr	336 (0.000)	0.335 (0.000)	0.336 (0.000)	0.337 (0.000)
EPS	1.645 (0.000)	1.651 (0.000)	1.646 (0.000)	1.616 (0.000)
Firm	0.288 (0.033)		0.270 (0.061)	0.137 (0.288)
Act		0.178 (0.112)	0.161 (0.261)	0.168 (0.149)
SegB				0.896 (0.000)
Dom				-0.204 (0.161)
Dim				-0.004 (0.930)
LF				0.001 (0.395)
N	3409	3409	3409	3390
R square	0.512	0.512	0.512	0.516
Sig F change	0.000	0.000	0.000	0.000

Note: The regression coefficients are presented with values associated sig. in parentheses. In the data processing, a 5% risk was considered in terms of the degree of significance of the results.

Source: Authors' processing, 2021

The results of the sensitivity analysis are presented in Table no. 6. The individual connections specific of variables *Big4* and *Act* retain the sense and significance of their influence on share price. However, a negative influence of information on the share price is noted in the case of firms whose financial statements are audited by a Big 4 member and having a higher concentration of ownership ($\beta_{Big4*Act_modelP2} = -1.881$). This can

be explained by investors construing this association as a potential clue for affecting auditor independence, when there is a high degree of ownership concentration. A high concentration of ownership on the main market has a positive effect on share price ($\beta_{Act*Piata_modelP3} = 1.234$; $\beta_{Act*Piata_modelP4} = 1.477$), but the negative influence of the Big4 presence in the event of a high level of *Act* does not differentiate function of BSE

market segment ($\text{Sig } \beta_{\text{Big4*Act*Piata_modelP4}} = 0.335$).

Table no. 6. Sensitivity analysis of the connection between the auditor's Big4 status, ownership concentration and BSE market segment

Independent variables	Dependent variable – P			
	P1	P2	P3	P4
Constant	-0.135 (0.137)	-0.235 (0.036)	-0.260 (0.034)	0.337 (0.384)
Cpr	0.336 (0.000)	0.333 (0.000)	0.335 (0.000)	0.336 (0.000)
EPS	1.636 (0.000)	1.623 (0.000)	1.584 (0.000)	1.577 (0.000)
Big4	0.675 (0.003)	1.797 (0.000)	1.811 (0.000)	2.041 (0.000)
Act	0.195 (0.073)	0.394 (0.009)	0.172 (0.068)	0.172 (0.104)
Big4*Act		-1.881 (0.000)	-2.040 (0.000)	-2.011 (0.000)
Act *Piata			1.234 (0.000)	1.477 (0.000)
Big4*Act *Piata				-0.513 (0.335)
Dom				-0.165 (0.154)
Dim				-0.067 (0.164)
LF				0.001 (0.326)
N	3409	3409	3409	3390
R square	0.513	0.516	0.520	0.521
Sig F change	0.000	0.000	0.000	0.000

Note: The regression coefficients are presented with values associated sig. in parentheses. In the data processing, a 5% risk was considered in terms of the degree of significance of the results.

Source: Authors' processing, 2021

Table no. 7 synthesizes the sensitivity analysis conducted from the perspective of grouping auditors according to their legal form of organization. Note that

the positive influence of maximum ownership concentration is maintained in the main market (β_{Act} $\text{*Piata_modelP3} = 1.182$; $\beta_{\text{Act*Piata_modelP4}} = 0.463$), but the

connection between the legal form of organization (companies/independent professional), degree of ownership concentration and stock exchange market segment does not express statistically significant influences (Sig $\beta_{Firm*Act_modelP2}=0.111$; Sig $\beta_{Firm*Act*Piata}$

$_modelP4=0.210$). It is confirmed once again that the market does not differentiate between auditors depending on their form of organization. The sense of the connections is also preserved when control variables are introduced into the analysis.

Table no. 7. Evaluating the connection between auditor reputation, ownership concentration and BSE market segment

Independent variables	Dependent variable – P			
	P1	P2	P3	P4
Constant	-0.276 (0.156)	-0.055 (0.535)	-0.057 (0.529)	0.005 (0.662)
Cpr	0.336 (0.000)	0.336 (0.000)	0.337 (0.000)	0.336 (0.000)
EPS	1.646 (0.000)	1.644 (0.000)	1.608 (0.000)	1.605 (0.000)
Firm	0.270 (0.061)	-0.005 (0.245)	-0.004 (0.348)	-0.017 (0.453)
Act	0.161 (0.261)	-0.245 (0.190)	-0.335 (0.345)	-0.326 (0.369)
Firm*Act		0.485 (0.111)	0.328 (0.198)	0.313 (0.232)
Act *Piata			1.182 (0.000)	0.463 (0.020)
Firm*Act *Piata				0.785 (0.210)
Dom				-0.217 (0.135)
Dim				0.004 (0.626)
LF				0.001 (0.299)
N	3409	3409	3409	3390
Rsquare	0.512	0.513	0.517	0.517
Sig F change	0.000	0.000	0.000	0.000

Note: The regression coefficients are presented with values associated sig. in parentheses. In the data processing, a 5% risk was considered in terms of the degree of significance of the results.

Source: Authors' processing, 2021

From a statistical perspective, all the tested models are significant (*Sig F change* <0.05), with an adequate informative capacity (minimum $R^2 = 0.512$), consistent with other analyses associated with evaluating the degree of relevance of information published by listed companies.

Conclusions

The capacity of accounting figures to influence investors' decisions, although extensively studied in the literature, is a topic that still offers opportunities and challenges owing to its complexity and the multiple perspectives for investigating it. Thus, although the topic was addressed even 30 years ago (Harris, & Ohlson, 1990), it continues to be topical given the need for ongoing investor information.

The aim of the paper was to analyze the connection between auditor reputation and the degree of ownership concentration and the relevance of the financial and accounting information reported by companies listed on the Bucharest Stock Exchange.

By testing the proposed research hypotheses, we identified the contribution of auditor reputation to stock price formation. Thus, the auditor's Big4 status generates higher relevance of financial information for investors compared to when financial statements were audited by Non-Big4 companies. After grouping auditors by legal form of organization i.e., company/independent professional, the results show that the market does not generally differentiate the quality of financial information from this point of view.

The degree of ownership concentration has a significant influence on share price. The study identifies an increased relevance of financial information reported by companies with maximum ownership concentration compared to other levels of concentration.

After introducing control variables into the analysis, a significant contribution is only noted for the variable that refers to the listing market segment, as information from the main BSE market are deemed a decision-making factor to a greater extent than the information reported by companies listed on the AeRO market.

The sensitivity analysis we conducted confirms the results. In this respect, we also note the superior influence of financial information in share price formation in the case of financial statements audited by a Big4 member, on the main market segment of the BSE and in the case of entities with a high degree of ownership concentration. Also, the form of legal organization (company/independent professional) does not express statistically significant connections either in correlation with the degree of ownership concentration and the stock exchange market segment.

Of course, the study does have a number of limitations i.e., the small sample size, the use of a single data analysis model, and the exclusive focus on the Romanian stock exchange market. Future research directions seek to remove such limitations, as well as to make a more in-depth analysis using specific elements of the audit process, such as the audit opinion expressed and Key Audit Matters (KAM), respectively.

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Financial Auditors' Perception on the Added Value of Internal Audit Services

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Abstract

In the current business environment, which has radically changed due to either socio-economic turmoil caused by economic or health crises (such as the COVID-19 pandemic) or due to technology and digitalization, internal audit has gained an important role within companies. Thus, in the last seventy years, internal audit has developed and evolved from being the function that controls accounting and financial data, to becoming the strategic function that improves governance processes for shareholders and management. The internal auditor helps an organization to meet its goals by providing a systematic and disciplined approach for assessing and improving the effectiveness of risk management and governance processes. Only an effective internal audit can achieve its tasks properly. Efficiency depends on the subordination level of the internal audit function (this needs to be adequate for the internal audit to be independent and objective). Efficiency also depends on the professional qualification and practical experience of internal audit staff, on the engagement's strategy, as well as on activities and added value for the company, and on its continuous improvement capacity. This research aims to analyse the perception of professional practitioners within Romanian professional bodies, both from the perspective of internal auditors who do this service based on audit engagements performed at company level, but also from the perspective of employees working in these companies' internal audit departments. The main goal is to create and shape a holistic framework to be used for assessing the added value of internal audit based on stakeholders' perceptions.

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The main results obtained highlight the fundamental role of the quality of human capital and of corporate governance at company level. Management will take responsibility for implementing the auditor's recommendations only based on an effective communication and reporting of audit observations. At the same time, the internal auditor's integrity, independence, objectivity, and competencies represent the foundation of an internal audit function that has all the prerequisites for gaining management's trust, support, and cooperation. Finally, the results of this research show the importance of the organizational context in which the audit function is organised. According to the worldwide well-established "three-line defence" model, the audit function is the last line of defence against fraud or non-compliance, thus ensuring the preservation of the company's resources.

Key words: internal audit; added value; efficiency of internal audit services; performance; COVID-19; digitalization; technological innovation;

JEL Classification: M21, M40, M41, M42

1. Introduction

The current sensitive socio-economic environment driven especially by the COVID-19 pandemic and digitalization is creating an uncertain context for both private and public organizations.

Being an independent and mandatory activity, and a value-adding strategic function, internal audit provides assurance on the verification level of operations carried out by that company, and makes recommendations for their improvement, thus contributing to the creation of added value.

This research aims to identify those circumstances where literature has not yet managed to set a clear connection between the activities of internal auditors and the company's performance. Thus, to assess the effectiveness of the internal audit function, our research shows the areas and segments that can add value, but also the factors allowing this.

To achieve our goals, we aimed to interview financial auditors and practitioners to assess their perception, not only from the perspective of the internal auditor performing this service based on audit engagements at company level, but also from the perspective of employees in the company's internal audit department. Our intention was to

be able to shape a holistic framework to be used for assessing the value added by the internal audit function based on stakeholders' perspectives.

Thus, considering the perception of internal auditors who are members of the Romanian Association of Internal Auditors (A.A.I.R.), and of financial auditors who are members of the Romanian Chamber of Financial Auditors (C.A.F.R.), our research aims at three objectives:

- OB1: to analyse the connection between the allocation of audit resources and the potential of the internal audit function to generate added value
- OB2: to analyse the impact of the qualities of the internal auditor on promoting the internal audit function, from the perspective of the internal audit function's potential to generate added value
- OB3: the impact of technological innovation on the allocation of audit resources.

The research is structured on five sections. Thus, the first section highlights the preliminary aspects of the undertaken scientific approach, respectively the context of the study case. The second section is an analysis of the specialised literature. The next two sections describe the research methodology, respectively the results obtained and a discussion around them. Finally, the fifth section draws the conclusions of the case study.

2. Literature review

In periods of socio-economic turmoil, such as the current one caused by the COVID-19 pandemic (Deliu, 2020; Farcane *et al.*, 2021), as well as due to disruptive changes in daily activities caused by digitalization and emerging technologies (Farcane & Deliu, 2020; Tiron-Tudor *et al.*, 2021; Tiron-Tudor & Deliu, 2021), more than ever, managers need quick access to information on which they can rely in their decision-making process. Thus, in a business environment that is changing faster than ever, and automation solutions are adopted rapidly in more and more areas, internal auditors play an increasingly important role (Deloitte, 2018c; Ernst & Young, 2020; KPMG, 2020b; Kahyaoglu & Aksoy, 2021; Mervelito *et al.*, 2021). In this respect, considering the major uncertainties caused by the assault of disruptive forces, the internal audit function needs to evolve for helping companies to understand and manage associated risks (Kahyaoglu & Aksoy, 2021), to achieve the expected results further to automation (Mervelito *et al.*, 2021), but also to continue to

innovate to get added value (KPMG, 2021). The traditional areas of continuous development of internal audit – i.e., GRC (governance-risk-compliance) and personal skills – become insufficient to adequately respond to these needs. On the other hand, aspects as automation, agility, entrepreneurship, or programming are areas where internal auditors should be able to perform for bringing added value to companies.

Over time, the role of internal audit was linked to the evolution of stakeholders' expectations, especially managers. Thus, internal auditors were asked to channel their efforts towards activities that generate added value (Savčuk, 2007; PWC, 2009; PWC, 2014a; PWC, 2014b; Deloitte, 2018b; Deloitte, 2018c; Erasmus & Coetzee, 2018; Jiang *et al.*, 2018). In addition to assessing compliance with legal regulations in terms of the company's processes, internal audit also needs to become a consulting function (Bou-Raad, 2000; Jayalakshmy *et al.*, 2005), respectively to communicate useful information on risk management and opportunities for process improvement and efficiency (Carcello *et al.*, 2018).

Therefore, internal audit is beginning to play an important role in the evolution of economic scenarios issued to ensure a sound corporate governance, proper risk management, fraud identification and prevention.

Internal audit is defined as “an independent objective assurance and consulting activity designed to add value and improve a company's functioning”, as it can help an organization to achieve its goals through a “systematic and disciplined approach” in terms of “assessing and improving the effectiveness of risk management, control and governance processes” (IIA, 1999).

In early 2008, IIA's Board of Directors approved a new strategic plan that focused on various activities to meet the requirement of continuous education for maintaining competency, and, by default, going beyond self-interest towards a “greater good” (IIA, 2008).

The concept of acting towards a “greater good” needed further nuances and development, and thus, a group was formed to explore and develop a clear and concise description of the proposed *added value of internal audit* or the so-called “greater good”, which could then be communicated to key stakeholders (IIARF, 2011).

On one hand, added value can be measured by monetary gains (Elliott *et al.*, 2007) or cost savings (Mihret & Woldeyohanni, 2008). On the other hand, added value is

often considered to be subjective, as it can be measured strictly qualitatively, by ensuring fulfilment of stakeholders' expectations (Roth, 2003; Arena & Azzone, 2009; PWC, 2014a; PWC, 2014b; Lenz & Hahn, 2015; PWC, 2016; Sarens *et al.*, 2016; Witzany & Harrington, 2016; Imbrescu & Peta, 2017; Lenz *et al.*, 2018).

Most research in internal audit has focused on identifying and assessing trends and developments in terms of good practices by means of empirical studies (Savčuk, 2007; PWC, 2009; PWC, 2014a; PWC, 2014b; Su *et al.*, 2017; Deloitte, 2018b; Deloitte, 2018c; Erasmus & Coetzee, 2018; Jiang *et al.*, 2018). Part of the studies perform an empirical analysis of the relationship between internal audit quality, the interactive mechanism of management structure and the companies' corporate value (Su *et al.*, 2017; Erasmus & Coetzee, 2018).

On the other hand, a survey among Romanian internal auditors by KPMG (2019) shows that, in recent years, one of the biggest challenges of the internal audit function has been and remains to position internal audit as a strategic function that brings added value to a company. Thus, in the context of ongoing developments in IT industry, as well as changes in operational processes, the ability of the internal audit function to readapt audit plans and processes, as well as the human resources required to perform activities, are continuously tested (KPMG, 2019; KPMG, 2020a; KPMG, 2020b).

Therefore, we notice how *added value* represents the centre of internal audit, as the very ability of auditors to add value and provide support to stakeholders creates the prerequisites for internal audit activities (Sarens & De Beelde, 2006; Sarens *et al.*, 2009; Lenz & Hahn, 2015; IIA, 2017; Botha & Wilkinson, 2019).

3. Research methodology and organization

3.1. The analysed sample

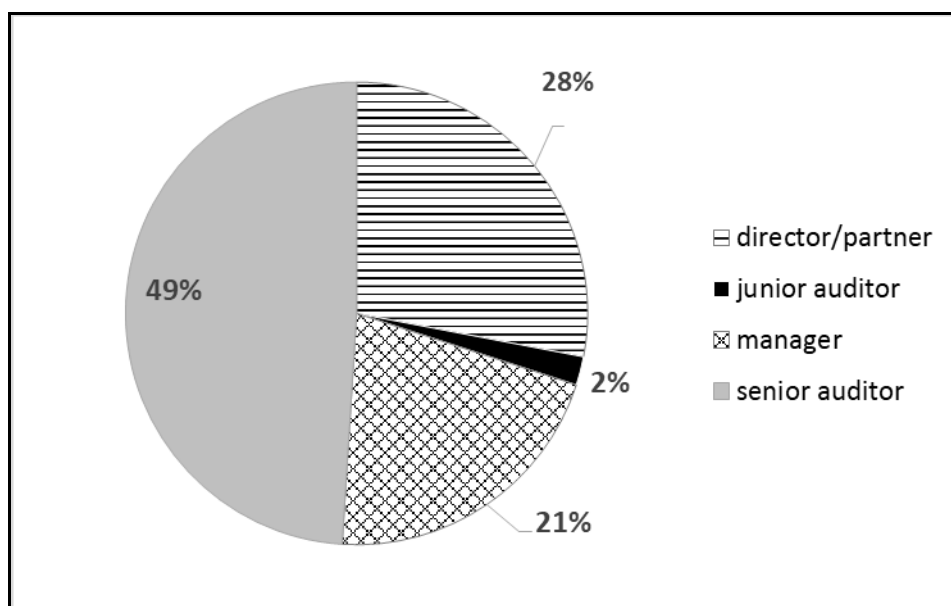
The study is part of a larger research, aiming to assess the impact of the internal audit function on companies' financial performances. We intend to identify the prerequisites of a well-defined audit function within the organizational matrix.

In this respect, we sent a questionnaire to the members of the Romanian Association of Internal Auditors (A.A.I.R.). Considering that the assessment of the reviewed

company's internal audit function is among the fundamental steps of the statutory financial audit activity, the questionnaire was also sent to the members of the Romanian Chamber of Financial Auditors (C.A.F.R.). The questionnaire contains a total of 116 questions, of which the section dedicated to auditors contains 32 specific questions, plus 5 questions that describe the general profile of each respondent.

In this study, the author was focused on analysing the answers to 20 of the 32 questions specific to auditors. The questions are offering a range of possible answers based on the Likert scale (1 – to a very small extent, 2 – to a small extent, 3 – medium/neutral, 4 – to a large extent, 5 – to a very large extent). These questions are useful for an analysis focused on key elements that condition the internal audit's potential to add value.

Figure no. 1. Sample structure as per respondents' status



Source: Authors' projection

Within approximately one month, 63 people, grouped by status, accepted the invitation to fill in the questionnaire. The structure of the sample represented in **Figure no. 1** shows that most of those who accepted our invitation are experienced auditors, as only 2% of the respondents are less experienced auditors.

At the same time, out of the 63 valid answers, 89% are answers from auditors who consider that the company's audit function is a legal obligation, compared to the rest of the respondents of only 11%, who claim that the internal audit function was created at the initiative of the company's management. This separation is essential because the organization of internal audit at the initiative of the company's management implies a higher degree of

management commitment in supporting internal audit engagements.

3.2. Analysis of the reliability of the used scale

The 32 questions included in the analysis are divided into four groups, focused on:

- *the impact of internal audit* at company level: added value, implementation of recommendations, savings
- *the quality of the internal auditor* and the interpersonal relationships: independence, understanding of the business model, continuous education, support, cooperation

- the implications of technologies and working tools on the activities of the internal auditor within the audit engagements: emerging technologies, Data Analytics, GRC (Governance-Risk-Control), support systems
- efficiency and effectiveness of the internal audit function: cost efficiency, time efficiency, communication efficiency, number of meetings,

planning, time budget limitation, testing.

To validate the used scale, we assessed the internal consistency of each group of items mentioned above (**scale reliability analysis**), by performing the **Cronbach's Alpha Test**. Table no. 1 shows the results of the analysis of the reliability of the scale used in the questionnaire.

Table no. 1. Results of the analysis of the reliability of the used scale

Item	Description	Cronbach's Alpha	Cronbach's Alpha if Item Deleted
Added value	Assess the extent to which the internal audit function creates added value		0.676
Implementation of recommendations	Assess the extent to which the recommendations in the internal audit report are implemented	0.803	0.751
Savings	Assess the extent to which the implementation of the recommendations in the internal audit report has led to savings and avoidance of additional costs		0.760
Independence	Assess the extent to which internal auditor's independence is respected from a management perspective		0.841
Understanding of the business	Assess the extent to which the internal audit function has a good understanding of the business model		0.858
Continuous education	Assess the extent of providing continuous training to the internal auditor	0.882	0.857
Support	Assess the extent to which the internal audit function is supported in performing the audit engagement		0.873
Cooperation	Assess the extent to which the internal audit function ensures a cooperation with the internal audit department		0.852
Emerging technologies	Assess the extent to which the internal audit function aligns with the technological innovations in audit		0.656
Data Analytics	Assess the extent to which you use Data Analytics for performing audit engagements and investigations		0.663
GRC	Do you use an integrated GRC (governance, risk, control) solution within the internal audit department?	0.772	0.844
Support systems	Assess the extent to which the internal audit function uses sufficient support tools/technologies (audit programmes, models, etc)		0.606
Cost efficiency	How do you assess the efficiency of the internal audit function in terms of costs?		0.902
Time efficiency	How do you assess the efficiency of the internal audit function in terms of time required for performing an internal audit engagement?		0.894
Communication efficiency	How do you assess the efficiency of the internal audit function in terms of communicating audit recommendations and monitoring their implementation?		0.876
Number of meetings	Assess the extent to which the number of meetings with companies' management is consistent with the specifics of the engagements	0.898	0.871

Item	Description	Cronbach's Alpha	Cronbach's Alpha if Item Deleted
Planning	Assess the extent of compliance with the audit plan (planned audit vs. actual audit)		0.877
Time limitation	Assess the extent to which time management is observed within audit engagements (plan vs. actual)		0.880
Testing	Assess the efficiency in using resources (tests done per day)		0.875

Source: Authors' calculations

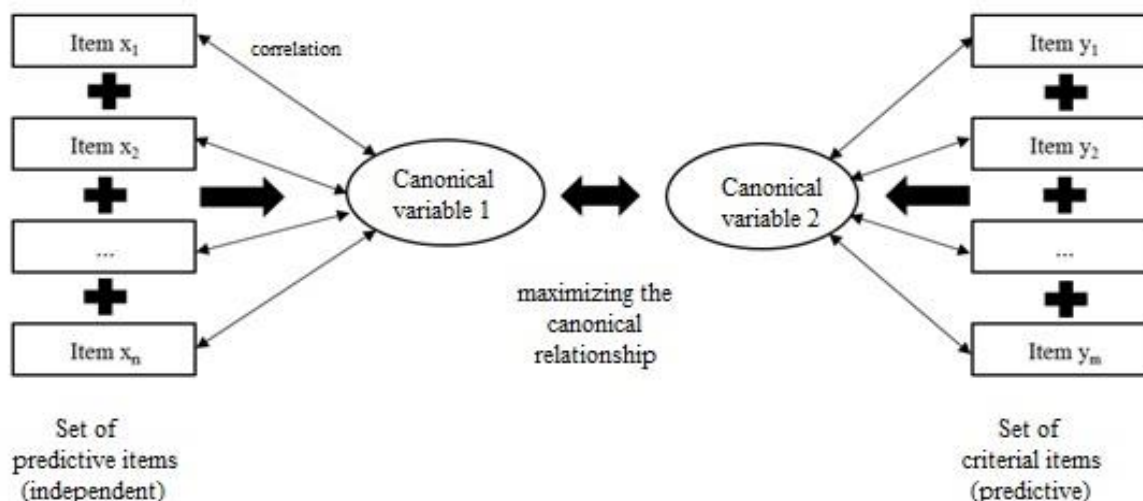
We notice that the questionnaire is balanced for the analysed sections, and the measuring scale is relevant, considering that the level of the Cronbach's Alpha coefficient exceeds 0,800. The section related to the impact of technological innovation is an exception – the Cronbach's Alpha coefficient is 0,772, which shows a scale of acceptable reliability (Hair *et al.*, 2019). Furthermore, if we analyse the measuring scale without grouping the items into conceptual groups, the Cronbach's Alpha coefficient is of 0,935, which shows an overall reliable scale.

3.3. Canonical analysis of items

To provide a clearer picture of the internal auditor's perception on the aspects highlighted in the questionnaire, we will perform a canonical correlation

analysis. This method provides more useful information as compared to the classical correlation analysis, specifically because it captures the combined effect of several analysed variables on several variable results (Tabachnick & Fidell, 2013). The analysis consists in outlining two canonical variables, which reflect the linear combination of a set of input variables for which we calculate the correlation coefficient. The canonical analysis estimates coefficients for each input variable, which maximizes the correlation between the two canonical variables, calculated as a linear combination of the input variables, as per *Figure no. 2*. Thus, this method allows us to analyse the linear association between a set of input variables and a set of dependent variables, and therefore it goes beyond the limits of analysing individual correlations.

Figure no. 2. Linear representation of canonical correlations



Source: Authors' projection

Formally, this method starts from two sets of variables, namely $X = (x_1, \dots, x_n)^T$ and $Y = (y_1, \dots, y_m)^T$. The correlation between variables X and Y is reduced to the analysis of the correlation between two canonical variables. These canonical variables are expressed as a linear combination of the components of the sets of input variables X and Y , where:

$$U = a' \cdot X = a_1 \cdot x_1 + a_2 \cdot x_2 + \dots + a_n \cdot x_n,$$

and

$$V = b' \cdot Y = b_1 \cdot y_1 + b_2 \cdot y_2 + \dots + b_m \cdot y_m.$$

The correlation coefficient between the two canonical variables is:

$$\text{cor}(U, V) = \frac{a' \cdot \Sigma_{12} \cdot b}{\sqrt{a' \cdot \Sigma_{11} \cdot a} \cdot \sqrt{b' \cdot \Sigma_{22} \cdot b}} - \text{it is the one}$$

intended to be maximized through the canonical correlation analysis, where:

$$\text{var}(U) = a' \cdot \text{var}(X) \cdot a = a' \cdot \Sigma_{11} \cdot a,$$

$$\text{var}(V) = b' \cdot \text{var}(Y) \cdot b = b' \cdot \Sigma_{22} \cdot b, \text{ and}$$

$$\text{cov}(U, V) = a' \cdot \text{cov}(X, Y) \cdot b = a' \cdot \Sigma_{12} \cdot b,$$

$$\text{with the restrictions } \begin{cases} \text{var}(U) = a' \cdot \Sigma_{11} \cdot a = 1 \\ \text{var}(V) = b' \cdot \Sigma_{22} \cdot b = 1 \end{cases}.$$

Once the two canonical variables are assessed, we calculate the correlations between the input variables and the two canonical variables. Canonical correlations

represent coefficients (weights) expressed by vectors a' and b' by estimating the canonical variables. They suggest the extent to which canonical variables are representative for each of these input variables. The canonical analysis also provides correlations between input variables and canonical variables which are not determined by them, called cross-structural correlations.

4. Results and discussions

4.1. Descriptive statistics

Table no. 2 summarises the main descriptive statistics of the analysed items. From an overall perspective, we notice that average values of most items show the predominance of a positive perception of internal auditors in terms of the potential of the internal audit function to create added value, provided that the auditor has a high level of professionalism (IIARF, 2011; IIA, 2017; Botha & Wilkinson, 2019) and to use innovative tools and technologies designed to manage large volumes of data, structured in various ways of presenting information (Farcane & Deliu, 2020; Tiron-Tudor *et al.*, 2021; Tiron-Tudor & Deliu, 2021).

The positive perception expressed by auditors is mainly shown for the item on *auditor's independence* (3.873), considering the value of the median (4) and the third percentile.

Table no. 2. Descriptive statistics

Item	Average	Median	Standard deviation	Percentile	
				1st	3rd
Added value	3.476	3	1.060	3	4
Implementation of recommendations	3.556	4	1.074	3	4
Savings	3.302	3	1.010	3	4
Independence	3.873	4	1.143	3	5
Understanding the business	3.667	4	1.032	3	4
Continuous education	3.238	3	1.292	3	4
Support	3.349	3	1.194	3	4
Cooperation	3.651	4	1.080	3	4
Emerging Technologies	3.333	3	1.078	3	4
Data Analytics	2.889	3	1.138	2	4
GRC	0.397	0	0.493	0	1
Support systems	3.206	3	1.080	3	4
Cost efficiency	3.032	3	0.822	3	3
Time efficiency	3.127	3	0.924	3	4
Communication efficiency	3.540	4	0.930	3	4
Number of meetings	3.317	3	0.981	3	4
Planning	3.841	4	0.902	3	4
Time limitation	3.540	4	1.045	3	4
Testing	3.476	3	0.931	3	4

Source: Authors' calculations

On the other hand, the lowest average corresponds to the item on *cost efficiency* (3.032), which checks the internal auditors' opinion on the costs of the internal audit function.

This result shows that the internal audit function is not accessible to any company, because related costs are not at all negligible (PWC, 2014b; D'Onza *et al.*, 2015).

Table no. 3. Distribution of questionnaire answers

	1	2	3	4	5
<i>Added value</i>	3.17%	14.29%	33.33%	30.16%	19.05%
<i>Savings</i>	4.76%	17.46%	28.57%	41.27%	7.94%
<i>Implementation of recommendations</i>	6.35%	7.94%	26.98%	41.27%	17.46%
<i>Independence</i>	6.35%	4.76%	19.05%	34.92%	34.92%
<i>Understanding of the business</i>	4.76%	7.94%	22.22%	46.03%	19.05%
<i>Continuous education</i>	15.87%	7.94%	30.16%	28.57%	17.46%
<i>Cooperation</i>	4.76%	7.94%	28.57%	34.92%	23.81%
<i>Support</i>	7.94%	12.70%	38.10%	19.05%	22.22%
<i>Emerging technologies</i>	4.76%	17.46%	31.75%	31.75%	14.29%
<i>Support systems</i>	7.94%	14.29%	38.10%	28.57%	11.11%
<i>Data Analytics</i>	12.70%	22.20%	38.10%	17.50%	9.50%
<i>Cost efficiency</i>	4.76%	14.29%	57.14%	20.63%	3.17%
<i>Time efficiency</i>	3.17%	20.63%	42.86%	26.98%	6.35%
<i>Communication efficiency</i>	3.17%	6.35%	38.10%	38.10%	14.29%
<i>Number of meetings</i>	6.35%	7.94%	42.86%	33.33%	9.52%
<i>Planning</i>	1.59%	4.76%	25.40%	44.44%	23.81%
<i>Time limitation</i>	4.76%	9.52%	30.16%	38.10%	17.46%
<i>Testing</i>	1.59%	11.11%	39.68%	33.33%	14.29%

Source: authors' calculations

Table no. 3 presents the distribution of the frequency of internal auditors' assessments, based on the data collected through the questionnaire. These results show once again that *emerging technologies* have a key role in audit when it comes to generating added value (Farcane & Deliu, 2020; Tiron-Tudor *et al.*, 2021; Tiron-Tudor & Deliu, 2021). However, auditors' opinion is moderate related to the level of efficiency of the internal audit function in terms of costs (42.86%) and in terms of time allocated to audit engagements (57.14%). Nevertheless, auditors highlight the crucial importance of the effectiveness of how auditors communicate with the audited departments, and the efficiency of reporting audit

observations and recommendations (52.38% expressed a favourable opinion). Furthermore, they emphasize the fundamental role of planning audit activities, considering that approximately 68.25% of the respondents expressed a favourable position in this respect.

4.2. Determinants in shaping auditors' perception

Table no. 4 shows the aspects where interviewed auditors have expressed significantly different opinions, either in terms of the vision, influenced by their professional status, or in terms of the obligation to organise the internal audit function within a company.

Table no. 4. Distribution of the questionnaire answers

Factor	Item	Kruskal-Wallis H	df	Asymp. Sig.
Obligation to organize the internal audit function	<i>Auditor's independence</i>	2.906	1	0.088
	<i>Effectiveness of audit activity</i>	4.207	1	0.040
Professional status	<i>Implementation of recommendations</i>	6.545	3	0.088
	<i>Communication efficiency</i>	6.540	3	0.088
	<i>Savings generated by implementing recommendations</i>	8.067	3	0.045

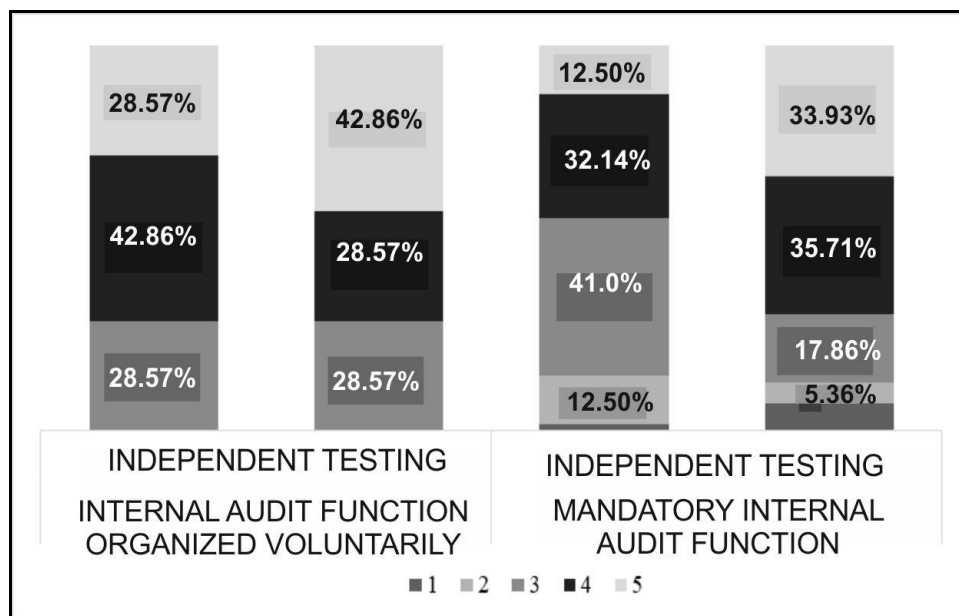
Source: authors' calculations

Overall, out of the 20 aspects analysed through the audit questionnaire, only in two cases we identified significant differences between the perception of auditors working in companies where the audit function was voluntarily organised and the perception of auditors working in companies where

the audit function was mandatory, because of corporate governance regulations.

These aspects refer to auditor's independence for a significance level of 10% ($Stat = 2.906$, $Sig. < 0.1$) and effectiveness of the audit activity per unit of time for a significance level of 5% ($Stat = 4.207$, $Sig. < 0.05$).

Figure no. 3. Representation of perception differences caused by the initiative of organising the internal function audit



Source: Authors' projection

Figure no. 3 is a representation of the distribution of auditors' perception conditioned by the voluntary character of organising the internal audit function within the company where the auditor is working.

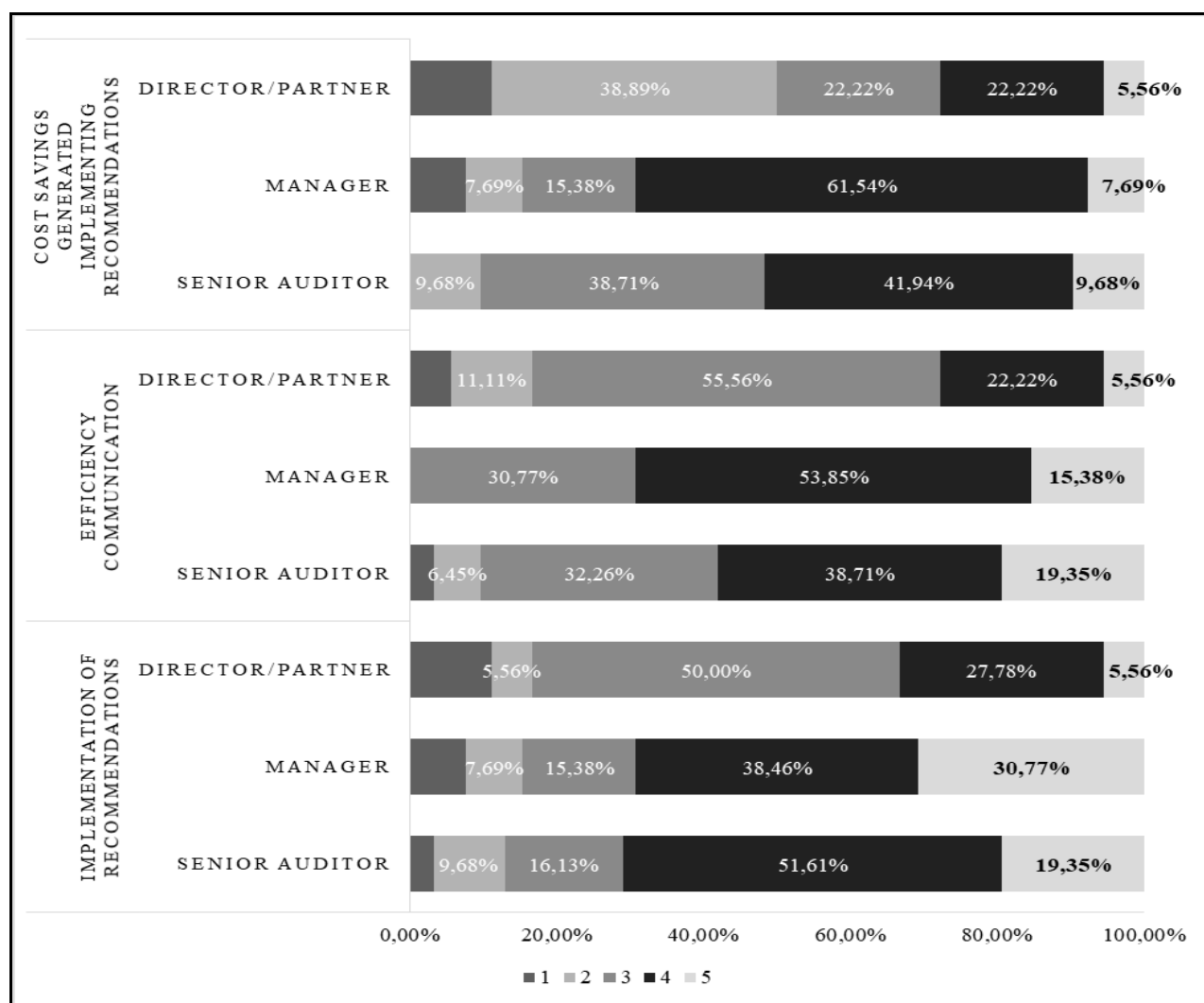
For the item on the *effectiveness of the audit activity per time unit (testing)*, we notice that the auditors' perception is more favourable for companies voluntarily organising

the internal audit function (approximately 42.86% + 28.57% = 71.43% of respondents), as compared to the perception of auditors working in companies where the internal audit function is organised based on the requirements of the legal framework (approximately 32.14% + 12.5% = 44.64% of respondents). On the other hand, internal auditors' perception on the extent to which management affects auditor's independence significantly differs in case of the two types of companies. For companies that voluntarily organize the internal audit function, 42.86% assess this item at maximum level, as

compared to 33.93% of auditors working in companies where the internal audit function is organised based on the obligation imposed by the legal framework (Sarens *et al.*, 2016).

These results provide indications of the importance of the voluntary nature of the decision to organise the internal audit function (Sarens & De Beelde, 2006; Erasmus & Coetzee, 2018; Eulerich *et al.*, 2020), while management gains awareness of the benefits of such a decision (Carcello *et al.*, 2018; Deliu, 2020).

Figure no. 4. Representation of perception differences resulting from the auditor's professional status



Source: Authors' projection

Figure no. 4 represents the distribution of the answers of auditors participating in the study, as per the respondent's professional status of.

The results show significant differences in terms of auditors' perception on the extent to which the recommendations in the audit report are implemented by process managers. There are significant differences between the perception of the audit engagement manager and the audit director, considering that approximately 50% of the directors issue a neutral perception in terms of the implementation of the audit recommendations, as compared to audit engagement managers or senior auditors, who have a similar position in only 15.38%, and 16.13% respectively. These results can be justified by the different way in which each of them understands the idea of implementing an audit recommendation, because the vision differs as the auditor progresses on the hierarchical scale. For example, the audit director has a much clearer overview of the processes within the company through access to inside privileged information. Therefore, for a director, the degree of implementing a recommendation rather represents management actions for generating systemic changes at company level, and less the actual actions included in the audit report (Sarens *et al.*, 2016).

There are also significant differences in auditors' perception on the effectiveness of communication with the audited department and reporting of audit results. The differences appear between senior auditors and audit engagement managers. $38.71\% + 19.35\% = 58.06\%$ of the senior auditors have a positive perception, which is less than the weight of audit managers of $53.85\% + 15.38\% = 69.23\%$. These are the expected results if we look at the job description of the two auditor profiles, because the audit manager is mainly responsible for coordinating communication with the audited department and for reporting the audit results. On the other hand, we also notice a significant difference between the audit manager and the audit director, because 55.56% of the audit directors issue a neutral opinion on the efficiency of the communication and reporting process. These results provide information on the poor way of transmitting relevant information across the hierarchical chain, from the superior hierarchical level to the operational management level (Sarens *et*

al., 2016). Deficiencies can be reduced to late transmission of these information for ensuring an accelerated implementation of the audit recommendations or it can be represented by truncated transmission of information, in which case, lower-level management decisions may contravene to the course of action recommended through the audit report.

In terms of perception on savings generated by the implementation of audit recommendations, we notice differences between all professional levels. While senior auditors have a favourable position in proportion of 51.61%, audit managers are satisfied in a higher weight of the effect of implementing the recommendations on the company's performances (69.23%). However, we notice a significant difference in the perception of audit directors, who rather issue a negative opinion in this respect in a percentage of 50%, claiming that implementation of recommendations does not lead at all, or only to some extent, to savings for the company. This result can be again attributed to the overview that the audit director has formed over time. Thus, the audit director is focused on obtaining substantial savings because of corrective actions taken by management, which should be aimed at systemic adjustments and continuous monitoring of the viability of the corrective solutions, without turning his attention to isolated registered cost savings, at the level of each production unit or at the level of an isolated process. On the other hand, lower hierarchy auditors rather turn their attention to the effect of isolated actions taken by management for addressing deficiencies identified in the audit engagement (Sarens *et al.*, 2016).

4.3. Implications of the human factor in promoting the internal audit function

Table no. 5 shows statistics obtained by the canonical analysis of items that refer to the quality of the internal auditor, including the ability to develop inter-personal cooperation relationships with members of the audited department, and to the result of the efforts of the internal audit department, by reference to the extent they perceive that the internal audit function generates added value and convinces audit clients of the beneficial effect of audit recommendations through the degree of implementation at the level of the audited department.

Table no. 5. Statistics related to the extracted canonical variables

Variant	Correlation	Eigen value	Wilks Statistic	F	No D.F	Denom D.F.	Sig.
1	0.868	3.070	0.221	6.741	16	169	0.000
2	0.252	0.068	0.899	0.680	9	136	0.726
3	0.193	0.039	0.960	0.592	4	114	0.669
4	0.057	0.003	0.997	0.186	1	58	0.668

Source: Authors' calculations

The obtained results show that the first variant of assessed canonical variables is the most relevant one for our analysis, with an eigenvalue of 3.07, clearly superior to the other variants, also having statistically significant

results ($F_{Sta} = 6.741, Sig. < 0.05$). Furthermore, it should be noticed that this pair of canonical variables explains over 96.54% of the variance at the level of the analysed sample.

Table no. 6. Statistics related to the extracted canonical variables

Item	Canonical correlation analysis		Canonical structural analysis	
	Canonical variable 1	Canonical variable 2	Canonical variable 1	Canonical variable 2
			Canonical loading	Cross loading
<i>Auditor's independence</i>	0.023		-0.656	-0.675
<i>Understanding the business model</i>	-0.737		-0.974	-0.634
<i>Continuous education</i>	-0.062		-0.699	-0.857
<i>Cooperation</i>	-0.301		-0.845	-0.468
			Cross loading	Canonical loading
<i>Support</i>		-0.060	-0.570	-0.778
<i>Added value</i>		-0.191	-0.846	-0.730
<i>Implementation of recommendations</i>		-0.841	-0.607	-0.986
<i>Savings</i>		0.029	-0.734	-0.539

Source: Authors' calculations

Table no. 6 summarises the statistics of the canonical analysis between two sets of items, respectively set 1, specific to the first canonical variable that includes items like *independence*, *understanding of the business model*, auditor's *continuous education* and *cooperation with the audited department*, and respectively set 2, for the second canonical variable that includes items like *support*, *added value*, *implementation of recommendations* and *savings*.

These associations were analysed precisely to assess the extent to which the combined effect of the qualities of the internal auditor leads or not to the promotion of the internal audit function by ensuring a satisfactory degree of support from the company's management, by seeking to implement as much as possible of the audit recommendations, and by improving financial performance.

Table no. 7. Correlation matrix (Spearman)

	Support (1)	Added value (2)	Implementation of recommendations (3)	Understanding of the business (4)	Cooperation (5)	Continuous education (6)	Independence (7)	Savings (8)
(1)	1	.703**	.724**	.672**	.552**	.501**	.461**	.416**
(2)	.703**	1	.655**	.633**	.601**	.518**	.521**	.609**
(3)	.724**	.655**	1	.806**	.678**	.563**	.514**	.521**
(4)	.672**	.633**	.806**	1	.673**	.627**	.555**	.492**
(5)	.552**	.601**	.678**	.673**	1	.605**	.589**	.351**
(6)	.501**	.518**	.563**	.627**	.605**	1	.668**	.330**
(7)	.461**	.521**	.514**	.555**	.589**	.668**	1	.299*
(8)	.416**	.609**	.521**	.492**	.351**	.330**	.299*	1

Source: Authors' calculations

In the case of the first canonical variable (*independence*), the results show a preponderant influence generated by item *understanding of the business model* (-0.737), which is translated by reference to the international internal audit regulations and the internal auditor's competence (IIA, 2017). On the other hand, we noticed that the second canonical variable (*predictive*) is preponderantly influenced by the coefficient related to item *implementation of recommendations* (-0.841).

In terms of the correlational canonical analysis, we observe that the maximization of the correlation between the two canonical variables led to two construct variables. Their main components are the opinion on the internal auditor's perception and on the degree of implementation of the audit recommendations. In this respect, the results suggest that the extent to which audit recommendations are accepted by management and implemented, is conditioned by the auditor's expertise, who must have a very good understanding of the audited processes, to do a recommendation that generates added value and accurately reflects the situation identified during the audit engagement (Erasmus & Coetzee, 2018; Eulerich *et al.*, 2020). Otherwise, management will challenge the deficiencies identified by the auditor and will also damage the degree of confidence in the internal audit function for the future (Carcello *et al.*, 2018; Eulerich *et al.*, 2020).

Based on the analysis of the correlation between canonical variables (0.868) and the individual Spearman correlation between items *understanding of the business*

model and implementation of recommendations (0.806), we notice a difference of approximately 0.062, interpreted as a correlation surplus caused by the common effect of input variables (Table no. 7). However, this difference is not significant. But it can be largely explained by item *continuous education*, considering the correlation of 0.857 between this item and the second canonical variable, which is the highest among the other variables included in the set of variables that describe the profile of the internal auditor.

On the other hand, item *added value* has the highest correlation with the canonical variable (0.846) reflecting the human factor in our analysis. Thus, the more favourable the internal auditor perceives the value-added potential created by the internal audit function, the more improved is the dimension of the human capital development, by deepening specialised knowledge, but also those specific to the activity field and business model of the company where he carried out the activity (PWC, 2009; PWC, 2014a; PWC, 2014b; PWC, 2016; Deloitte, 2018a; Deloitte, 2018b; Deloitte, 2018c; KPMG, 2019; Ernst & Young, 2020; KPMG, 2020a; KPMG, 2020b; KPMG, 2021).

These results thus confirm the importance of advance preparation of audit engagements, not only by rigorous planning of audit activities, but also by including in the audit team those auditors who have the necessary skills, as also required by IIA through the conceptual framework promoted at international level (IIA, 1999; IIA, 2017).

Conclusions

In our opinion, for obtaining added value further to an audit engagement, a few steps need to be followed, such as: planning, which plays an important role in any activity performed, documentation and interpretation of potential risks by the audit team members, then the analysis and monitoring for covering the identified risks, comparing the proposed goals with the achieved ones, and, in the end, the stage of improvement and action taking. Thus, it is necessary to monitor the involved resources, the taken actions and the results, as well as communication with all stakeholders by using a wide range of communication means.

This study emphasises the importance of the voluntary nature of the decision to organise the internal audit function, while management becomes aware of the benefits of such a decision.

The scientific approach was three-dimensional. On one hand, it aims to analyse the correlation between the allocation of audit resources and the potential of the audit function to generate added value. On the other hand, we analysed the implications of the internal auditor's quality on promoting the internal audit function, from the perspective of the potential of the internal audit function to generate added value. Finally, there is the analysis of the impact of technological innovation on the allocation of audit resources.

The obtained results revolve around the positive perception of internal auditors on the potential of the internal audit function to create added value, considering the auditor's increased level of professionalism (IIARF, 2011; IIA, 2017; Botha & Wilkinson, 2019) and the use of innovative tools and technologies designed to manage large volumes of data, structured in various information presentation forms (Ernst & Young, 2020; Farcane & Deliu, 2020; KPMG, 2021; Tiron-Tudor *et al.*, 2021; Tiron-Tudor & Deliu, 2021). However, the internal audit function is not accessible or opportune to all companies,

specifically due to the relatively high costs of organising this function (PWC, 2014b; D'Onza *et al.*, 2015; Deloitte, 2018c).

Auditors' vision differs depending on their professional status, specifically due to the contextual image that each one has about the audited departments and about the company overall. This vision difference is mainly present in terms of perception on savings generated by the implementation of the audit recommendations and on communication and reporting efficiency (Sarens *et al.*, 2016; Eulerich *et al.*, 2020).

The added value of internal audit needs to also be analysed pragmatically, in terms of costs and efficiency. Practically, at first sight, for small companies, the effort to organise the internal audit function seems "too expensive". But this can be considered a turning point in the development of a company, because once they have reached the point where they become aware and they also have the necessary resources for accessing the internal audit function, they also become "eligible" for recognising the internal audit's added value. A practical solution would be to share internal audit costs between similar companies, and in the domestic business environment it is important for entrepreneurs to realise first the role of internal controls and then their monitoring through the internal audit function. Only this is how we can reach a sustainable economic development.

However, this study is limited from the perspective of the analysed answers sample. In this context, we appreciate that future research will be able to perform a more complex analysis based on more argued tests executed on complex items that measure more than auditors' opinion on the implications of the internal audit function on the company's performances. Thus, we expect that it will be possible to correlate auditors' perceptions with numerical information derived from the financial statements of the companies included in the analysis.

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Accounting and Auditing Profession in the Era of Digitalization

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Abstract

The third phase of technological advancement, also known as digitalization, involves significant changes at many levels such as society, business domain, organization and process. Accountants and auditors worldwide face an alert pace of digitalization which could potentially move the profession beyond its traditional paradigm. This study reviews the existing literature on accounting and auditing in the era of digitalization by using a structured literature review (SLR). Doing so, this paper critically discusses the research status in this area and gives directions for future research. Findings show that there is an increased interest for research in digitalization of accounting and auditing area, especially on big data and data analytics, but also on other subareas of digitalization such as cloud computing, blockchain, digital reporting and robotic process automation. However, research in this domain is in its infancy and yet there are still gaps in the literature that needs to be developed.

Key words: digitalization; accounting; auditing; structured literature review (SLR);

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Introduction

Digitalization brings with it many changes around the world, and especially in those fields where technology is indispensable. Accounting and auditing are such fields where technology made its tool. The objective of this paper is to synthesize and critically review the existing literature in accounting and auditing digitalization and to give directions for future research. The motivation of this study arises from the need for more research in this field given the current circumstances and the increased interest especially from the practice.

Using a SLR as a research method, this study seeks to answer the following research questions:

RQ1: How is the research for accounting and auditing digitalization developing?

RQ2: What is the focus and critique of the literature on accounting and auditing digitalization?

RQ3: What is the future for research in accounting and auditing digitalization?

Massaro et al. (2016) state that, when writing a SLR, authors must follow a rigid set of rules, which is not necessary when writing a traditional literature review. Moreover, the paper should have a specific plan and needs to be well structured. Previous studies used the SLR method in different accounting areas such as mandatory IFRS disclosure (Tsalavoutas et al., 2020) or integrated reporting (Dumay et al., 2016).

The analysis indicates that there is an increased interest in the area of digitalization in accounting and auditing and researchers have turned their attentions in many directions. Following the review, findings show that the most researched subarea of digitalization is given by big data and data analytics, and especially on the way students need to be prepared in order to meet employers' needs. Furthermore, cloud computing, blockchain, digital reporting and robotic process automation are other subareas of interest. However,

research in accounting and auditing digitalization is in its early stage and it needs more development.

The present study contributes to the literature in accounting and auditing digitalization as it gives an overview on the most recent studies in this area by critically discussing the status of the research. Also, following the synthesis of the literature, authors give paths for future research in different subareas of digitalization that could be of interest for researchers in accounting and auditing domain. To the best of authors' knowledge, this is the first study that reviews the academic works in accounting and auditing digitalization using a structured literature review. Other studies conducted literature reviews in accounting and auditing digitalization areas, but they used different approaches. For example, Knudsen (2020) critically reviews the existing literature in financial accounting by using a systematic literature review and Moll and Yigitbasioglu (2019) used a traditional literature review to discuss the findings in accounting and auditing areas.

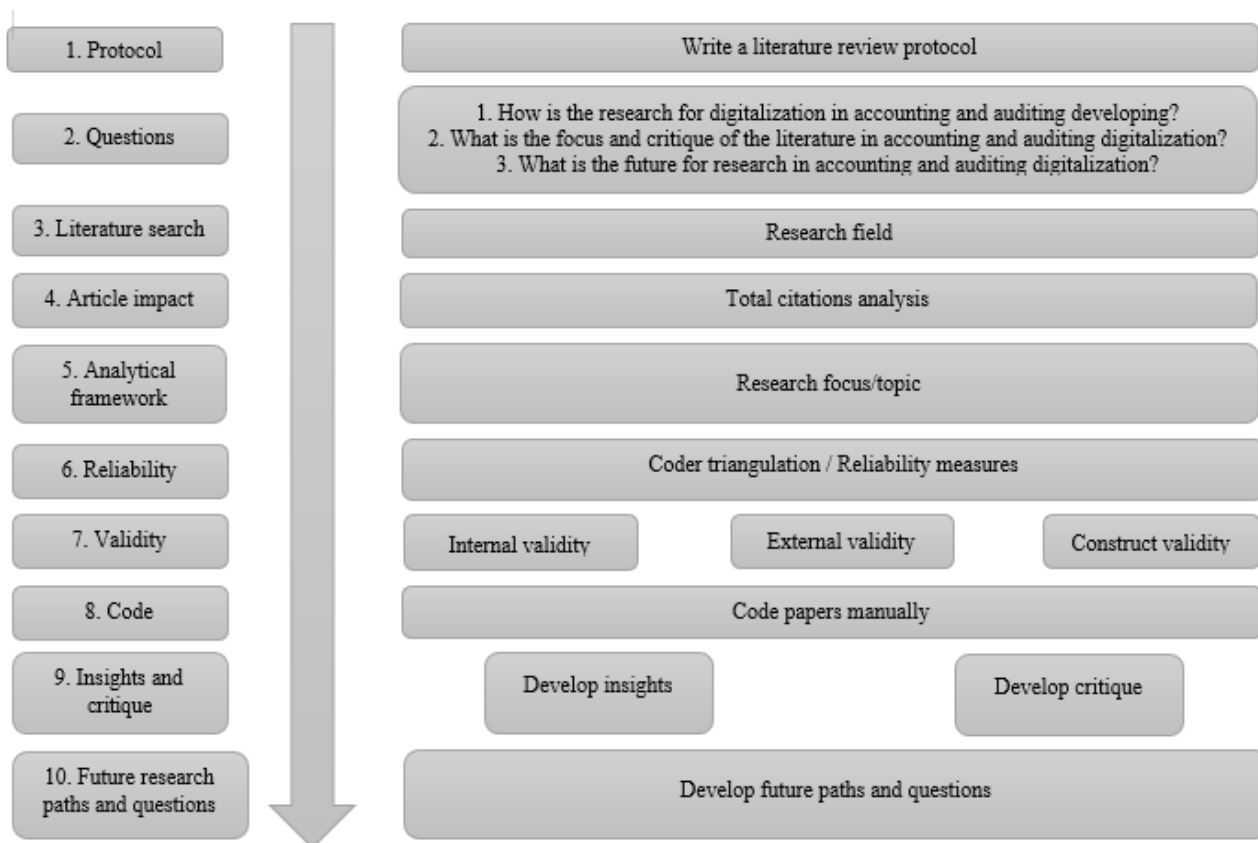
The paper is structured as follows. The first section describes the methodology used by discussing each step for writing a SLR. The second section gives insights and critique for the reviewed literature and the last section presents the main conclusions, directions for future research and limitations of the study.

1. Methodology

In order to provide a clearer picture of the academic studies about digitalization in accounting and auditing, we have used a SLR as a research method. Massaro et al. (2016) state that, when preparing a SLR, a traditional literature review is not necessary, because this one will be presented in the findings section. Therefore, we will start with the methodology part, and more specifically, with a presentation of the ten steps for conducting a SLR which are developed by Massaro et al. (2016). These steps are presented in the

Figure no. 1.

Figure no. 1. The process for develop a SLR



Source: Adapted from Massaro et al. (2016), p. 8

The first step was to write a literature review protocol for defining the research boundaries. The synthesis on the literature is made on digitalization in auditing and financial accounting, as a branch of accounting field. Given that the literature on accounting and auditing digitalization is continuously growing and the technology is constantly evolving, our literature review has been limited to a period of ten years, starting with 2011 until 2021. Furthermore, we have selected only articles from accounting journals that are indexed in Scopus database. Knudsen (2020) argues that the use of Scopus database helps in limiting the search for relevant and published papers, excluding other unpublished material and proceedings.

In the second step, we have defined our research questions by following Massaro et al. (2016, p.7) model. The three research questions are presented in *Figure no. 1* and in the introduction, each of them having an important role in conducting a literature review. The first one aims in

providing an answer on the accounting and auditing digitalization history under review and on the contribution of the prior literature to where accounting and auditing digitalization research is today. The role of the second question is to make a critical analysis of the existing literature's builds upon and focus (Massaro et al., 2016). The third question helps in detecting the gaps in the literature regarding to the studied phenomenon.

The third step was to determine the type of research studies and to carry out an extensive literature search. As we discussed in the first step, we have only sought in accounting journals from Scopus database, but we also made sure that these journals were available in Science Direct or Google Scholar databases. In *Table no. 1* we present the journals where the data has been collected from and the number of selected articles per each journal. The search process was based on keywords search. As suggested by Massaro et al. (2016), this

search type is suitable when selecting a group of journals because the findings are already narrowed. Also, previous studies have used keywords search in conducting a literature review in the accounting digitalization field. As a few examples, we found Knudsen (2020), who discusses about digitalization in

accounting by using a systematic literature review and Moll and Yigitbasioglu (2019), which synthesize and analyze academic articles, reports from professional accounting bodies and articles made by professional services firms regarding internet related technologies in accounting.

Table no. 1. Accounting and auditing digitalization articles' status on the reviewed journals

Ref. No.	Journals in review	Articles count
1	Advances in Accounting Education: Teaching and Curriculum Innovations	1
2	British Accounting Review	2
3	International Journal of Accounting Information Systems	15
4	Journal of Accounting and Public Policy	1
5	Journal of Accounting Education	10
6	Journal of International Accounting, Auditing and Taxation	1
	TOTAL	30

Source: Authors' own research

Initially, we only sought for the keywords "digitalization" and "digitalisation", but as expected, this query did not return many articles. In order to extend our dataset, we followed Knudsen (2020) suggestion, and we then sought for other words closely related to digitalization. The interrogation we used in the search process returned a total number of 212 articles. Below, we present the query which shows the keywords, the time frame and the selected journals.

[title-abs-key ("digitalization" OR "digitalisation" OR "digital" OR "big data" OR "analytics" OR "cloud" OR "cyber" OR "mobile" OR "social media" OR "robotization" OR "robotisation" OR "automatization" OR "automatisation" OR "artificial intelligence" OR "blockchain" OR "platforms" OR "internet of things" OR "bots" OR "robots" OR "RPA" OR "automation") AND PUBYEAR > 2010 AND PUBYEAR < 2022 AND SRCTITLE ("Journal of Financial Economics" OR "International Journal of Accounting Information Systems" OR "Journal of Accounting and Economics" OR "Journal of International Accounting, Auditing and Taxation" OR "Accounting, Organizations and Society" OR "Journal of Accounting and Public Policy" OR "Critical Perspectives on Accounting" OR "Asia Pacific Management Review" OR "Advances in Accounting" OR "Journal of Accounting Education" OR "European Research on Management and Business Economics" OR "China Journal of Accounting Research" OR "Management Accounting Research" OR "British Accounting Review")]

In selecting the relevant articles for our research study, we read the abstract for each paper, and we excluded articles not related to financial accounting and auditing. The final dataset consisted in 30 academic studies which are presented in **Appendix A**.

In the fourth step, we measured the articles impact by using the number of citations from Google Scholar, which is considered an indicator of interest for the research area (Dumay et al. 2016), and also a valuable data source for evaluating the impact when using a SLR method (Massaro et al., 2016). The total number of citations for the reviewed articles was 1232 as of July 2021 which shows that there is an increased interest in this field. Dumay (2014) argues that the most recent articles need to be excluded from the review having that there was not enough time for them to get cited. However, given that digitalization in accounting and auditing is a relatively new topic, and most of the articles presented in the Appendix A were published in the last three years, we chose to keep them in our review. The total number of citations for the academic papers published in 2019, 2020 and 2021 was 409. The top three most cited articles were Sledgianowski et al. (2017), with 144 citations, which discuss about big data and technology in accounting and auditing, Pincus et al. (2017), that got cited 134 times for digitalization in accounting education and Janvrin and Watson (2017), cited 118 times for big data in accounting.

The fifth step was to define an analytical framework for our SLR. As such, we considered one unit of analysis relevant for our review, more specifically research focus. As presented in the Appendix A, authors have directed their attention on many areas of digitalization such as big data and data analytics, cloud computing, blockchain, other digitalization areas or digitalization in general for both accounting and auditing.

In the sixth step, the literature review reliability was established through the separate codification of the papers by each author, and the analytic unit of analysis turned up to be similar.

Seventh, the literature review validity was tested for each way discussed by Massaro et al. (2016). Internal validity was established when authors individually coded the papers. External validity was ensured through exclusions of irrelevant articles from the total number of 212 papers as discussed in the third step. Construct validity was done through the analysis of citations, which has been presented in the fourth step.

The eighth step was to code the data. This has been done as discussed in the fifth step by using one unit of analysis and then searching for different items. For this procedure, we did not use any computer-aided coding. Instead, we chose to code the data manually.

2. Insights and critique

This section covers the ninth step and presents the literature on accounting and auditing digitalization by giving answers for the first two research questions: “how is the research in auditing and accounting digitalization developing?” and “what is the focus and critique of the literature on accounting and auditing digitalization?”. In what follows, we will discuss each item of the unit of analysis research focus by outlining the insights and critique.

This unit allows us to understand where researchers on accounting and auditing digitalization directed their attention. Previous studies used research focus as a unit of analysis in the accounting area for conducting literature reviews (Guthrie et al., 2012; Englund and Gerdin, 2014; Serenko and Dumay, 2015a). As we stated in the previous section, for this unit, we found different items that could be analyzed such as cloud computing, big data and data analytics, blockchain, and other digitalization related areas or digitalization in general. Appendix A shows the framing of each paper on digitalization areas.

2.1. Research focus – Cloud computing

According to Mell and Grance (2011) “cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.”. Unlike traditional in-house implemented IT models, cloud computing has the potential to provide IT resources that are accessible through internet by third party cloud services providers, usually on pay-per-use basis or a subscription (Marston et al., 2011; Stanoevska-Slabeva and Wozniak, 2010). In accounting, cloud solutions are available for many applications at a sophisticated implementation level, surrounding the depth and breadth of enterprise resource planning functionality (ICAEW, 2015a).

In our reviewed papers about cloud computing in accounting, authors aim in providing an understanding regarding the rationale for cloud-based accounting solutions adoption by small and medium practices by focusing on the identification of the factors that affect actual adoption and to provide insights into the disruptive technology impact on small and medium practices (Ma et al. 2021). The authors of this study found that the direct benefits of cloud accounting are positively associated with the adoption of cloud. Also, relationship benefits, client service and external pressure were significant adoption motivators. Moreover, the authors found that clients were less concerned about cloud technology risks and a potential explanation is that they are already familiar with other internet-based technologies, for example, internet banking. The second paper about cloud accounting focuses on the understanding of the behavioral differences between cloud users and non-cloud users. Findings show that cloud users are more likely to outsource accounting services in comparison to non-cloud users having that due to cloud the digital information could be easier disseminated (Asatiani et al. 2019). The third paper reviews the literature on cloud computing for both accounting and auditing and gives paths for future research (Moll and Yigitbasioglu, 2019).

With regards to cloud computing in auditing authors seek to investigate the external auditors’ perception of its adoption in Australia. The findings show that firms often opt for hybrid or private solutions instead of cloud even though cloud computing is perceived as a strong foothold. One of the reasons is related to the perceived importance

of information confidentiality and security. In contrast, the interviewees stated that security in cloud could be better than traditional IT systems, especially in the case of third-party audited vendors with a good reputation (Yigitbasioglu, 2015).

Thus, we find that the literature in cloud computing for accounting and auditing is quite small and only 4 out of 30 papers discuss it. Also, the focus of the literature in cloud computing only consists of the understanding regarding the rationale for cloud-based accounting solutions adoption by small and medium practices, behavioral differences between cloud users and non-cloud users, the perception of external auditors on the cloud adoption and an overview of the literature followed by directions for future research.

2.2. Research focus – Big Data and data analytics

Big Data represents the sheer speed and volume at which data is generated by using electronic transactions, texts, website clicks, photographs, Facebook activity, videos and others (Fay and Negangard, 2017). Data analytics is defined as “extensive and systematic use of data, statistical and quantitative analysis, exploratory and predictive analysis, and fact-based management to drive business decisions and actions” (Davenport and Kim, 2013, p. 3). Alles and Gray (2016) argue that, while data analytics and big data are two different concepts, they could be interrelated. There are three main attributes that characterize big data: velocity, variety and volume (Laney, 2001). Having these three characteristics of big data, data analytics tasks are complex and ambiguous (Laney, 2001; IBM, 2012).

Given that these two concepts are interrelated, we chose to treat them together. Most of the papers in our literature review discuss about accounting education and the need for data analytics in the accounting curriculum. For example, Sarkar et al. (2021) investigate the ways accounting information systems and academic courses could be adapted in order to prepare students with the necessary knowledge and skills for addressing employers needs with regards to big data. They found that both focus approach and hybrid approach are used by universities to include data analytics. The hybrid approach was also supported by Dzurandin et al. (2018). Furthermore, students must understand how to learn, know how to communicate, understand the need of paying attention to details, develop technology skills in order to meet employers' requirements (Sarkar et al., 2021). Moreover,

McKinney et al. (2017), found that higher order skills as understand the analysis limits and the ability to ask questions are other important skills in the era of big data in addition to data analysis skills. With regards to knowledge, skills and abilities (KPAs) that accounting students need to acquire, Ballou et al. (2018), identified that, next to traditional accounting, holistic business knowledge, technology and tools, research skills, data analytics, writing/communication and unstructured problem solving are other additional KPAs that accounting graduates should have. In addition, Messa (2019) states that a sensemaking perspective which animates approaches on how data analytic competencies are learned and taught through the inclusion of accounting disciplines can determine if graduates achieve resilient capabilities or entry-level skills in an environment such as big data.

Some authors suggest education methods for facilitating information system and technological competencies integration into the accounting curriculum that are relevant to business analytics and big data (Sledgianowski et al., 2017). Others provide study cases on how to utilize data analytics skills to address big data (Fay and Negangard, 2017). Another interesting aspect is related to audit textbooks and how well they integrate data analytics (Blix et al., 2021). The authors of this paper found that some books have an entire chapter about data analytics, while others only mention it as an additional tool and, because of that, students will probably not understand how data analytics is used in audit or the way data analytics will impact the profession. Furthermore, Richardson and Shan (2019) investigate the time and the way data analytics will be included in the accounting education. Using a survey as a research method, they found that more than 90% of the accounting department chairs think that data analytics need to be integrated into the accounting curriculum, but only about 33% of these departments currently teach data analytics and more than half plans to introduce data analytics in the next five years. In contrast, Andiola et al. (2020) conclude that accounting departments implemented accounting analytics and technology components as required by Standard A7 which refers to Information Technology Skills and Knowledge for Accounting Graduates (AACSB, 2013).

While reviewing the selected academic papers on big data, we determined that authors turned their attention on auditing rather than accounting, not surprisingly having that big data sets are usually used by financial auditors. Alles and Gray (2016) state that, while Big Data exists in auditing, its application in this domain is less clear than in

other fields because the way it works depends on the auditor's choice about the type of data that will be included and the way the data will be analyzed. In addition, Krieger et al. (2021) found that the audit firm's technological capability affects successful technology adoption for analyzing big data. With respect to data analysis, authors discuss different techniques used by financial auditors. One of the most common techniques is process mining, which can be used instead of collecting information through interviews or document inspections because it produces reliable process models in an automatic manner for all the transactions. As an example, Werner (2017) proposes an alternative approach to deduct the control flow by financial auditors using process models. However, Werner et al. (2021) argue that process mining has some limitations because it can only be used for transactions recorded in the system and other procedures and transactions that cannot be recorded are not covered by this technique. Another data analysis technique used in financial auditing and discussed by authors is machine learning. In this respect, Hunt et al. (2020) provide an analysis on the likelihood of switching the auditors by a company and examine the relationship between audit quality and this likelihood for clients that do not change their auditors. Moreover, Dilla and Raschke (2015) discuss data visualization techniques and how these can be used in detecting fraud.

In summary, big data and data analytics research is highly discussed among researchers. The reviewed papers gave us important information about data analytics, how it should be integrated into the accounting curriculum for addressing big data and digitalization in general, what the skills that students need to acquire are in order to meet employers needs in this era and whether universities provide students with data analytics courses. Also, authors discuss different techniques used in financial auditing such as process mining, machine learning and data visualization tools. However, as Moll and Yigitbasioglu (2019) state, more research is needed to address big data.

2.3. Research focus – Blockchain

A blockchain represents a distributed ledger, and more specifically, a chronological chain of 'blocks' in which each block includes a record of a valid network activity since the latest block was added to that chain (Bogart and Rice, 2015). The primary advantage of this technology is that, as long as a transaction is being approved by the nodes in a network, its reversal or re-sequence is not possible. This

incapacity is essential for its integrity and ensures that each party involved has accurate and identical records. Having that the blockchain is distributed, all changes in a ledger could be seen by all the members, hence, its transparency is ensured (Treleaven et al., 2017).

In our reviewed papers we only found one article that discusses about blockchain in accounting and its applicability. More specifically, this paper designs an information system that could increase the representation faithfulness for financial information reporting. In this respect, blockchain is used for balancing public access with privacy by developing the existing accounting recordkeeping concepts (McCallig et al., 2019). We also found another paper that reviews the literature on blockchain for accounting and auditing and addresses paths for future research (Moll and Yigitbasioglu, 2019).

With respect to auditing, authors provide blockchain architectures to address different challenges that auditors meet during an audit, such as the problem of collecting important digital audit evidence. Also, this architecture has the potential to address issues as for example, access to data, investment costs, privacy and security (Vincent et al., 2020). Furthermore, research discuss about the auditing role in the blockchain space and where this technology is needed in this area (Alles and Gray, 2020). The authors of this paper suggest that while auditing the blockchain especially when it is private may have some value, it is more important to investigate whether the records that are stored on the blockchain has a correspondent in the reality.

As we can see above, research in blockchain is quite small with only 4 out of 30 papers discussing this architecture in accounting and auditing. Literature shows that blockchain could be used for enhancing the representation faithfulness of financial reporting and to address challenges met by auditors during an audit. Moreover, authors suggest that auditors need to pay attention to the real existence of blockchain stored records.

2.4. Research focus – Other digitalization areas

In addition to cloud computing, big data, data analytics and blockchain, we also found other papers related to digitalization in accounting and auditing areas, but because their proportion in the total reviewed papers was very small, we chose to treat them together. These papers

approach digital reporting and robotic process automation (RPA). Digital reporting is supported by XBRL, that is an open standard for analyzing, exchanging and creating business information on the Internet (Eierle et al., 2014). RPA is a tool that uses software bots in order to automate highly repetitive and routine tasks which are usually performed by people, thus enabling faster handling time, higher volumes, reduced errors and costs (Deloitte, 2017). Also, a few articles discuss about digitalization in accounting and auditing in general and their allocation on different areas was difficult.

With respect to digital reporting, authors in our review investigate two aspects. The first one examines whether financial reports presented through a digital format can minimize functional fixation's occurrence and thus gives support to financial reports' users to adjust for differences in the positioning of key financial information (Ghani et al. 2011). Findings show that the presentation of financial reports in digital formats was not a factor that assisted in overcoming the functional fixation. The second one discusses about factors that influence voluntary adoption of digital reporting by small companies from UK for their statutory financial information and whether these companies can obtain benefits following the voluntary adoption (Alkhatib et al. 2019). The authors of this paper identified five significant factors: costs, complexity, relative advantage, management support and technology competence.

In the case of RPA, as well as in the case of digital reporting, we only found two papers that analyze this aspect. The first one presents the RPA in the context of accounting and the second one presents it in the context of auditing. More specifically, the one in accounting seeks to understand the issues related to accounting digitalization and to identify accounting tasks that are suitable for the implementation of RPA (Kokina, and Blanchette, 2019). Findings indicate that labor intensive, high volume, repetitive, digital form and rule-based tasks or tasks that use structured data and multiple systems are suitable for RPA implementation. Also, the authors found that companies are challenged by the complexity of RPA. The study in auditing proposes a 4-stage framework useful for applying RPA in audit (Huang and Vasarhelyi, 2019).

Regarding digitalization in general, the authors conducted literature reviews in accounting and auditing, Delphi studies and surveys. For example, Knudsen (2020), addresses a systematic literature review on the financial

accounting area and Moll and Yigitbasioglu (2019) present a traditional literature review in the areas of accounting and auditing. Also, one paper discusses about the forces for higher education change following digitalization in accounting (Pincus et al., 2017), and another one conducts a Delphi study in order to provide a prevision to the auditing industry by examining the consequences that are probable to occur due to changes driven by digitalization expected in the next five to ten years (Tiberius and Hirth, 2019).

In summary, articles in other related digitalization area are divided in three different categories. First, we discussed about digital reporting that is a field of accounting, and more specifically financial reporting, rather than auditing and this can be deducted from the analyzed papers. Second, authors present the robotic process automation in both accounting and auditing areas. The third category is given by the papers that cover the digitalization in general without focusing on a specific area.

Conclusions

This study conducted a structured literature review on digitalization in accounting and auditing area focusing on studies published in Scopus database between 2011 and 2021. More specifically, the objective of this paper was to identify the way research in accounting and auditing digitalization is developing and the status and critique of the literature in this domain. Findings show that there is a growing interest in this field and researchers turned their attention on different subareas of digitalization. As revealed in the second section, big data and data analytics received notable attention, especially on the education side, followed by cloud computing, blockchain technology, digital reporting and robotic process automation. Even though there is an increased interest for digitalization in accounting and auditing, the research in this area is on its early stage and it still needs to be developed.

In the previous section we have given answers for the first two research questions and based on these we will discuss some paths for future research, which aim in providing the answer for our third research question. Cloud computing is one of the digitalization subareas that needs more development. As we discussed in the findings section, only four out of thirty studies discuss this subject with one paper performing a structured literature review. The first paper presents the determinants and benefits of

cloud adoption by small and medium practices (Ma et al. 2021). Future studies could investigate this subject only from the perspective of accounting and auditing companies, but also including possible risks when working in cloud. The second paper discusses about cloud users and non-cloud users and whether there is a difference between them with regards to accounting outsourcing decision (Asatiani et al. 2019). Researchers could also investigate whether accounting companies that use cloud, benefit for more clients than those that do not do it so.

With respect to big data and data analytics researchers emphasized the need for knowledge and skills for accounting graduates by analyzing on different ways the accounting curriculum on data analytics. Future studies could investigate how data analytics skills could impact the recruitment process for a position of accountant or auditor and to what extent graduates that not own such skills could be rejected after an interview. Another interesting aspect could be related to the evaluation process within a company. In this regard, researchers could investigate whether data analytics skills and knowledge represent a factor that could impact the promotion decision of an employee and also whether this could influence the salary increase. In the big data research, authors gave also attention to practice and especially on the analysis techniques. On this respect, more research is needed to find out how challenging is for accountants and auditors to work with these techniques and to identify the most suitable tasks that could be performed by using data analytics techniques.

Blockchain is another area of research that needs to be developed. In accounting, research focuses on designing an information system that could increase the representation faithfulness for financial information reporting (McCallig et al., 2019). Future studies could investigate to what extent companies use blockchain technology and whether this would be a factor that threatens the accountants' jobs. Also, researchers could examine

the skills that accountants and auditors need following the implementation of the blockchain technology.

Research in digital reporting could be more investigated by analyzing its status in different countries, whether XBRL standard is adopted by these countries and how well companies compete with this standard. With regards to RPA future studies could explore whether accountants and auditors have necessary skills to help IT people in creating the software bots to automate the processes and to what extent employees in the accounting field may lose their jobs or what are some future jobs possibilities due to occurrence of RPA. Also, in auditing future studies could research what tasks are suitable for automatization through RPA.

The present paper differs from other similar studies from several perspectives. First, this study uses a structured literature review as a research method unlike previous studies that used systematic literature review (Knudsen, 2020) or traditional literature review (Moll and Yigitbasioglu, 2019). Second, this research analyzes the areas of accounting and auditing, while Knudsen (2020) only analyzes the area of accounting. Third, our analysis also covers the most recent academic works that are not included in the other researches.

Our study should be of interest for researchers as it synthesizes high quality academic papers on the area of accounting and auditing digitalization by giving insights and critique. Also, after analyzing the papers, this study gives directions for future research which could be considered a starting point for those interested in digitalization in accounting and auditing research. Moreover, this research could be of interest for practice and education, as it summarizes the research findings on this field.

The study results should be taken in line with some limitations. Even though we used Scopus database to search for papers, we could not search in all accounting journals given the limited access to these resources. Also, the decision to keep or exclude the articles from the entire sample was based on authors' judgement.

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Appendix A – Selected articles list

Ref. No.	Journal	Title	Topic / field	Year	Authors	No of Citations
1	<i>Advances in Accounting Education</i>	Data analytics in the accounting curriculum	Data analytics – Accounting	2019	Richardson, V.J., Shan, Y.	8
2	<i>British Accounting Review</i>	Functional fixation: Experimental evidence on the presentation of financial information through different digital formats	Digital reporting – Accounting	2011	Ghani, E.K., Laswad, F., Tooley, S.	21
3	<i>British Accounting Review</i>	The role of internet-related technologies in shaping the work of accountants: New directions for accounting research	Digitalization – Accounting and auditing	2019	Moll, J., Yigitbasioglu, O.	95
4	<i>International Journal of Accounting Information Systems</i>	External auditors' perceptions of cloud computing adoption in Australia	Cloud computing – Auditing	2015	Yigitbasioglu, O.M.	40
5	<i>International Journal of Accounting Information Systems</i>	Data visualization for fraud detection: Practice implications and a call for future research	Data analytics - Auditing	2015	Dilla, W.N., Raschke, R.L.	69
6	<i>International Journal of Accounting Information Systems</i>	Incorporating big data in audits: Identifying inhibitors and a research agenda to address those inhibitors	Big data – Auditing	2016	Alles, M., Gray, G.L.	82
7	<i>International Journal of Accounting Information Systems</i>	Financial process mining – Accounting data structure dependent control flow inference	Data analytics – Auditing	2017	Werner, M.	26
8	<i>International Journal of Accounting Information Systems</i>	Impact of accounting process characteristics on accounting outsourcing – Comparison of users and non-users of cloud-based accounting information systems	Cloud computing – Accounting	2019	Asatiani, A., Apte, U., Penttinen, E., Rönkkö, M., Saarinen, T.	36
9	<i>International Journal of Accounting Information Systems</i>	Establishing the representational faithfulness of financial accounting information using multiparty security, network analysis and a blockchain	Blockchain - Accounting	2019	McCallig, J., Robb, A., Rohde, F.	19
10	<i>International Journal of Accounting Information Systems</i>	Determinants of the voluntary adoption of digital reporting by small private companies to Companies House: Evidence from the UK	Digital reporting – Accounting	2019	Alkhatib, E., Ojala, H., Collis, J.	11
11	<i>International Journal of Accounting Information Systems</i>	Early evidence of digital labor in accounting: Innovation with Robotic Process Automation	Robotic process automation – Accounting	2019	Kokina, J., Blanchette, S.	48
12	<i>International Journal of Accounting Information Systems</i>	Applying robotic process automation (RPA) in auditing: A framework	Robotic process automation – Auditing	2019	Huang, F., Vasarhelyi, M.A.	60
13	<i>International Journal of Accounting Information Systems</i>	Blockchain architecture: A design that helps CPA firms leverage the technology	Blockchain – Auditing	2020	Vincent, N.E., Skjellum, A., Medury, S.	9
14	<i>International Journal of Accounting Information Systems</i>	"The first mile problem": Deriving an endogenous demand for auditing in blockchain-based business processes	Blockchain – Auditing	2020	Alles, M., Gray, G.L.	11
15	<i>International Journal of Accounting Information Systems</i>	Elusive boundaries, power relations, and knowledge production: A systematic review of the literature on digitalization in accounting	Digitalization -Accounting	2020	Knudsen, D.-R.	28

Ref. No.	Journal	Title	Topic / field	Year	Authors	No of Citations
16	<i>International Journal of Accounting Information Systems</i>	Cloud-based client accounting and small and medium accounting practices: Adoption and impact	Cloud computing – Accounting	2021	Ma, D., Fisher, R., Nesbit, T.	0
17	<i>International Journal of Accounting Information Systems</i>	Explaining the (non-) adoption of advanced data analytics in auditing: A process theory	Data analytics – Auditing	2021	Krieger, F., Drews, P., Velte, P.	0
18	<i>International Journal of Accounting Information Systems</i>	Embedding process mining into financial statement audits	Data analytics – Auditing	2021	Werner, M., Wiese, M., Maas, A.	0
19	<i>Journal of Accounting and Public Policy</i>	Using machine learning to predict auditor switches: How the likelihood of switching affects audit quality among non-switching clients	Data analytics – Auditing	2020	Hunt, J.O.S., Rosser, D.M., Rowe, S.P.	6
20	<i>Journal of Accounting Education</i>	The need for 'skeptical' accountants in the era of Big Data	Big data – Accounting	2017	McKinney, E., Yoos, C.J., Sneed, K.	61
21	<i>Journal of Accounting Education</i>	Manual journal entry testing: Data analytics and the risk of fraud	Big data – Auditing	2017	Fay, R., Negangard, E.M.	35
22	<i>Journal of Accounting Education</i>	Toward integration of Big Data, technology and information systems competencies into the accounting curriculum	Big data - Accounting and auditing	2017	Sledgianowski, D., Gomaa, M., Tan, C.	144
23	<i>Journal of Accounting Education</i>	Forces for change in higher education and implications for the accounting academy	Digitalization – Accounting	2017	Pincus, K.V., Stout, D.E., Sorensen, J.E., Stocks, K.D., Lawson, R.A.	134
24	<i>Journal of Accounting Education</i>	Data-driven decision-making and its impact on accounting undergraduate curriculum	Data analytics – Accounting	2018	Ballou, B., Heitger, D.L., Stoel, D.	34
25	<i>Journal of Accounting Education</i>	Infusing data analytics into the accounting curriculum: A framework and insights from faculty	Data analytics – Accounting	2018	Dzuranin, A.C., Jones, J.R., Olvera, R.M.	59
26	<i>Journal of Accounting Education</i>	Accounting students' learning processes in analytics: A sensemaking perspective	Data analytics – Accounting	2019	Mesa, W.B.	7
27	<i>Journal of Accounting Education</i>	Integrating technology and data analytic skills into the accounting curriculum: Accounting department leaders' experiences and insights	Data analytics – Accounting	2020	Andiola, L.M., Masters, E., Norman, C.	25
28	<i>Journal of Accounting Education</i>	Developing institutional skills for addressing big data: Experiences in implementation of AACSB Standard 5	Big data – Accounting and auditing	2021	Sarkar, S., Gray, J., Boss, S.R., Daly, E.	0
29	<i>Journal of Accounting Education</i>	How well do audit textbooks currently integrate data analytics	Data analytics – Auditing	2021	Blix, L.H., Edmonds, M.A., Sorensen, K.B.	0
30	<i>Journal of International Accounting, Auditing and Taxation</i>	Impacts of digitization on auditing: A Delphi study for Germany	Digitalization – Auditing	2019	Tiberius, V., Hirth, S.	46



Auditor-Client Relationship: Interferences, Influences and Associations

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Abstract

Auditor-client relationship is a multifaceted interaction between the two parties, defined and influenced by several factors. This research delimitates and summarizes the eight relevant factors in literature in order to analyze them, as opposed to most previous research, in a synergic manner. The study does not limit to the qualitative part as it provides insight upon when and how interferences in the auditor-client relation appear. The most challenging associations among the two parties is the negotiation process that could occur during the audit mission, targeting auditor's opinion, thus generating pressure upon the professional and ethical core values. Based on the gathered data through the means of a developed questionnaire, the authors have indicated and analyzed the neuralgic point of the relation, its influencers and the interferences within.

Key words: auditor-client relation, factors of influence, negotiation, auditor's opinion, professional code, ethical code

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Introduction

Besides conducting a research based on a theoretical approach of the auditor-client relationship (ACR), in order to understand in an adequate manner the factors related to this relationship, it is necessary to also approach this research from an empirical perspective. Having this dual approach provides insight upon the various facets of ACR. We found our research starting from the theoretical approach including the synergy of the factors of influence subtracted from literature. The relevance of the theme is determined by the fact that all of the interactions between the auditor and the client, along with the actions, exchanged information, applied auditing techniques are unfolded in the context of the ACR. Therefore, the manner in which the ACR shapes itself determines the very outcome of the audit mission and its main scope. As a consequence, the ACR and the interferences that occur inside it are a major determinant of the manner in which the audit unfolds, being a major area of interest and research.

The problem regarding this area of research is that there are few approaches that take into consideration all of the main eight factors of influences revealed by the existing literature. Without a holistic perspective, the influences present in the ACR are harder to be properly measured leading to unfit solutions that are unsuccessfully trying to improve the relation between the two parties and, in the end, the quality of audit. One of the most challenging interference in the ACR is the potential negotiation process that could occur regarding auditor's opinion, generating high pressures upon auditor's independence and audit quality. Therefore, our goal is to answer, through this paper, to the following research question:

Which are the characteristics of the interferences and negotiation process in the ACR?

In order to test the selected factors of influence of ACR, we considered that the most adequate instrument is the questionnaire. In accordance with an extensive literature research, having the goal to gather the necessary and proper data, both the construction and deployment of the questionnaire was made to the statistical relevant population of auditors. By measuring the ACR in the synergic context of the eight factors together brings a more pragmatic perspective upon the existence and measure of influence generated by the factors regarding the ACR and the potential negotiation process that could arise between the two parties.

ACR debates

There are several terms used in literature when referring to the ACR, having two major directions due to its complex nature: in a more general approach auditor-client relationship, interaction or management relationship are the terms used by some authors, while others with a more focused perspective use auditor-client negotiation, disagreements or realignments, or even audit-client tenure (Ghosh & Moon, 2005; McCracken et al., 2008; Brown & Wright, 2008; Kleinman et al., 2010; Ye et al., 2011; Svanberg & Öhman, 2016; Grant, et al., 2018). In the context of ACR, provided it is primarily determined by a juridical contract, the parties usually experience negotiations regarding the client's financial reporting, leading to various material accounting and disclosure implications. One of the most significant reasons for such negotiations are the unclear regulations. It can be deducted that in such negotiations, the client tries to influence the auditor on the financial and contractual side as most of the cases where an agreement was reached, the reappointment of the auditor came soon afterwards (Gibbins et al., 2001). Of course, a negotiation once it has begun can lead to a determined type of solutions: agreement on one of the initially suggested financial reporting solutions which is usually based on concessions made by either party, lack of agreement or reaching common ground on a new solution (Salterio, 2012; Awadallah, 2018).

As deducted from the relevant literature, various factors influence and determine the ACR:

- *audit quality* (Chen et al. 2010; Lennox, 2016; Krishnan et al., 2017) – defined as the congruence of the chance the auditor has to detect a misstatement in the clients' accounting system (competence) and reporting that specific misstatement (independence), all of this evaluated by the market (DeAngelo, 1981);
- *auditor's independence* (Goldman & Barlev, 1974; Nichols & Price, 1976; Salterio, 2012; Dhaliwal et al, 2015) – represents the fundament of auditing as a profession, determining audit quality and differentiating "in fact" or "in appearance" (Ruddock et al., 2004);
- *audit partner/firm rotation* (Ghosh&Moon, 2005; Carey& Simnett, 2006; Bleibtreu & Stefani, 2018) – necessary measure in order to provide high audit quality, initiated with mandatory character (Chen et al., 2008);

- *non-audit services* (Ghosh et al. 2009; Carmona et al., 2015; Campa & Donnelly, 2016) – described as unanticipated fees which could potentially pose the biggest threats to auditors' independence (Kinney and Libby 2002);
- *the role of regulator's enforcement* (Brown & Wright, 2008; Guenin-Paracini & Gendron, 2010; Hatfield & Mullis, 2015) – Oversight bodies have been enforced as a counter-balance to accounting and auditing failures in present international regulatory environment, "created to watch the watchers" (Richardson, 2009) and having as a major role the improvement of public confidence towards financial reporting and auditing of the public companies (Cooper & Robson, 2006);
- *audit profession between public and private interest* (Carcello & Nagy, 2004; Newman et al., 2011; Guo, 2016) – this struggle is represented by the recent shift of the accounting profession towards a more commercialistic characteristic than a professional one (Suddaby et al. 2007);
- *trust and confidence between auditor and client* (Brown & Wright, 2008, Aschauer et al., 2015) – is mentioned to be of high importance at the moment when on one hand there is lack of guarantees while uncertainty and risk are present (Rennie et al., 2010);
- *competition and client pressure* (Collings, 2002; McMeeking, 2007) – is resumed by the fact that auditors comply through compromise to the pressures generated by the client, sustained by the accepted forceful accounting treatment (Hatfield et al. 2008, Hatfield et al. 2011).

On the course of the ACR unfolding the auditor has proved to be a full negotiator also motivated by self-interest in winning or losing (Gibbins et al., 2001). The ACR is of high complexity, thus literature analysing the relation from various perspectives. A perspective arising major interest is negotiation upon the audit contract object, in the context of classic models of negotiation, the most cited being the Gibbins model (Gibbins et al., 2001). In accordance to the perspective provided by the analysed literature we developed the questionnaire having as a main starting point the study employed by Gibbins, M., Salterio, S. & Webb, A. (2001), "Evidence about auditor-client management negotiation concerning the client's financial reporting" on one hand, and also the questionnaire used by Gibbins, M., S. McCracken & S.

Salterio (2003), "Auditor-client management negotiation concerning client's financial reporting: evidence from the client's side" on the other hand, as secondary source.

As presented above, taking into consideration all the eight factors during our survey strategy that we applied contributes to a proper answer to our research question. Our aim is to determine which are the influences in the ACR and the negotiation process that might occur and having our questionnaire developed according to the wholistic perspective upon literature is a major contributor to achieving our goal.

Methodology

Neuman (2002) states that the research strategy which is carried out by researchers is directly determined by the nature of the research. Mainly, research strategies that have the purpose of ensuring a good quality of research outcome usually entail identifying the data collection sources that facilitate achieving the research goals. Based on previous statements, there are various approaches regarding research strategies that can be implemented, primarily, survey, experiment, case study, action research, ethnography, archival research and grounded theory (Saunders et al., 2011). Out of all the mentioned strategies, our further focus will be on the chosen one, which will be further developed below.

Survey research method targets the gathering of information that can be defined by: what, who, to what extent on one hand or even how many on the other hand (Saunders et al., 2011). Thus, we developed a questionnaire to answer our research needs containing 21 questions. We have structured our questionnaire to contain single and multiple questions. As for the nature of the answers, depending on the question, the respondents are kindly asked to provide yes or no answers, Likert scale pre-defined answers and open numeric answers. Our developed questionnaire contains demographic questions that determine the respondents' professional profile. Moreover, the questionnaire targets each of the eight previously presented factors of influence and the manner in which they interact in the ACR context. The questions also aim to measure the ACR and negotiation characteristics, the manner in which the two parties reach a common ground and the recurrence of past issues.

Afterwards, the questionnaire was distributed by e-mail to the potential respondents that were previously determined by us. In order to have a properly founded research, we

have determined the population of auditors with the help of the Romanian Chamber of Financial Auditors (CAFR-in Romanian abbreviation) which has provided, following an official request, a summary of the number of active auditors as independent practitioners and the number of active audit firms, based on their database. Moreover, the *Chamber of Financial Auditors in Romania (CAFR)*, showed support even in the data gathering process by distributing an official e-mail, kindly asking the selected auditors to answer the attached questionnaire as an action of sustaining the research in the ACR domain. We have received 326 responses out of the total of 1220 sent e-mails. The number of 1220 represents the auditors and audit companies together, that are registered at Chamber of Financial Auditors in Romania and also reported to have conducted audit mission(s) in year, 2020. After the process of validation of the gathered data, 23 questionnaire answers were invalidated due to lack of completion for some questions or no selected answers at other question. This leads to a final database to be analyzed of 303 distinct responses that were validated. This study contains data

processing using SPSS program, meant to reveal the frequency of answers in order to provide an overview of the ACR and the interferences within it.

Descriptive results analysis

The first analysis that we chose to make is based on the four demographic questions that we have developed in order to have an overall perspective of the manner in which the respondents are distributed according to certain defined characteristics.

The first question targets the position occupied in the audit company. From a demographic point of view our sample is formed out of partner/associate with 49.2% frequency, followed by senior – member in the mission team with 38.9%, the rest being executive director with 11.9% out of the total (**Table no. 1**). Therefore, the conclusion that most of the respondents of our questionnaire were either directly or indirectly involved in the negotiations with the client, as they held top positions.

Table no. 1. The position held by the respondent within the audit firm

What position do you currently hold in the audit firm?			
		Frequency	Percent
Valid	Senior, member of the mission team	118	38.9
	Executive Director	36	11.9
	Partner/Associate	149	49.2
	Total	303	100.0

Source: Authors' projection

High interest information can be drawn from the question measuring the experience of the respondents. The question contributes to developing a point of view upon the auditors that are involved in negotiations directly or not, correlated with their years of activity in this field. From **Table no. 2** we deducted that the average experience of the respondents is of 13.25 years. This leads to the conclusion, that on average, the auditors that have accumulated a considerable experience and, consequently, have moved higher in the hierarchy, are those who are involved in and encounter negotiations with the clients.

Table no. 2. The experience of the respondents

Years of experience		
N	Valid	303
	Missing	0
Mean		13.25
Median		13.00
Mode		10 ^a
Std. Deviation		5.615
Range		34

Source: Authors' projection

The third question of the questionnaire target the sex of the respondents. To conclude, the respondents are relatively even distributed between male (46.5% out of

total) and female, that are a little more numerous totaling 53.5% share of the total answers (Table no. 3).

Table no. 3. Gender of respondents

		Frequency	Percent
Valid	Female	162	53.5
	Male	141	46.5
	Total	303	100.0

Source: Authors' projection

Last question in the demographic section of the questionnaire provides an overview upon the frequency

and occurrence of negotiations in the ACR. This question provides a surprise, revealing the real extent of the negotiation phenomenon in auditing. The element of unexpected lies in the fact the majority of respondents (57.1%) have encountered negotiation to occur in more than 75% of the client interactions. Moreover, the next category of answers indicating that negotiation is present in over 50% of the cases has reached 24.4% out of the number of respondents. Naturally, there are only few respondents (9.9%) that have encountered negotiations in 25% to 50% of the client interaction cases and 8.6% of the respondents have declared to encounter negotiation in under 25% of the interactions (Table no. 4).

Table no. 4. Frequency and occurrence of negotiations in the ACR

Have you participated in discussions with clients on the opinion in the audit report?			
		Frequency	Percent
Valid	< 25%	26	8.6
	25% – 50%	30	9.9
	50% – 75%	74	24.4
	>75%	173	57.1
	Total	303	100.0

Source: Authors' projection

Basically, these results validate of focus upon the matter of ACR considering that 81,5% of respondents do experience client negotiations in at least 50% or even over the threshold of 75% of the interactions. This is one major pillar sustaining our research as the high frequency of negotiation occurrence leads to increased potential infringements of professional standards or contractual clauses.

Empirical results analysis

Our deployed questionnaire targeted further and more analytic aspects of ACR in order to provide a better perspective of the dynamics and interactions of the mentioned relation. There are various aspects that are relevant to the ACR, besides the factors of influence, all of these being presented and analyzed in the following. All data was analyzed through SPSS generating basic analysis in the first step and graphics to better reveal the data.

We targeted, through our questionnaire, to gather data regarding the type of audit company the respondents work in, thus it can indicate cultural and professional influences that could manifest in case of international companies opposite to the national audit companies. Table no. 5 shows that the majority of respondents have experienced negotiations with clients while they were working in an audit company with a Romanian majority capital acting individually (67.6%). Only 21.8% out of the total respondents have experienced negotiations while working in a Big 4 company, while 10.6% were employees of a national group or network. The balance incline in favor of respondents working in an audit company with a Romanian majority capital acting individually provides grounds for a supplementary separate and individual hypothesis analysis based only on this group of respondents in order to provide an insight upon the Romanian context and influence upon the researched subject.

Table no. 5. The type of audit firm in which the respondents work

Type of audit firm in which you experienced discussions with the clients on the opinion and other elements of the audit report		
	Frequency	Percent
Big 4 member: PricewaterhouseCoopers, Deloitte, KPMG and Ernst & Young	46	15.2
Member of another international group / network	20	6.6
Member of a national group / network	32	10.6
Company with Romanian majority capital acting individually	205	67.6
Total	303	100.0

Source: Authors' projection

After analyzing the company where the respondents were working when they experienced negotiations with clients, it is also of high importance to see which were the types of missions that mostly attracted to say so the negotiations.

Table no. 6 reveals, from a different perspective, that auditors have encountered negotiations with the clients most often during statutory audit missions (56.1%). Secondly, 31.4% of respondents state that negotiation has occurred during financial audit missions, while only 12.5% have encountered negotiations in other types of assurance missions.

Table no. 6. The types of missions that attracted the negotiations

Missions in which you have experience in discussions with clients on opinion and other elements of the audit report were for following type of audit			
		Frequency	Percent
Valid	Statutory	170	56.1
	Financial	95	31.4
	Other types of assurance missions	38	12.5
	Total	303	100.0

Source: Authors' projection

Besides the negotiation itself, in the ACR it is also importance the manner in which negotiation unfolds and the final result. It is of key importance to measure the effect of such discussions or negotiations because it is the effect that defines whether the phenomenon is worth of

further research. The biggest part of the respondents has divided their answers between two cases: issuing a qualified opinion to the detriment of the adverse opinion (36.6%) that could have stopped the client from getting financing or triggering other issues for the business and issuing an unqualified opinion (clean report) to the detriment of the qualified opinion (40.9%) which allows the client to access better markets and financing. The other two categories are minoritarians, with 14.9% out of the total answers in favour of issuing a qualified opinion to the detriment of disclaimer of opinion and 7.6% opted for an unqualified opinion (clean report) to the detriment of the adverse opinion which also represents the variant with the biggest span from one opinion to the other. **Table no. 7** shows how is distributed the change of opinion.

Table no. 7. Opinion expressed by the auditor

Following discussions with the client on the opinion and other elements of the audit report, you most often expressed:			
		Frequency	Percent
Valid	A qualified opinion to the detriment of the adverse opinion	111	36.6
	A qualified opinion to the detriment of disclaimer of opinion	45	14.9
	An unqualified opinion (clean report) to the detriment of the qualified opinion	124	40.9
	An unqualified opinion (clean report) to the detriment of the adverse opinion	23	7.6
	Total	303	100.0

Source: Authors' projection

A longer relationship between the auditor and the client leads to increased chances for the negotiation to occur as both of them can get to relate at a more personal level becoming comfortable with each other. Regardless of the initiator of the negotiation, we also focused on measuring the length of the relationship at the moment they encountered negotiation. Our questionnaire, through the collected data, shows a consistent majority of answers that indicate that it is when the relationship between the auditor and the client is of three years in length or more the most of the negotiation cases upon the opinion occur (61.72%). Only 18.15% of the total respondents state that the negotiation started to be initiated at a length of the relation of two years, while 20.13% have placed the moment of negotiation occurrence at one year

length (Table no. 8). Consequently, the negotiation upon the opinion has no exact timing regarding the initiative moment, but it is most likely to occur as the ACR evolves in time.

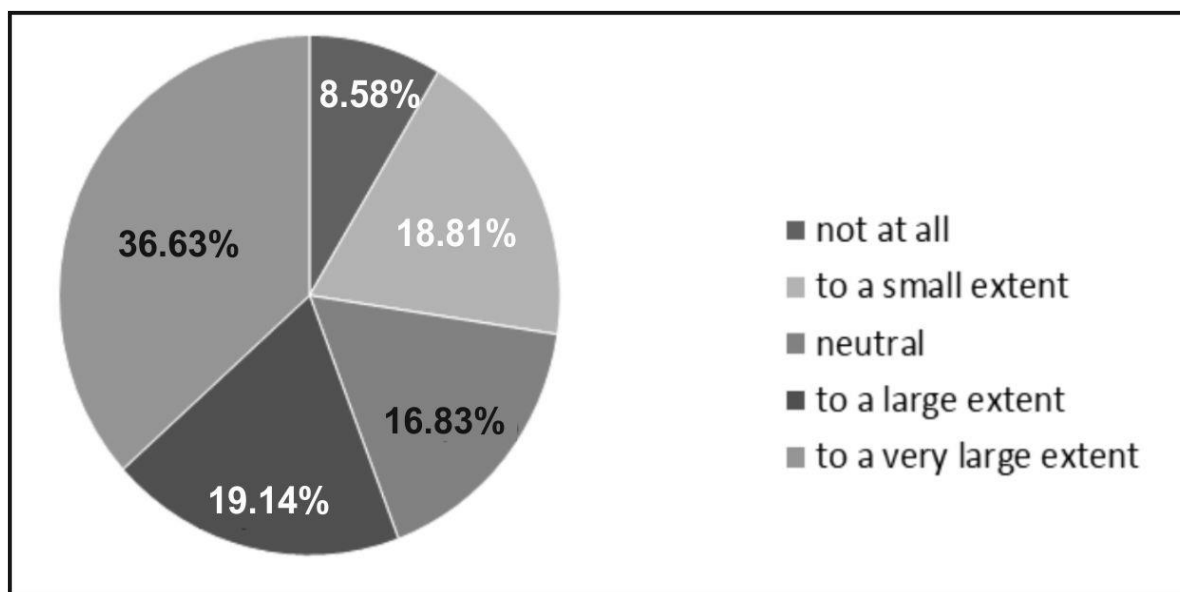
Table no. 8. Duration of the relationship with the client at the time of discussions on the opinion and other elements of the audit report

		Frequency	Percent
Valid	1	61	20.1
	2	55	18.2
	>=3	187	61.7
	Total	303	100.0

Source: Authors' projection

As for another factor influencing the evolution and the reached outcome is case of negotiations, there are more respondents who consider inherent risk to pose an influence, than the ones who do not: in a large extent (36.63%) or very large extent (19.14%). Of the total respondents 16.83% consider that inherent risk is neutral towards how negotiations turn out in the end. On the other hand, only 8.58% consider that inherent risk does not influence negotiations, while 18.81% think that this has had a minor influence upon the discussion they had with the clients upon the opinion and other elements of the audit report (Figure no. 1).

Figure no. 1. To what extent do you consider that the inherent risk of clients has influenced discussions with them on the opinion and other elements of the audit report?

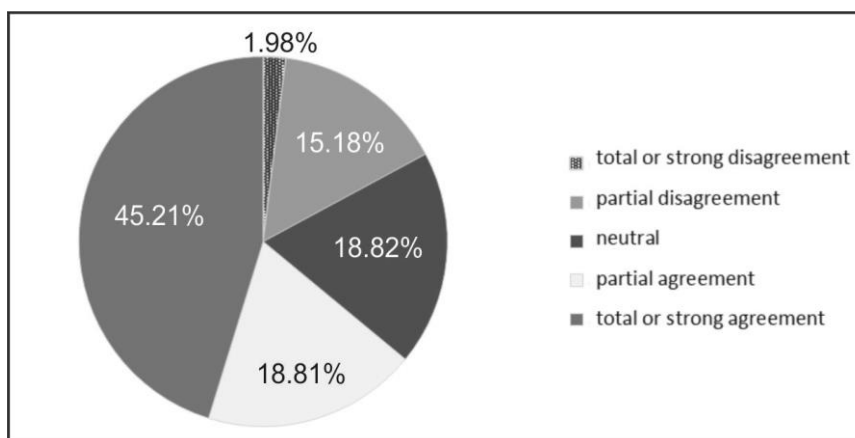


Source: Authors' projection

It is often said that the past is a good example for how the future will be. Therefore, the question whether the manner in which the auditor and the client have interacted in the past will influence the way in which they do in present negotiations is only natural. In accordance with the collected data, we can conclude that, as expected, more than a half of the respondents (18.81% are the one that fully consider and 45.21% those who

partially do) consider that the result of current discussions and negotiations is highly influenced by who past negotiations were settled. There is only a minority of respondents (1.98% out of respondents totally and 15.18% partly disagree) that feel that there is no influence generated by past negotiations upon the current ones, while 18.81% position themselves on a neutral position (Figure no. 2).

Figure no. 2. The way in which recurring issues from previous missions were resolved influenced the outcome of current discussions with clients on the opinion and other elements of the audit report

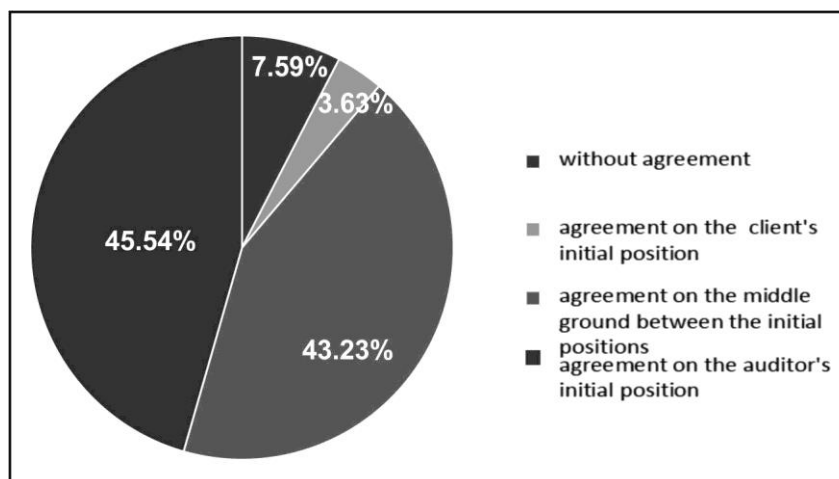


Source: Authors' projection

The process of negotiation and its characteristics are not the only aspects that raise the interest, but also the result of those discussions that the auditor and client have. The result of questionnaire data analysis reveals that the least of cases (3.63%) the client manages to convince the auditor during the negotiations to adopt its own initial perspective. On the other side, in 45.54% of the responses, the described situations have solved with the

auditor convincing the client to adopt the initially proposed solution. The way of both sided concession is met in 43.23% out of the total responses, when the auditor and the client manage to agree on a middle solution that is further defined at the moment. The cases when negotiations lead to a stalemate between the auditor and the client, resulting in no agreement, are encountered in 7.59% of the cases (*Figure no. 3*).

Figure no. 3. The result of the discussions on the opinion and other elements of the audit report following the clarifications of some aspects by the clients



Source: Authors' projection

Considering that only a small share (2.64%) of the auditors were sanctioned following a quality control made by the professional body, we can conclude that auditor's conduct in the negotiation process is at a proper ethical and professional level (**Table no. 9**).

Table no. 9. Were you sanctioned following a quality control carried out by the professional body?

		Frequency	Percent
Valid	No	295	97.4
	Yes	8	2.6
	Total	303	100.0

Source: Authors' projection

Discussions and Conclusions

Overall, our findings underline one main idea, that the negotiation phenomenon is almost a constant in the ACR, having a high frequency and generating, together with the eight factors, complex interferences among the parties. Our research reflects, in a rather consistent manner, the national character of the influences among the ACR as almost 70% of the respondents are affiliated to a national auditing company, thus manifesting through their answers the local cultural influence. The deployed questionnaire, by following the main line of unfolding of the ACR and negotiation process, manages to capture the key points. We manage to reveal that the type of missions in which negotiation most often occurs are the statutory ones, providing upon where regulations and control must be improved. The resulting conclusions that we have drawn based on our data analysis are in line with the ones in the model that we followed in the development of our questionnaire, Gibbins, M., Salterio, S. & Webb, A. (2001), "Evidence about auditor–client management negotiation concerning the client's financial reporting". We both concluded that the longer the relationship between auditor and client gets, the more inclined they are to initiate negotiations encouraged by the personal relation that is achieved. The general perspective of both studies is that negotiation is highly present in the ACR leading in some cases to shifts of opinion on the auditor's behalf, in our case the shift towards an unqualified opinion (clean report) to the detriment of the qualified

opinion being the most encountered one. However, it appears that even in the context of negotiation the auditor seems to maintain close to the professional core values as in overwhelming number of cases the result of the discussions leads to an agreement either on auditor initial position or a middle ground solution. Therefore, we can deduct that following the discussion, the auditor still does not generally accept a solution that is exclusively developed by the client, having none of the auditor's personal and professional influence. Starting from the idea that the longer the relation is the more personal it becomes, it is clearly that this is not the only influence generated by the length of the ACR. Obviously, as the relation evolved through time it gathers experiences, disagreements, concessions and other such cases which further in time determine and influence how do the negotiations unfold and which is the result to where these are headed. Moreover, the auditor inherits not only the client's problems when signing a contract, but also the risk, which we found to influence the discussion in an extensive manner. Basically, our research results show that the Romanian market of audit is generally aligned with previous international findings regarding the nature of ACR, the interferences generated by the relation and negotiation process and the influence of factors such as independence, auditor rotation, audit quality and not only.

One of the main characteristics of the ACR and the negotiation process is the active and forceful one. As the ACR and negotiation unfold, several states are reached such as interaction, variation of ideas, shifts in opinion, as well as the manner in which the parties negotiate. These states are altered by the influence of the presented contextual factors. For such a dynamic and complex relation, it is only a well-structured and deployed survey which can measure the interferences that appear. We targeted through our paper provide a better and synergic perspective upon the neuralgic points of the ACR considering those are the generators for not applying the professional core values. Those neuralgic points that pose much influence and pressure upon the ACR are mostly that factors themselves that act as a whole mechanism by generating influence not only upon the relation, but among them as well.

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Assurance on Non-Financial Information – Challenges and Opportunities

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Abstract

In recent years, large companies have moved from the voluntary to the mandatory stage of reporting non-financial information on environmental, social and governance issues. Thus, in order to increase the degree of confidence in these reports, auditors can provide assurance engagements that contribute to a better image of the companies. The purpose of the paper is highlighted on two objectives, namely the first objective regarding the practices of an assurance engagement and the second objective related to the identification of existing research on assurance of the sustainability reports of non-financial information. For the first objective, based on the guidelines and recommendations issued by the professional bodies, the challenges that auditors have to meet in fulfilling their engagements were analyzed. The methodology used for the second objective was a bibliometric analysis using VOSviewer software, of a sample of 240 papers from publications indexed in the Web of Science – Clarivate Analytics database from the last 20 years. The results obtained showed that the number of published papers has had an upward trend in the last five years, with authors from all continents, but mainly from English speaking countries. The topics approached by the authors were shaped around the concepts of assurance, sustainability reports, governance and opportunities, following the bibliometric analysis resulting in a close connection between them. The basic conclusion that emerges is that this topic remains a subject of debate that still needs to be explored in order to identify all the challenges that auditors face and that would be possible solutions, both as a regulation and as an audit practice.

Kew words: non-financial information; sustainability; assurance; reporting; directive; social responsibility;

JEL Classification: M41, M42, M48

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Introduction

Non-financial reporting (NFR) is a topic under continuous debate and is subject to a review process (Monciardini et al., 2020). If, until recently, financial information (FI) was considered sufficient, now it is only part of the image of a company (Accountancy Europe, 2019). Thus, non-financial information (NFI) complements financial information, leading to integrated thinking and reporting (Di Vaio et al., 2020).

From a practical point of view, the financial information is prepared for reporting by specialists in the financial-accounting field, according to the normative acts that regulate this aspect, whether they are national or international regulations. The reporting of non-financial information requires knowledge in several areas, but the regulation of the reporting of these aspects is also included in the normative acts that refer to financial information. Therefore, the role of the professional accountant is a major one in preparing the reporting of both financial and non-financial information. Also, the practices used by auditors in assurance on reported information are of particular importance for the credibility of sustainability reporting. (Dando & Swift, 2003; Simnett, Vanstraelen, & Chua, 2009; Kolk & Perego, 2010; Braam & Peeters, 2018).

The annual reports of the companies are intended to inform investors and other stakeholders (Hațegan et al., 2015). Thus, if the opinion on the financial information is expressed through the reports issued by the financial auditors, then the question also arises of how to ensure the truthfulness of the non-financial information. Power (1996, 1999) argued that practitioners can make new areas auditable by simultaneously creating a consensus around a stable and legitimate knowledge base for audit practice, as well as an auditable environment. Thus, this new knowledge can be applied in the case of non-financial information.

Therefore, the purpose of this paper is delimited on two objectives. The first objective is to analyze and synthesize the main challenges for auditors in evaluating non-financial information, based on the guidelines and recommendations of professional bodies in order to identify opportunities that arise in the development of the accounting profession. The second objective refers to the bibliometric analysis of research published about assurance on NFI reporting, based on a sample of 240 papers published in the period 2000-2021 in journals

indexed in the Web of Science – Clarivate Analytics (WoS) database, using VOSviewer software.

The paper contains an analysis of the available data on assurance on the reporting of non-financial information by companies, from the perspective of the need for this engagement. The paper can be a bibliographic source for researchers in the field of accounting and financial auditing, for company management representatives to understand the need and importance of reporting non-financial information on environmental, social and governance issues. Also, it contributes to existing research by synthesizing information on current research challenges and topics in the field studied.

The paper is organized as follows: in the next section the theoretical background is presented, after which the research methodology is detailed. The third section presents the results obtained together with the discussions generated by the research carried out. The final section contains the main conclusions, as well as the limits of the research together with possible future research directions for the development of the studied topic.

1. Theoretical background

Non-financial information relates mainly to environmental, social and governance issues, as regulated in Directive 2014/95 / EU on the presentation of non-financial information, (Directive) applicable to companies based in European Union countries. At the international level there are other similar regulations adapted to the specifics of the legislation of each country.

European legislation does not provide for a standard reporting model, reports may vary in structure and content. The information presented in the non-financial reports is relevant when it allows us to understand the impact that the company's activities have on the environment and on society, but also how the company's performance, position and development are affected.

The sustainability practices of companies vary depending on their size, the level of maturity of the business, the complexity of business processes, strategic planning, organizational structure and the interests of the parties.

Increasing investor pressure and corporate leadership awareness have led to the development of a number of reporting frameworks that seek to capture the relationship between non-financial and financial performance, a summary of which is presented in **Table no. 1**.

Table no. 1. Non-financial reporting frameworks

Abbrev.	Issuer type / name	Framework
GRI	Independent organization GRI	Global Reporting Initiative
IIRC	Non-profit organization Value Reporting Foundation	International Integrated Reporting Council
SASB	Non-profit organization Value Reporting Foundation	Sustainability Accounting Standards Board
SDG	Organization of Nations United (UN)	United Nation – Sustainable Development Goals
TCFD	Independent organization TCFD	Task Force on Climate-Related Financial Disclosures
UNGC	UN	United Nation – Global Compact
CDSB	Consortium of non-profit organizations CDSB	Climate Disclosure Standards Board
CDP	Non-profit organization CDP	Disclosure Insight Action

Source: Own processing

From previous research (Zaman et al., 2021) resulted that the most common reporting framework was GRI, but in recent years there has been an increase in reporting related to SDG standards (IFAC, 2021).

According to the Directive, companies with more than 500 employees must present the business model, policies and processes implemented in terms of environmental and social aspects. The information may be presented as a component non-financial statement of the annual report or in the sustainability report as a separate report.

Companies can also opt for an integrated report based on the IIRC reporting framework. The summary of the reporting modalities is presented in Table no. 2.

Table no. 2. Type of report

Type	Regulations
Sustainability report	Directive
Annual report	Directive
Integrated report	IIRC

Source: Own processing

According to the study conducted by IFAC (2021) it turned out that the most common way of reporting information has materialized in sustainability reports.

Assurance on non-financial reporting involves choosing the standards applicable to it. Thus, the IAASB considered the most appropriate is the standard 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, thus it developed the non-authoritative practical guidance to assist practitioners in performing of the extended external reporting assurance engagements (IAASB, 2021).

The certification audit, performed by specialists other than financial auditors based on other standards, was studied by Boiral & Gendron (2011). The aim of the research referred to the extent to which the certification audit can contribute to the achievement of organizational responsibility for sustainable development. The paper carried out critical analyzes of financial audit and standardization (ISO) practices, concluding that the audit function must be viewed from an interdisciplinary point of view.

2. Metodology

To achieve the first objective, the research methodology is based on the analysis and synthesis of information on the challenges of assurance on NFI reporting. For the second objective, the bibliometric analysis is used to identify trends and approaches in the field of assurance on NFI reporting, as well as the authors who have had an impact in the analyzed field.

VOSviewer software was used to process the data to identify the relationships between the keywords used in the literature, as well as between the authors and the citations of their papers. The bibliometric analysis was based on data downloaded from the Web of Science (WoS) – Clarivate Analytics as of July 31, 2021, for the period 2000–2021.

In order to identify the papers that addressed the topic of assurance on NFI, the groups that contained in the topic the keywords “assurance” or “audit” were taken into account, along with one of the following words: “non-financial”, “sustainability”, “corporate social responsibility”, “CSR”, “integrated report”, “integrated reporting”, “environmental”, “greenhouse gas”, “carbon”.

The database highlighted a number of 240 papers from all types of documents. The list was saved as a .txt file and a thesaurus file was provided to combine the almost identical terms. This file was subsequently processed through VOSviewer software, providing keyword analysis and citations based on individual authors and the country-by-country dispersion of the papers.

3. Results

3.1. Challenges in the assurance on NFI

In order to meet the first objective, the guidelines and recommendations published by professional bodies were identified, namely IFAC, IAASB, IIRC, Accountancy Europe and other bodies and consulting companies.

Thus, the IAASB (2021) of IFAC developed the above documents in order to promote consistent and high-quality application of the standard in extensive external reporting assurance engagements to increase reporting quality, strengthen confidence in resulting assurance reports and increase the credibility of reports, so that users can rely on this information. It follows from these documents that in order to establish

credibility and trust, there must be a solid framework tailored to the needs of users, strong governance, more detailed and consistent information and professional assurance services. Also included are illustrative examples for carrying out assurance engagements, which contain aspects of reporting frameworks, the industry in which the company operates, the type of assurance, limited or reasonable, and how to exercise professional judgment.

Accountancy Europe (2018) also conducted a study addressed to experts who were investigated on the needs for assurance of non-financial information. The study showed that the standards used were the international standards on assurance engagements (respectively those coded with 3000, 3400, 3402 and 3410) developed by the IAASB (2018). Based on this document, the challenges identified by the respondents of the mentioned study were summarized in **Table no. 3**.

From the correlation of the presented aspects, it can be deduced that the engagements of the auditors to assurance on NFI reporting is much more difficult than the audit of the financial information, due to the multitude of possible reporting frameworks, the reporting method, as well as the specifics of the company.

Table no. 3. Challenges identified in the assurance on NFI

Issues	Challenges
1. The level of maturity of the reporting	<ul style="list-style-type: none"> • Lower control systems • Lack of information with negative effect • Different definitions of some concepts compared to accounting principles • Reduced customer availability in relation to the auditor
2. The purpose of the assurance engagement	<ul style="list-style-type: none"> • Understanding the scope and responsibilities • Assessing the extent of the engagement according to the reporting method
3. The assessment of engagement	<ul style="list-style-type: none"> • Uncertainty about future information such as strategies and estimates • Occurrence of problems that do not depend on the company (e.g., supply of raw materials) • Formal reporting without highlighting the connection with the company's performance • The impact of technology
4. The assessment of reporting framework	<ul style="list-style-type: none"> • Coherence and comparability of reports • Uncertainties on their own criteria developed by companies • Incomplete information on reporting criteria
5. The assessment of materiality	<ul style="list-style-type: none"> • Defining the users of non-financial reporting • Lack of a common model for setting the threshold • Impossibility of establishing a single significance materiality • The definition of NFI misstatement is different from financial information
6. The form of assurance report	<ul style="list-style-type: none"> • Understanding NFI assurance reports • Applying standards by including more information than the financial audit

Source: Own processing, based on data from Accountancy Europe, 2018

Therefore, the challenges identified in the study conducted by Accountancy Europe (2018) are fully justified which leads to the need to improve auditors by accumulating new knowledge and attracting specialists in other fields. Possible answers to the challenges presented can be grouped into two main directions. A first direction refers to the improvement of the regulations regarding the mandatory reporting and the content of the reports on NFI (European Reporting LAB, 2021), which will materialize by revising the Directive especially regarding the comparability of information, as well as introducing the requirement of the assurance of sustainability information (European Commission, 2021). A second direction is the application by auditors of standards in assurance engagements, through the issuance by the IAASB of guidelines, procedures, examples, as has already begun with the publication of the guideline on the assurance of the extended external reports (IFAC, IIRC, 2021). These ongoing measures need to be continued by others of this kind in order to lead to a more accurate reporting of NFI and to ensure their veracity.

Sonnerfeldt and Pontoppidan (2020) discussed the challenges of assurance practices in the context of increasingly complex and fragmented regulations. The conclusion of the research was that the concept and assurance standards are still "under development" and the definitions and issues remain ambiguous. They also

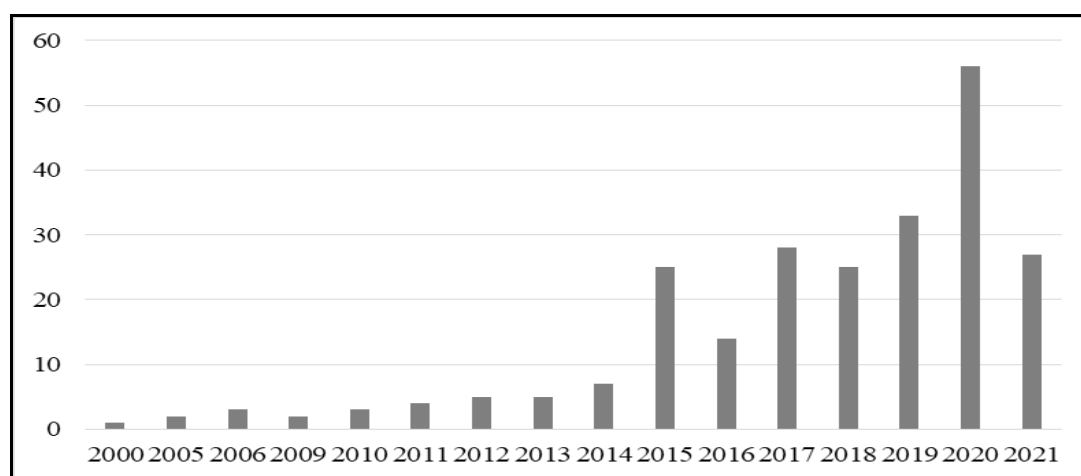
stressed the importance for regulators, companies and their various stakeholders to recognize the value and limitations of assurance, which is a way for companies to improve reporting, but not an end in itself. Their findings referred to the fact that the reports published by companies were only narratives decoupled from organizational realities, so companies should first rethink the purpose of their reporting, and then request the assurance engagement.

The study conducted by IFAC (2021) showed that in some companies the reports were not provided by financial auditors, the non-financial information being certified by specialists other than financial auditors, who applied various standards such as AA1000 *Assurance Standards*, ISO 14064-3 *Greenhouse gases* or other standards. All this shows the complexity of the field of non-financial reporting and its diversity.

3.2. The results of the bibliometric analysis

In the analyzed period 2000-2021, 240 papers were identified that met the selection criteria. *Figure no. 1* shows that the first paper was published in 2000, followed by papers published sporadically in different years. Since 2009, papers have been published every year, with an increasing trend, but only since 2015, the number of papers is growing significantly, reaching 56 papers in 2020.

Figure no. 1. The evolution by years of the number of papers



Source: Own processing

From the point of view of the **document type**, almost 90% of the papers are articles published in the journals of some publishing houses, 10% of the papers were published in conference volumes, 1% in book chapters.

Table no. 4 shows that the **research areas** of the papers published by the authors were diverse, starting from the basic field *Business and Economics* with a

share of over 80%, followed by the field of *Environmental Sciences Ecology*, as well as other subfields within *Technical Sciences* and *Social Sciences*. Also, some journals have been indexed in several fields, which leads to the impossibility of totaling the number of papers according to this criterion.

Table no. 4. Top research areas

Areas	Papers	Weight of
Business Economics	198	82.50
Environmental Sciences Ecology	51	21.25
Science Technology Other Topics	26	10.83
Social Sciences Other Topics	21	8.75
Engineering	11	4.58
Computer Science	7	2.91
Public Administration	7	2.91
Other 23 areas	29	12.09

Source: Own processing

The data processing resulted in the distribution of papers by **country** after the affiliation of the authors, being identified 53 countries. **Table no. 5** shows the countries of origin of the authors who have published a minimum of 10 papers, in descending order. It can be seen that the first two countries hold a third of this total, respectively: Australia (17.08%) and Spain (16.25%), followed by the USA (15.83%) and South Africa (10%).

Table no. 5. Distribution of authors by countries

Countries / Regions	Papers	Weight
Australia	41	17.08
Spain	39	16.25
USA	38	15.83
South Africa	24	10.00
England	20	8.33
Germany	19	7.91
China	17	7.08
Netherlands	17	7.08
Italy	16	6.67
France	11	4.58
New Zealand	10	4.44

Source: Own processing

Keyword analysis is how the most common keywords appeared together in the papers studied. VOSviewer software highlighted 982 keywords. From the total number of words selected, those that had at least 5 occurrences were analyzed, resulting in a selection of 87 words, from which 31 words were eliminated, respectively irrelevant and those that were replaced with similar expressions (for example CSR reporting or merging terms expressed in the singular or plural). Thus, in the end, 56 words were grouped in three clusters, with a minimum of 10 words per cluster, having a setting made in the bibliometric software for resolution one.

Table no. 6 shows the elements of each cluster that interacted with each other. Cluster A is the main one, which refers to assurance, which has made connections with two other clusters, respectively cluster B, with CSR key element and cluster C highlighted by words that mainly refer to governance.

Thus, in cluster A were grouped the words with the most occurrences, starting from the central keyword "assurance" with 139 occurrences, along with other words such as disclosures (104), sustainability report (104), performance (80) words which confirms that the chosen research topic is in an increasing trend. A second group resulting from the analysis (cluster B) was that of corporate social responsibility (90

appearances), which also contains elements derived from its connection with their assurance, respectively impact, perception and independence. The group of words with lower links (cluster C) refers to

governance (54 occurrences), integrated reporting (19) correlated with other terms related to the company (management, internal audit, earnings, ownership).

Table no. 6. Clusters

Cluster A	No.	Cluster B	No.	Cluster C	No.
assurance	139	CSR	90	governance	54
disclosure	104	impact	72	integrated reporting	19
sustainability report	104	legitimacy	28	management	18
performance	80	information	26	insights	14
determinants	57	companies	19	combined	13
quality	52	perceptions	17	framework	7
statements	49	demand	8	internal audit	7
services	39	independence	8	earnings	6
credibility	32	sustainable development	8	opportunities	6
market	20	value	8	ownership	5
cost	19				
stakeholders	17				
audit	16				
accountability	14				
relevance	12				
expertise	11				
auditors	10				
construction	10				

Source: Own processing

The analysis was continued with the identification of the **most cited authors** who published articles regarding the assurance on NFI reporting that were indexed in the WoS database. Out of the total of 484 identified authors, the selection criterion was that an author had accumulated at

least 100 citations, so VOSviewer highlighted 37 authors who met these conditions. From the data processing, it was found that there is no close relationship between the authors in terms of co-authorship and citations. **Table no. 7** presents the list of authors with over 200 citations.

Table no. 7. Top authors having at least 100 citations

Authors	Documents	Citations
Simnett, Roger	7	869
Chua, Wai Fong	1	501
Vanstraelen, Ann	1	501
Perego, Paolo	4	481
Kolk, Ans	2	466
O'Dwyer, Brendan	3	419
Garcia-Benau, Maria A.	4	301
Owen, David	1	263
Unerman, Jeffrey	1	263
Zorio, Ana	4	259
Martinez-Ferrero, Jennifer	11	249
Garcia-Sanchez, Isabel-Maria	8	216

Source: Own processing

The analysis showed that the most cited authors were as follows: Simnett with 869 citations from 7 documents, followed by Chua and Vanstraelen with 501 citations from a single document. In fact, the mentioned authors were co-authors of a paper that accumulated 501 citations. The ranking is continued by three authors with over 400 accumulated citations, namely Perego (481), Kolk (466) and O'Dwyer (419). The author with the most papers included in the sample was Martinez-Ferrero, respectively with 11 papers.

To develop the research, the papers were centralized on the publications and publishers that own them. **Table no. 8** includes **the journals** in which the papers were published, in descending order of number. The analyzed papers were published in prestigious journals, from which the journals were selected in which at least 3 papers on the studied topic were published. It should be noted that a number of 17 papers that were presented at conferences are registered as published in 2 separate publications, which led to the impossibility of totaling the amounts in the table.

Table no. 8. Distribution of papers by publications

Publication Titles	No of papers	Weight (%)
Auditing: A Journal of Practice & Theory	14	5.83
Journal of Business Ethics	14	5.83
Corporate Social Responsibility and Environmental Management	12	5.00
Accounting Auditing Accountability Journal	11	4.58
Business Strategy and the Environment	10	4.17
Sustainability Accounting Management and Policy Journal	8	3.33
European Accounting Review	6	2.50
International Journal of Auditing	6	2.50
Journal of Cleaner Production	6	2.50
Managerial Auditing Journal	6	2.50
Southern African Journal of Accountability and Auditing Research	6	2.50
Sustainability	6	2.50
Meditari Accountancy Research	5	2.08
Contemporary Accounting Research	4	1.67
Accounting Organizations and Society	3	1.25
Australian Accounting Review	3	1.25
British Accounting Review	3	1.25
International Journal of Disclosure and Governance	3	1.25
Journal of Accounting and Public Policy	3	1.25
Journal of International Financial Management Accounting	3	1.25
Social Responsibility Journal	3	1.25
13 journals and conference volumes with 2 articles each	26	10.83
96 journals and conference volumes with one article each	96	40.03

Source: Own processing

Table no. 8 shows that the journal with the most published articles is Auditing: A Journal of Practice & Theory, indexed in Business category, followed by Journal of Business Ethics and Corporate Social Responsibility and Environmental Management, which are

interdisciplinary journals indexed in several categories. It can also be seen that almost half of the number of papers were published as single article or at most two articles in a journal, and the other half of the number of papers was concentrated in the 21 journals presented.

The journals mentioned in the previous table are published by various **publishers** whose situation is

presented in **Table no. 9**, in descending order according to the number of papers.

Table no. 9. Top publishers		
Publishers	Papers	Weight
Wiley	48	20.00
Emerald Group Publishing	46	19.17
Springer Nature	29	12.08
Elsevier	24	10.00
American Accounting Association	18	7.50
Taylor & Francis	13	5.42
MDPI	7	2.92
IEEE	7	2.92
South African Inst Government Auditors	6	2.50
Other 5 publishers with 2 articles each	10	4.16
Other 25 publishers with one article each	32	13.33
Total	240	100.00

Source: Own processing

Table no. 9 shows that the first 3 publishers hold more than half of the total papers analyzed. It should be noted that papers have also been registered by publisher of professional associations of accountants, represented mainly by the American Accounting Association, which owns the *Auditing: A Journal of Practice & Theory*, being

the journal with the most papers on the subject studied. This fact shows a permanent concern of professional accountants.

Out of the total number, 14 papers were highlighted that accumulated at least 100 citations, the situation of which is presented in **Table no. 10**.

Table no. 10. Top articles with minimum 100 citations					
Title	Authors	Journal	Year	Total citations	Annual aver.
Assurance on Sustainability Reports: An International Comparison	Simnett, Roger; Vanstraelen, Ann; Chua, Wai Fong	Accounting Review	2009	501	38.54
Determinants of the Adoption of Sustainability Assurance Statements: An International Investigation	Kolk, Ans; Perego, Paolo	Business Strategy and the Environment	2010	273	22.75
Seeking legitimacy for new assurance forms: The case of assurance on sustainability reporting	O'Dwyer, Brendan; Owen, David; Unerman, Jeffrey	Accounting Organizations and Society	2011	263	23.91
Multinationals' Accountability on Sustainability: The Evolution of Third-party Assurance of Sustainability Reports	Perego, Paolo; Kolk, Ans	Journal of Business Ethics	2012	193	19.3
Impact of Assurance and Assurer's Professional Affiliation on Financial Analysts' Assessment of Credibility of Corporate Social Responsibility Information	Pflugrath, Gary; Roebuck, Peter; Simnett, Roger	Auditing: A Journal of Practice & Theory	2011	171	15.55
CSR and Assurance Services: A Research Agenda	Cohen, Jeffrey R.; Simnett, Roger	Auditing: A Journal of Practice & Theory	2015	154	22.00
The Case of Sustainability Assurance: Constructing a New Assurance Service	O'Dwyer, Brendan	Contemporary Accounting Research	2011	142	12.91
Assurance of Sustainability Reports: Impact on Report Users' Confidence and Perceptions of Information Credibility	Hodge, Kristy; Subramaniam, Nava; Stewart, Jenny	Australian Accounting Review AUSTRALIAN ACCOUNTING REVIEW	2009	139	10.59

Title	Authors	Journal	Year	Total citations	Annual aver.
Understanding and Contributing to the Enigma of Corporate Social Responsibility (CSR) Assurance in the United States	Casey, Ryan J.; Grenier, Jonathan H.	Auditing: A Journal of Practice & Theory	2015	129	18.43
The Association between Sustainability Governance Characteristics and the Assurance of Corporate Sustainability Reports	Peters, Gary F.; Romi, Andrea M.	Auditing: A Journal of Practice & Theory	2015	123	17.57
Sustainability Reporting and Assurance: A Historical Analysis on a World-Wide Phenomenon	Junior Mori, Renzo, Best, Peter J.; Cotter, Julie	Journal Of Business Ethics	2014	123	15.38
How Credible are Mining Corporations' Sustainability Reports? A Critical Analysis of External Assurance under the Requirements of the International Council on Mining and Metals	Fonseca, Alberto	Corporate Social Responsibility and Environmental Management	2010	112	9.33
Corporate social responsibility research in accounting	Huang, Xiaobei Beryl; Watson, Luke	Journal Of Accounting Literature	2015	106	15.14
Sustainability Development and the Quality of Assurance Reports: Empirical Evidence	Zorio, Ana; Garcia-Benau, Mari A.; Sierra, Laura	Business Strategy and The Environment	2013	101	11.22

Source: Own processing

Table no. 10 shows that the *Accounting Review* journal has only one article published, but which has accumulated the most citations. The journal *Auditing: A Journal of Practice & Theory*, ranked first by the number of citations, counted 4 articles that had over 100 citations.

It should be noted that articles written since 2009 that consisted mainly of non-financial reporting by companies have accumulated consistent citations.

The first article published in 2000, written by Wallage, accumulated 63 citations, being cited annually since 2009. The aim of the article was to highlight the experience resulting from the verification of sustainability reports, respectively the report issued by Shell in 2000. At that time, standards were not available for reporting, which meant applying new criteria needed to assess management's claims about sustainability. The conclusion of the study was that verifying sustainability reports is a very difficult assurance service for financial auditors, which could be a challenge for academic researchers to develop additional research. We can say that Wallage (2000) paved the way for research in this field with a long-term vision.

A year later, Gray (2001) performed a 30-year radiograph from 1970-2000 on social accounting, reporting and auditing. Thus, the certification of information was performed through the social audit performed by independent bodies, but without usually being hired by the organization in question.

The above-mentioned articles addressed voluntary non-financial reporting more because in the periods when the research was conducted, the regulations on mandatory reporting were not yet generalized. One topic addressed was that of international comparisons and investigations. Thus, Simnett, Vanstraelen and Chua (2009) analyzed the emerging voluntary assurance market of a sample of sustainability reports published between 2002-2004. The results showed that companies that wanted to build their corporate reputation resorted to assurance engagement on sustainability reporting, regardless of whether the assurance provider is an auditor or another specialist, the auditor being preferred by companies in stakeholder-oriented countries. Kolk and Perego (2010) investigated the factors influencing the use of voluntary services for assurance on sustainability reports, on a sample of companies included in the international index Fortune Global 250 for the years 1999, 2002 and 2005. The results were similar to those of the aforementioned authors, namely that companies operating in countries that are more stakeholder-oriented and have a weaker governance regime are more likely to require to assurance on sustainability reporting. Perego and Kolk (2012) analyzed the reports issued by multinational companies, finding that they projected a decoupled or symbolic image of liability, thus undermining the credibility of assurance practices.

Another topic addressed was that of legitimacy, so O'Dwyer et al. (2011) examined the evolution of the

legitimation processes adopted by practitioners in assurance of the sustainability of audit firms based on the structure and the content of assurance statements, so that users are fully informed about the assurance engagement made.

Content analyzes of sustainability reports were also performed to establish their credibility. Pflugrath, Roebuck and Simnett (2011) concluded that the credibility of a sustainability report is higher when it is assured and when the assurer is a professional accountant. Also, according to research conducted by Hodge et al. (2009) users had more confidence in sustainability reports when the level of assurance offered is reasonable (i.e., high, but not absolute) and when the assurance was provided by an accounting and auditing firm.

O'Dwyer, B. (2011) sought to understand how assurance practitioners have come to construct practices for assurance on sustainability reporting, and the extent to which these efforts have made these reports auditable, highlighting the inherent difficulties involved in the direct transfer of traditional audit practices to new areas of assurance characterized by unclear qualitative data.

Casey & Grenier (2015) analyzed the assurance market of corporate social responsibility (CSR) in the United States, the results showing that for companies in industries highly regulated their supervision can act as a substitute for assurance on CSR, so demand of these services was not very high. The level of the assurance services market was researched by Cohen and Simnett (2015) who identified the characteristics of this market that may have an impact on the decision to use these services and the choice of service provider based on competitiveness and quality requirements.

Another researched topic was that of corporate governance mechanisms, Peters and Roma (2015) investigated whether sustainability-oriented corporate governance mechanisms had an impact on the voluntary assurance of corporate sustainability reports. Thus, the companies that had a sustainability director within the management team turned to the services of assurance of the sustainability reports, and this connection increased when the director had experience in this field, being preferred as service providers the financial audit companies.

The topic of INF reporting has been intensively studied in the last 5 years, during which time mandatory regulations have become widespread in several countries, so that the authors have addressed the same topics as those presented above, or new ones (García-Sánchez, 2021).

Thus, the credibility of the reports was further studied by García-Sánchez (2020), Quick & Inwinkl (2020) and Zhou, Simnett & Bray (2020).

Challenges of engagements and assurance practices have been studied by Braam & Peeters (2018), Sonnerfeldt & Pontoppidan (2020) and Krasodomska, Simnett & Street (2021). Other topics addressed referred to the quality of assurance engagements that may be influenced by audit committees (Zaman et al. (2021), but also to the analysis of assurance reports in the case of a financial market, such as Italy (Rossi & Tarquinio, 2017).

A systematic literature review on the assurance of extensive external reporting was carried out by Venter & van Eck (2021), based on articles published between 2009 and 2020 in relevant journals indexed in the Scopus, EBSCOhost and ProQuest's databases. The analyzed articles addressed different research methodologies and tools, such as archival, experimental, interviews, case studies, surveys and content analysis. The results of the study showed a rapid growth of the literature in the period 2018-2020, the main topics addressed being the determining factors and the consequences of assurance.

Previously, the most relevant papers were presented, but there may be other valuable researches. The authors' general findings were that auditors had difficulty in assurance engagements, indicating that a review of non-financial reporting regulations was required, and that companies needed to be more responsible in disclosing the information included in published reports.

From the literature review we found that the number of papers that systematically reviewed the existing research literature on non-financial reporting and bibliometric analysis was relatively low, most focused on the topic of sustainability reporting, expressed by various concepts. Di Vaio et al. (2020) in the study conducted on a sample of 60 papers published in the period 1990-2019 identified a close link between the concepts of integrated thinking and non-financial reporting. Erkens, Paugam, & Stolowy (2015) conducted a bibliometric analysis of articles published on INF between 1973-2013 and found that research reached a certain degree of maturity in the early 2000s and that the most common topic studied in INF research has been corporate social reporting. Pasko et al. (2021) carried out a bibliometric analysis on the papers published on sustainability reporting in the period 1981-2020 and found that their number increased more after 2009, after which there is a maturity of research, so how much research is the more recent the more elaborate they are.

Compared to the previous bibliometric analyzes mentioned in the paper, the originality of our paper is given by the association of the concept of assurance with the expressions that refer to the reporting of non-financial information.

Conclusions

The assurance engagement of non-financial information is different from auditing financial information. Thus, auditors issue the report or statement of assurance on the basis of other standards, which may create difficulties in their application. The difficulties can arise from the way the reports were prepared, but also by the practices that the auditor must carry out in carrying out the engagement.

The aim of the paper was to highlight the main challenges of auditors in assurance engagements on non-financial information and what research has been published on this topic. A bibliometric analysis of the links between key concepts, authors, journals in which the papers were published, as well as the number of citations that ensure the visibility of research results was also performed.

From the synthesis of the information from the guides and recommendations of the professional bodies it resulted that the auditors are faced with major challenges due on the one hand to the inconsistency, but also to the diversity of reporting frameworks and the way companies comply with them (Sonnerfeldt & Pontoppidan, 2020, Krasodomska, Simnett & Street, 2021). On the other hand, there are aspects related to the auditing profession, respectively to the application of audit standards, which do not yet provide for uniform practices in fulfilling the engagements, leaving a greater freedom to the professional reasoning of the auditors. But this situation can also be seen as an opportunity in the professional development of auditors to provide quality services. (Venter & van Eck, 2021, Zaman et al., 2021).

The results of the bibliometric analysis showed that the research interest on the studied topic has had an increasing trend in recent years, largely due to mandatory regulations on non-financial reporting, similar results being

obtained by Venter & van Eck (2021). It was confirmed the existence of close links between the concepts studied, namely assurance, sustainability reporting, governance.

The basic conclusion that emerges is that research in the field has evolved from the analysis of voluntary reporting to the analysis of mandatory reporting. Since the introduction of mandatory non-financial reporting, the problem of the difficulty of the assurance engagement to provide this information has become more pronounced, which has led to many debates in professional bodies to identify the challenges that auditors have to meet. This topic remains a topic of debate that still needs to be explored to identify all the challenges that auditors face and that would be possible solutions to both regulatory and audit practices (Sonnerfeldt & Pontoppidan, 2020; Krasodomska, Simnett & Street, 2021).

The results obtained can be useful for professional accountants to improve non-financial reporting, the study conducted can be a guide for auditors, which summarizes the main challenges identified in providing assurance engagements. Managers can identify the critical points of companies and take action in time, in accordance with the findings summarized by Accountancy Europe (2018). Regulators can identify issues that should be legislated so that companies' reporting leads to increased investor confidence.

The paper contributes to the knowledge of the reality in the field of non-financial reporting, being a source for researchers in the field of accounting and auditing, through information on a summary of papers published on this topic that can be developed in connection with other fields, such as financial audit.

The analysis had some limitations given by the sample of analyzed papers, taken from a single database (WoS), which led to the limitation of identifying other published papers, but the research can be continued by a future bibliometric analysis of articles indexed in other databases. The paper is a premise for quantitative research that may include in the study variables that lead to the creation of an econometric model on the factors that influence the content of non-financial reporting.

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Performance Audit Challenges in the Public Sector in Romania

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Abstract

Over the last decade, performance audit missions have become increasingly important in the public audit activity carried out in Romania.

The purpose of this article is to present the characteristics but also the challenges of performance audit missions through a synthesis of the similarities and differences found between this type of mission and other types of public audit: system audit, regularity audit and financial audit. The research methodology used was both qualitative and quantitative, with the role of comparatively pointing out the distinct way of carrying out these types of missions realized out on the specifics of the INTOSAI Audit Standards.

Key words: INTOSAI; Supreme Audit Institutions; performance missions; system missions; regularity missions; financial audit missions;

JEL Classification: M42, H83

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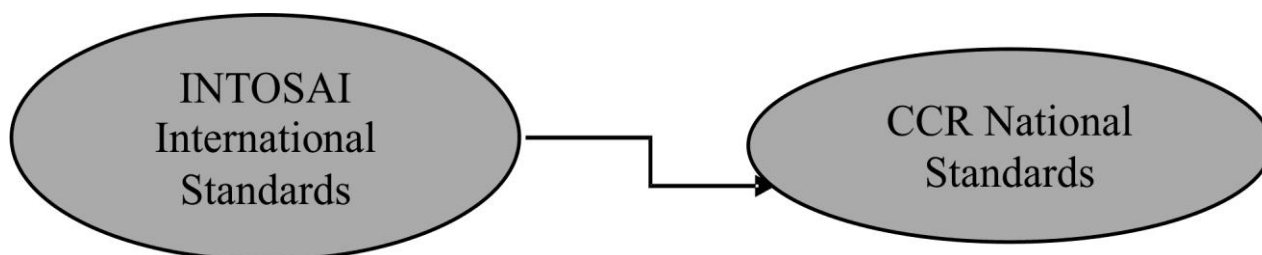
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1. Introduction

In the context of the progress of public audit activities over the last 30 years, in the sense of adapting to the requirements of the internal business environment, which happened not only in Romania but also in other countries (Xhani, Avram&Iliescu, 2020),

(Reichborn-Kjennerud, 2014), the quantification of the perception of their effectiveness aimed at carrying out performance audit missions. These missions examine whether the entity's objectives and activities are established in such a way that the results can be evaluated and their compliance with the objectives can be stated.

Figure no. 1. The relationship of interdependence between Standards



Source: Authors' processing after Standards, 2011

Over the last few decades, Supreme Audit Institutions around the world have been in a position to increase the number of public performance audit missions and to create a mechanism to improve the activities carried out by the public sector, also taking into account the existence of periods of austerity (Torres, Yetano & Pina, 2016). However, there is research in some Western European countries which concludes that the attention paid to these missions in the media and in Parliament is moderate and that dialogue between the Supreme Audit Institution and ministries is important in this context (Reichborn-Kjennerud, 2014).

The aim of this paper was to define the different types of public audit missions analyzed, to present the standardized framework applicable to performance audit and to present through a comparative analysis the similarities and differences between these missions and those of regularity, system and financial audit. At the same time, we performed the analysis of concrete data provided by representative institutions in organizing such missions in the public sector, highlighting the methodological challenges of performance audit in Romania.

In Romania, the International Auditing Standards issued by INTOSAI (International Organization of Supreme Audit Institutions) are applied, but interpreted in the specific context of a country within the European Union. Auditors use these standards to perform quality, efficient and

effective professional activities. These standards aim to comply with the guidelines of the public finance audit, operating conditions that should be followed by the Supreme Audit Institutions (for Romania – the Romanian Court of Accounts), basic audit principles and specific operational lines for conducting financial, performance and compliance audits.

The Romanian Court of Accounts has issued audit standards which it uses in its work in this way:

- General: regarding ethical conduct, audit documentation and the principles of legality and regularity, the use of the work of auditors and experts, quality assurance and control in audit work, communication, accountability, transparency and monitoring of the implementation of the measures ordered.
- Specific: on the financial audit; on performance audit and compliance audit.

2. Standardized framework and specialty literature

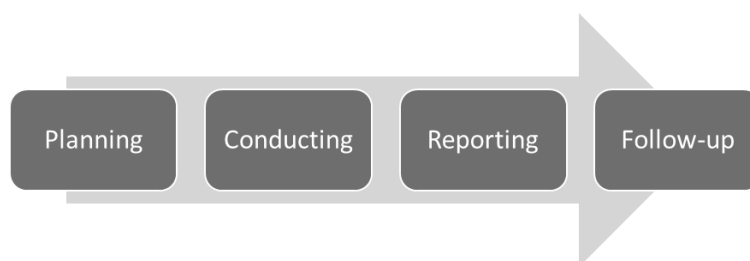
In our analysis we will use standards for mission planning, standards for audit procedures and techniques and those related to the performance of the audit report following a performance audit.

The standards used in performance audit missions are the International Standards of Supreme Audit Institutions (INTOSAI): Fundamental Principles of Performance Audit mentioned in ISSAI 300; Standards and guidelines for performance auditing based on INTOSAI audit standards and practical experience – ISSAI 3000; Performance audit guidelines – key principles – ISSAI 3100. The following documents are also used in the public performance audit: the Performance Audit Manual of the European Court of Accounts, the Performance Audit Manual of the Romanian Court of Accounts, H.G. no.155/2014 for the approval of

the Regulation on the organization and development of the specific activities of the Court of Accounts, as well as the capitalization of the documents resulting from these activities and H.G. no.1086/2013 for the approval of the General Rules regarding the exercise of the public internal audit activity.

The standards state that such performance audit missions are performed in high-risk areas and do not preclude checks on compliance with applicable laws and regulations.

Figure no. 2. Stages of performance audit missions



Source: ISSAI 300, INTOSAI Professional Standards Committee

There are three ways to organize a performance audit mission: based on results, by analyzing the occurrence of dysfunctions within the audited objective, but also a combination of them.

The performance missions aim to ensure the minimization of costs with the allocated resources to achieve maximum

results, using the application of management principles and practices. Thus, the measurement of performance is achieved through the 3 E, economy, efficiency and effectiveness.

When targeting the 3 E, the auditors use questions such as those in **Table no. 1**.

Table no. 1. Questions used to measure performance

For economy	For efficiency	For effectiveness
Do procurement procedures comply with this principle?	Does the use of resources respect the principle?	Have the planned results been achieved through the managerial policy?
Has the use of resources been made in compliance with the principle?	Does the management, organization, execution and monitoring of the audited activities comply with the principle?	Do the means used and the results obtained correspond to the objectives of the managerial policy?
Has the management pursued the achievement of the established objectives and performance indicators?	Do the activities correspond to the objectives and requirements and quality, timely and customer / citizen oriented services are offered?	Is the scheduled impact a direct result of managerial policy or due to the circumstance?

Source: Own projection

To carry out a performance audit it is necessary **to use at least two of the three concepts:**

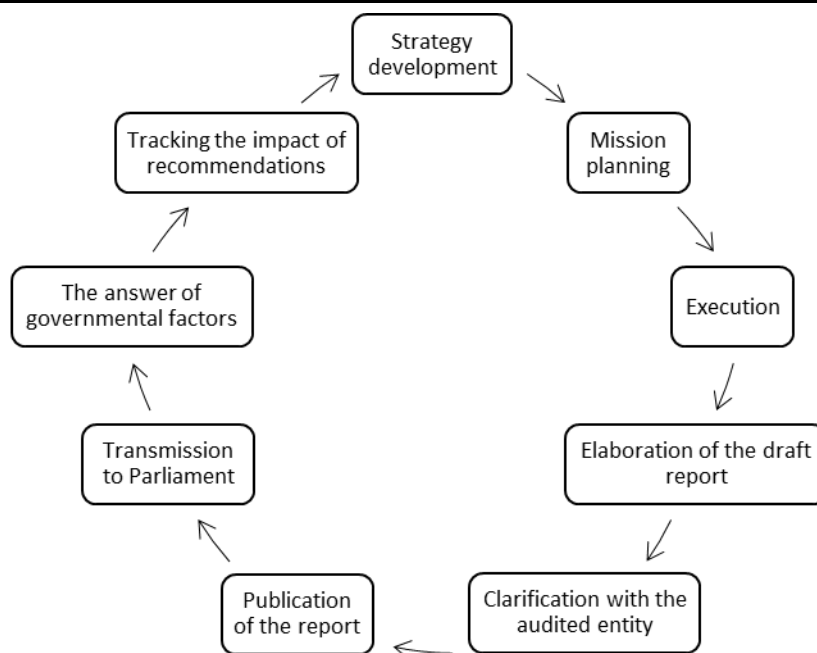
- Economy → minimizing the costs allocated to achieve the estimated results but maintaining quality;

- Efficiency → maximizing results on allocated resources;
- Effectiveness → the degree of fulfillment of the objectives.

In the planning phase, the external performance audit is performed through strategic planning, when establishing audited themes and entities and operationalization. In the first instance, the strategy in such missions is to analyze the risks,

especially those of major irregularities and fraud, areas of interest and based on information received through audit reports from ministries / financial audit and new initiatives / activities of the executive / entities. In order to establish the strategy, a minimum time horizon of 3 years is analyzed and it is decided which are the human, material and time resources that are necessary to accomplish the performance mission, so that a strategic choice can be made.

Figure no. 3. The performance audit process



Source: The Performance Audit Manual, 2005, Romanian Court of Accounts

According to the Activity Report for 2020, the strategy of the Romanian Court of Accounts is to increase the number of performance audit topics, as a number of 52

such missions were performed out of a total number of 3,023 external public audit missions, respectively 1.72%.

Table no. 2. Risks regarding non-compliance with the 3 E

1. The existence of unjustified expenditure, which exceeds expectations;
2. Economic objectives not achieved or partially met;
3. Costs and significant exceedances of the completion deadlines in case of some projects;
4. Complaints, appeals and attitudes of the representatives of the consumer groups regarding the quality of the services provided by the entity;
5. High levels of debt to public budgets and other creditors;
6. The accounting system and the internal control system improperly organized or managed;
7. Significant losses caused by natural disasters, waste, etc.;
8. Frequent changes of institutional / organizational nature;
9. Various worrying information regarding the use of public funds presented by the media.

Source: Authors' processing after Standards, 2011

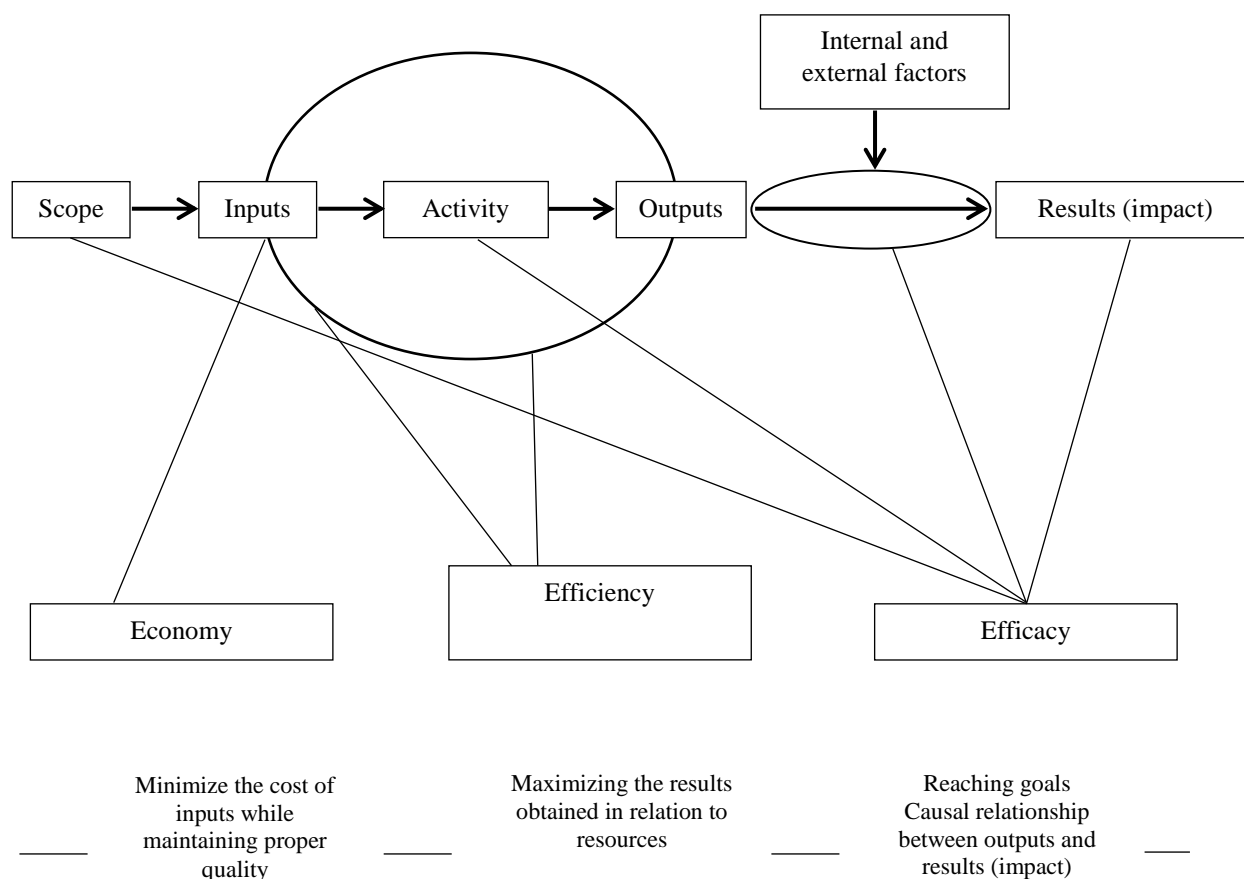
The strategic choice in performance missions must also take into account the answers to the following questions:

1. Are the 3E at risk?
2. Will the study of the topic bring new information to increase performance?
3. Is it a good time to choose a theme?
4. Possibility to conduct the study?
5. Does the topic fit into the audit policy?

The performance audit **does not necessarily involve the simultaneous analysis** of the "3E" – economy, efficiency and effectiveness, as specified in the regulation on the organization and conduct of activities specific to the Court of Accounts, as well as the capitalization of the documents resulting from these activities issued by the Romanian Court of Accounts.

A model followed by auditors in performance audit missions is that of tracking inputs and outputs (*Figure no. 4*).

Figure no. 4. Input and output model in the performance audit



Source: Performance Audit Manual, 2005, Romanian Court of Accounts

Following the analysis of the public performance audit missions carried out by the Romanian Court of Accounts, it was observed that in order to achieve the goal, multi-

annual missions were also carried out. (e.g., Performance audit of the sports patrimony administration of the Ministry of Youth and Sports during 1990-2016).

In preparation for the public audit mission, the auditor conducts a **preliminary study** which has in its composition **an analysis of the risks that are significant on the financial management** ie the risks of not meeting the targets set for achieving the 3E in the use of public funds and in the management of assets. These can be inherent in their nature (inherent risk) and / or may be influenced by deficiencies in the organization and conduct of internal control (control risk).

In this regard, the auditor identifies the relevant risk factors:

1. The nature and complexity of the policy, program and operations;
2. The diversity of the entity's objectives and purposes;
3. Availability of resources,
4. The complexity of the organization's structure and the clarity of responsibilities;
5. The existence and clarity of control systems;
6. Complexity and quality of management information.

Risk identification leads the auditor to areas with high-risk potential, which must be analyzed during the audit engagement. By establishing the risks, the auditor makes a list of them and makes a first assessment of the risks with the information available at that time.

In order to carry out its mission, the auditor must use the audit criteria he / she acquires, analyzing in particular the applicable legislation, standards and setting the audit objectives. For each objective, questions are established for obtaining the evidence that will form the basis of the opinion formulated and of the recommendations formulated.

The Court of Accounts carries out such tasks primarily because it has a "responsibility to Parliament and taxpayers in connection with the proper management of public funds and resources". (Auditing standards, 2011), and it must respond to requests from them.

A specific procedure for this type of audit is the **use of the debate group** to collect information for testing in the mission, from those related to the audited field, members of professional organizations, researchers, academics.

We consider this approach very important for obtaining quality recommendations.

So, the audit criteria chosen by the public auditors will be established taking into account legislation, standards, examples of good practice, performance indicators, various criteria from capitalizing on the experience of various researchers, academics, experts, etc.

Data analysis is done through comparative analysis, cost-benefit analysis, cost-effectiveness analysis, analysis of the achievement of objectives, "before and after" analysis.

The auditor seeks to determine the cause of the problem and the effect of that problem, the consequence.

The performance audit report prepared by the team of auditors is presented in a specific form including **the positive findings as well as those for which constructive recommendations have been established**. The audit report can be sent to the specialized Commission of the Parliament, the Government, the Ministry of Finance, the Official Gazette, the audited public institutions, the interested entities. Moreover, such reports will be re-analyzed by experts, the audited entity, academics and the team that participated in the study, in a period subsequent to its publication, to make a report to the Court of Accounts setting out the views of these parties leading to opportunities to increase the quality of this type of mission and increase its impact. Such a mechanism also helps to increase confidence in the work of the Court of Accounts.

The annual audit report of the Romanian Court of Accounts as the Supreme Audit Institution with experience in performance auditing is published electronically and also forwarded to Parliament's Specialized Committees for analysis and submitted to the Plenary for debate, after which a report with proposals and conclusions is prepared by these Commissions.

The Executive will receive this report and through the Ministry of Finance will make a memorandum which will mention the recommendations retained for implementation considering that **there is no legal provision that obliges the executive to implement**. Annually, the Court of Accounts analyzes the implementation of these recommendations, which during 2020 represented 115 such actions.

The interest of the Romanian Court of Accounts regarding the accomplishment of performance missions is documented also in 2012, when it has initiated cyclic missions in an area of interest, for example the system of social assistance benefits for preventing and combating poverty.

The European Court of Accounts found that **the most frequently used indicator of the impact of performance audits is given by the recommendations implemented or admitted** (Van Looke & Put, 2011). The authors analyzed the

existing information for the reports / syntheses of performance audit reports published on the page of the Romanian Court of Accounts (named in **Appendix no. 1**), from a number of 19 reports / summaries, made for an audited period between 2004-2019, it was observed that all these reports / report summaries have

accepted recommendations and only for two reports (approximately 11%) were the views expressed by the auditors. The activity reports of the institution did not contain information on the number of recommendations implemented in the performance audit reports.

Number of performance audit reports / summaries for which there are recommendations	Of which: Number of Performance Audit Reports / Summaries for Accepted Recommendations	Of which: Number of performance audit reports / summaries for which views were expressed at the time of reconciliation by the audited entity	Minimum and maximum years of the audited period of audit missions
19	19	2	2004-2019

On the other hand, the interest and appetite for performing public internal performance audit missions has been growing, so in the Report on the internal public audit activity in Romania for 2019, Central Harmonization Unit for Public Internal Audit mentions the intention to launch an updated guide on performance audit but also to carry out a pilot project on testing the methodology developed within the UAT Vulcana Băi.

Although 13,177 public internal audit missions were carried out in 2019, none of them were performance audits.

3. Research methodology

The research carried out is exploratory, qualitative, refers to the revision of the specialized literature and the standards used in the public performance audit missions. with an emphasis on the comparative analysis of the similarities and differences found between this type of mission and other types (regularity, system, financial audit). The study aims to score the characteristics and challenges of performance auditing in the Romanian public sector. The paper was also based on the differentiated study of the latest reports on the internal and external public audit activity published by the Central Harmonization Unit for Public Internal Audit (2019) and the Romanian Court of Accounts (2020), from the point of view of the organization of this type of missions and information on the regulations used in each of the two types of public performance audit missions, but also through the qualitative and quantitative analysis of the information from 19 reports / syntheses of performance audit reports made by the Romanian Court of Accounts,

for a period of 15 years, for which activities from different fields were audited.

4. Similarities and differences between performance, system, regularity and financial audit

Using the comparative analysis of the legislative framework regarding the public audit activity described by Law no. 672/2002 and Law no. 94/1992, we can observe the differences in definition between the four types of public audit missions performed by the internal and external public auditor, as in **Table no. 3**.

It can be seen from **Table no. 3** that there are:

- a similarity between the internal public audit missions called regularity or compliance audit missions and the external public audit missions called financial or compliance audit missions;
- a similarity between the evaluation carried out during public external performance and performance audit missions and the system's internal public audit missions, which aims to function in terms of effectiveness, economy and efficiency;
- a similarity in the sense that organized external public audit missions refer to three types of such missions, while internal public audit missions refer to three types of missions;
- a clear difference between the names of other types of internal public audit missions and those of external public audit.

Table no. 3. Differences in defining the four types of public audit missions

Performance audit	System audit	Regularity / compliance audit	Financial / compliance audit
Analyzes the criteria established in order to implement the objectives and attributions of the entities towards the obtained results (internal) Evaluate independently how it works in terms of efficiency, economy, effectiveness of the activity / operation / program (external)	Evaluate management and internal control systems to determine whether they work economically, effectively and efficiently (internal)	Examine actions on financial effects in terms of compliance with all applicable principles, procedural and methodological rules (internal)	It is checked whether the financial statements are complete, real and in accordance with the laws and regulations in force (external)

Source: Authors' processing according to Law no. 672/2002 and Law no. 94/1992

We continued in **Table no. 4** the comparative analysis based on the characteristics described by H.G. no.1086 / 2013 for the approval of the General Rules regarding the exercise of the public internal audit activity and of H.G. no.155 / 2014 for the approval of

the Regulation on the organization and development of specific activities of the Court of Accounts, as well as the capitalization of the documents resulting from these activities issued by the Court of Accounts of Romania.

Table no. 4. Comparison of the characteristics of the four types of public audit missions (continued)

Performance audit	System audit	Regularity / compliance audit	Financial / compliance audit
Performance audit as an independent and objective activity of analysis of activities / processes / programs / projects in an entity, designed to add value to them, by evaluating and comparing the results obtained with those proposed or expected, in conditions of economy, efficiency and effectiveness.	The system audit is performed by evaluating the management and internal control systems to determine whether they operate economically, effectively and efficiently.	Actions on financial effects are examined in terms of compliance with applicable principles, procedural and methodological rules.	The financial audit aims at verifying: a) the accuracy and reality of the financial statements, in accordance with accounting regulations; b) the evaluation of management and control systems regarding the follow-up of financial obligations to budgets or other public funds; c) the use of funds allocated from the budget or other special funds according to the established destination; d) the quality of the economic-financial management; e) economy, efficiency and effectiveness of the use of public funds; f) evaluation of the financial control and internal audit activities of the audited entities.

Performance audit	System audit	Regularity / compliance audit	Financial / compliance audit
OBJECTIVES			
<p>The main objective is to assess how the entity uses public funds, complies with the principles of economy, efficiency and effectiveness, and provides management with an independent view of achieving the desired results, as well as recommendations on ways to increase its performance.</p> <p>The results obtained examined aim at the following aspects:</p> <ul style="list-style-type: none"> a) economy, in order to minimize the cost of resources allocated to achieving the estimated results of an activity while maintaining the appropriate quality; b) efficiency, maximizing the results of an activity in relation to the resources used; c) effectiveness, ie the degree to which the objectives programmed for each activity are met and the ratio between the projected effect and the actual result of the activity. <p>Approaches used by internal auditors:</p> <ul style="list-style-type: none"> a) results-based approach, for evaluating the performances achieved, regarding the fulfillment of the requirements regarding the economy, efficiency and effectiveness in the process of implementation and development of a program or activities; b) problem-based approach refers to the identification, verification and analysis of problems, respectively the economy, efficiency and effectiveness of activities related to the implementation and development of programs or the performance of activities by audited entities and the causes of their occurrence. The performance audit examines the internal / managerial control system to identify vulnerabilities and risk areas for performance targets. The system ensures the economy, efficiency and effectiveness of activities. 	<p>The component subsystems of the entity shall be analyzed in specific missions to ensure the functioning of the entity.</p> <p>These missions use elements specific to the regularity of activities and elements of performance. The criteria used in carrying out these missions are:</p> <ul style="list-style-type: none"> a) compliance; b) regularity of operations and professional ethics; c) patrimonial integrity and supporting documents; d) economy of inputs, resources used and efficiency of operations; e) achieving objectives according to quality and performance standards; f) useful and reliable operational and financial information. <p>For this type of mission, the public entity is a system, composed of several subsystems. Using information on the size, volume and diversity of the areas in which the public entity operates, the audit is performed on the whole or on components.</p>	<p>Mission objectives:</p> <ul style="list-style-type: none"> a) added value for the audited entity through opinions and recommendations; b) better risk management; c) monitoring compliance with existing rules and procedures; d) increasing the quality of risk management, control and governance processes; e) ensuring the existence of reliable and accurate financial and accounting information; f) increasing the efficiency and effectiveness of operations. <p>The main objective is to ensure the regularity / compliance of procedures and operations with the regulatory framework.</p>	<p>The general objective in financial audit missions is to obtain reasonable assurance that:</p> <ul style="list-style-type: none"> a) the audited financial statements do not contain significant misstatements, are prepared by the entity in accordance with the financial reporting framework applicable in Romania, comply with the principles of legality and regularity and provide a true and fair view of the financial position and financial performance; b) the way of managing the patrimony and the execution of the budget of incomes and expenses verified are consistent with the purpose, objectives and responsibilities provided in the normative acts by which the verified entity was established and respects the principles of legality, regularity, economy, efficiency and effectiveness.

Performance audit	System audit	Regularity / compliance audit	Financial / compliance audit
<p>The main criterion in selecting audit topics is the possibility to improve the performance of programs / activities. The following guidelines are used in the organization of external audit missions:</p> <p>a) on results, if the set objectives have been achieved;</p> <p>b) on problems, checking and analyzing the causes of dysfunctions;</p> <p>c) system-based, which examines the proper functioning of the management system;</p> <p>d) a combination of these approaches.</p>			
CARRYING OUT THE MISSION			
<p>A reference system is used to carry out the performance audit tasks, criteria to which the results of the verifications performed should be reported. The criteria are established on the basis of the government strategy, by analyzing legislation, public policies, contractual requirements, national or international standards, guidelines and regulations, industry standards and other relevant indicators, literature, references obtained by comparison with good practice in the audited field, the results obtained by similar public entities, criteria used in similar audits; performance criteria established by the legislature; criteria obtained by capitalizing on the experience of specialists, experts, researchers in the field.</p> <p>The discussion group is a procedure used in the public external performance audit and consists of gathering opinions and ideas on the main issues from specialists within and outside the audited entity.</p>	<p>This type of mission provides an in-depth analysis of processes and results. It examines how the system / subsystem was designed and implemented.</p>	<p>It is achieved by comparing reality with the established reference system.</p>	<p>The Court of Accounts shall certify, in accordance with the law, the accuracy and veracity of the audited financial statements.</p>

Source: Authors' processing according to Law no. 672/2002 and Law no. 94/1992

Similarities:

- ✓ the conduct of regular, system and financial missions involves the elaboration of the audit plan, which must be detailed according to the size of the audited entity and its complexity;

- ✓ in the elaboration stage of the audit plan, information on the nature of the activity of the audited entity, the information system, the organizational chart, the characteristics of the entity must be mentioned;

- ✓ the actual audit steps and the drafting of the audit report are performed for any type of public audit engagement.

Differences:

- ✓ **the regularity audit** takes into account clear regulations on the basis of which it is concluded whether the audited operations are legal or illegal, **performance audit** is open to interpretation, the auditor has the opportunity to choose the criteria according to the 3E, **financial audit** uses unique criteria established by applicable law and regulations;
- ✓ **the regularity audit** presents the opinion on the legality of the operations and transactions performed, **system audit** verifies the implementation and operation of the internal control system and internal control according to the 3E;
- ✓ **performance audit** it can only be achieved if the entity's managers have established quantifiable performance indicators. The auditor measures the fulfillment of the indicators and the correspondence with the level of allocated and consumed resources;
- ✓ **performance audit** is finalized through specific reports, their structure differs depending on the objective, **financial audit** is finalized by a financial audit report that presents the economic-financial circumstances;
- ✓ **the regularity audit** verifies and diagnoses the entity in the past and present tense, **performance audit** formulates recommendations for the future operation of the systems and **financial audit** verifies and presents the opinion after the end of the financial year;
- ✓ **the regularity audit** is performed only at the entities that keep their own accounting records, **system and performance audit** is mandatory to execute with

priority to decision-making entities that influence the performance of subordinate structures.

5. Conclusions

A first conclusion of the study in terms of applicable standards and regulations is that performance audit missions can be performed by both external public auditors, organized at the level of the Romanian Court of Accounts as well as by internal public auditors, organized by the Central Harmonization Unit for Public Internal Audit within the Ministry of Finance.

One of the current challenges in conducting a public internal performance audit mission is making the necessary updates by the institution methodologically responsible, testing it on concrete cases by organizing public internal performance audit missions and presenting these examples of good practice to internal public auditors in Romania.

Another challenge specific to this type of mission is the need to know the impact indicator of performance audits, which previous studies have appreciated to be given by the implemented or admitted recommendations.

We can conclude that there are differences but also similarities between the performance missions performed by the external and internal public audit, but also between these missions and those of regularity, system and financial audit.

The limitations of this research lie in the low number of reported performance audit missions, at the two institutions with methodological role analyzed. In a subsequent study it is possible to analyze the evolution of the number of these performance missions but also the use of the updated internal public audit methodology for this type of mission.

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Appendix no. 1. Analyzed performance audit reports / summaries

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