CURRENT CHALLENGES AND CHANGES IN THE ACCOUNTING FUNCTION

Vesna Nencheva, Eleonora Stancheva-Todorova

Faculty of Economics and Business Administration, Sofia University 'St. Kliment Ohridski',
125 Tzarigradsko Shose Blvd. block 3, Sofia 1113, Bulgaria

Abstract

Inspired by the numerous changes, roadblocks and problems facing the accounting profession as part of Industry 4.0 (and beyond), this paper aims to discuss three current challenges which will continue to impact the profession in the foreseeable future. Strategic documents, such as the World Economic Forum's 2023 report on the future of jobs, the ACCA's 2023 Annual Report, and other relevant documents, are used as a frame of reference. This paper outlines the three challenges that need to be understood both in terms of the future of jobs in general and the future of accounting in particular. These challenges are: 1) the capacity of accounting to attract graduates into the profession; 2) the relevance of the profession in terms of the ongoing digital transformation; and 3) the challenge of change, which this paper explicitly links to and examines by using VUCA framework – a well-known tool for identifying, quantifying and mitigating the risks associated with a specific situation. The articulation of the challenges seeks to indicate the necessary steps to a more sustainable accounting profession.

Keywords: *accounting profession, challenges, digital transformation, VUCA framework, soft skills*

1. INTRODUCTION

The accounting profession, as all professions, is undergoing a period of reassessment regarding its future position in the roster of developing professions. The change we are currently experiencing, spanning multiple dimensions and levels of business following the COVID-19 crisis, is unprecedented; we can already witness the acceleration of multiple tendencies in the world markets. The COVID-19 crisis also placed at the centre of attention the communal challenges in the world – ones which require new thinking and the rethinking of business's role in society.

The World Economic Forum's report "The Future of Jobs" from May 2023 comments on the labour market transformations, caused by technological advancements such as the introduction of generative artificial intelligence (AI), additionally impacted by economical and geopolitical turmoil as well as growing social and ecological pressures (Di Battista et al, 2023). This fourth edition of the report "The Future of Jobs" discusses the tendencies regarding employment in the future and offers important guidelines, which can prepare employers and specialists concerning the development of these changes. The report summarises the perspectives of 803 companies – in which there are 11.3 million employees in total – in 27 industries and 45 economies from all world regions. The onset of AI makes possible the scale of this study through a network of partner organisations, which have helped improve the geographical range of the report (conducted in partnership with Coursera, Indeed and LinkedIn as well). The general guidelines provided in the report are ambitious in their goal to prepare specialists, companies, governments, educational institutions and civil society regarding the upcoming turbulent transformations as well as guarantee that future investments will result in better working conditions and opportunities for all.

In specific reference to AI, the report (Di Battista et al, 2023) claims that over 75% of companies aim to integrate the uses of new technologies, big data, cloud computing and AI. The employers who participated in the survey expect over 40% of employee's current skills will be disrupted. Despite the high demand for cognitive skills, there is a noticeable increase in the demand for creative thinking, which nearly matches the demand for analytical skills. There is also a noticeable increase in the identified need for technical literacy. Another key priority is the training of employees to work with AI and big data in the next five years, according to 42% of the survey respondents (Di Battista et al, 2023).

Moreover, there is an expected focus on the development of skills to do with leadership and social influence, such as resilience, flexibility, as well as curiosity, the desire for lifelong learning, and professional development. In this regard, there is the expectation of high returns in the form of a higher level of satisfaction and productivity. Also, one of the identified challenges is the recruitment of new competent workers. On this topic, 48% of the surveyed organisations indicate there are plans in place to develop talents, improve their promotion procedures, and implement wide-ranging changes with regard to reskilling and upskilling (Di Battista et al, 2023).

The wider context is that of Industry 4.0, also known as the fourth industrial revolution (Stancheva-Todorova, 2020). The incoming and upcoming changes accelerate the implementation of new technologies. Namely, technology completely changes the ways of working, as well as what said work entails and what are the necessary skills for it. For example, Rebele and Kent St. Pierre (2019:72) describe these same changes as an important factor of impeding the entry of those newly hired and newly graduated in the profession. The understanding of these changes is at the core of developing strategies for overcoming their challenges.

2. CHALLENGES FOR THE ACCOUNTING PROFESSION

The profession is witnessing a threat to its future viability as a result of three major challenges arising out of multiple changes in culture, technology and the world of labour. According to Hunter (2022), this threat can be summarised in the form of three key challenges:

- of attraction;
- of relevance;
- of change.

2.1. The Challenge of Attraction

Hunter argues that accounting is undergoing a crisis in relation to its ability to attract students to the profession. A key factor of this, as multiple researchers indicate (Hermanson, Hermanson and Ivancevich,1995; King and Fitzgerald, 2016), is how potential students perceive the profession. Germanou, Hassall and Tournas (2009) note the observable phenomenon of decreasing student numbers.

Hermanson, Hermanson and Ivancevich (1995) conducted a survey with accounting students and others studying different specialisms; in the study, they find a significant difference in the positive perception of the profession by students who intend to pursue a career in the field. Moreover, a key factor for the lack of interest on behalf of students in other fields regarding accounting is their perception of the type of work required by the profession as well as the work environment and the expectation for limited opportunities to apply creativity (1995:30). Another significant factor, according to Hermanson, Hermanson and Ivancevich (1995:29) is the influence of acquaintances, relatives and instructors on students' perceptions of the profession. As a parallel example, Sugahara and Boland (2006) demonstrate similar findings in a Japanese context regarding accounting students and those studying in other fields. Namely, the role of instructors and professionals, with whom students are in contact, is of great significance. Moreover, the students in other fields tend to underestimate the importance of communication skills in the process of fulfilling the accounting function in an organisation. To take a wider view, the above indicates the role of pedagogy as significant for the correct formation of students' expectations of what accounting entails as a profession. King and Fitzgerald (2016:199) observed the problem of attracting newcomers to the profession as well as said attraction's resilience with regard to the profession's capacity to retain professionals. More specifically, the researchers envision an overall change of the accounting function as well as a general transformation of the requirements for employees in a given organisation.

Germanou, Hassall and Tourna (2009:136) note that the accounting profession in the present moment requires professionals with rich and varied knowledge, as well as skills and competencies that differ from those in previous decades. The researchers emphasise that according to their study with students in Malaysia and England, there are cross-cultural negative perceptions of the accounting profession with

regards to expected levels of stress, working conditions (for example, working to deadlines), and the frequent demand to comply with strict timelines and direct instructions from others (2009:145). As Hunter adds (2022, n.p.), the accounting profession is in direct competition with other professions. With this in mind, it is important to pay special attention to the image that most students, especially those not in accounting, have of the profession. As Cernuşca and Balaciu (2015:8) note, the profession's image is of great significance as it determines the social status of the professional, the role one takes in society, as a consequence of the profession's attractiveness. The researchers report on the basis of a study with Romanian students in accounting that a key factor for choosing accounting is precisely the status and prestige of the profession (2015:21). Also, the authors note indications for underestimating soft skills at the expense of hard ones (for example, IT skills, see 2015:21).

The integration of these concerns in accounting pedagogy will contribute to addressing this challenge. More than this, Hatane et al (2022) stress the importance of including 'field work-practice' (2022:401) in their educational programmes in order to 'equip students to face work challenges' (2022:413). As literature would suggest, this practical experience would also need to support the development of soft skills (Bérubé and Gendron, 2022:395). Such an overall approach would prove to prepare graduates beyond simply passing professional certifications, but also work to foster 'career actualities from a longer-term perspective' (2022:395). Bérubé and Gendron (2022) stress that thinking beyond strictly technical skills is essential for this approach. Alternatively, or complementarily, this can be achieved through the integration of case studies with the goal to improve graduates' soft skills (Helliar, 2013). King and Fitzgerald (2016: 194-5) also note the potential influence on a profession's image of trust in relation to infamous scandals. A key aspect of this issue of trust is the matter of image management and the capacity for change; namely, as Rogers et al (2005) point out the profession's image and reputation is premised on professionals acting with integrity. Such concerns would similarly need to be incorporated as part of the 'the combination of specific knowledge and soft skills' (Ankova, 2020:200) that is bound to be essential in graduates if they are to meet challenges being discussed.

A key problem, which can be assumed to be related to an incorrect image of the profession, is that other professions, such as those to do with AI, big data, cloud computing, machine learning (ML) and business intelligence (see Hunter, 2022), attract students (ACCA, 2023:26), which in the case of a more accurate perception and expectations regarding accounting would have opted into the profession instead. Cernuşca and Balaciu (2015) also point to problems which arise in small organisations on the local level (in the authors' case, Romania) in relation to national and international professional organisations, the effects of globalisation (see King and Fitzgerald, 2016), new technologies and global changes, as well as current and prospective, in the labour market (e.g. World Economic Forum's report, Di Battista et al, 2023).

2.2. The Challenge of Relevance

King and Fitzgerald (2016:200) refer to this challenge as a problem of the profession's currentness in a fast-changing professional field. Hunter (2022) evocatively captures the significance of the problem of relevance with reference to the popular discourse of substituting accountants with robots. Not far from this discourse is the myth that the demand for accountants is decreasing (on the contrary, ACCA 2023:26) as well as the assumption that the technical dimension of accounting is being automated (Hunter, 2022, n.p.). In this context, the challenge of relevance hides in the profession's ability to adapt to multiple global factors that influence practice, theory and, subsequently, education in accounting.

In this regard, the Institute of Chartered Accountants in England and Wales published a report in 2022 that claims "60% of the jobs in finance today will not exist in 10 years' time, but only 1 of 10 of those impacted are currently aware of this. The overall number of roles may not decrease, but the roles and work will evolve significantly. The skills required will be different to those needed today." (Oliver Deacon Coaching, 2022:2). A report by the Association of Chartered Certified Accountants (ACCA) in 2023 presents data, which shows that organizations that have invested in digitalisation before the COVID-19 global pandemic have demonstrate higher levels of resilience to the economic crash. In this sense, the appropriate integration of technologies is of great significance for crisis management and mitigating risks in a given organisation. In another sense, ACCA's report indicates that similar crises additionally accelerate the integration of technology, because organisations of all sizes have had to

reassess their supply chains, to research new channels of entry into a market, as well as accelerate and change their offer of new services and products, together with an overall change of their operational models. In a wider view, the pandemic's effect can be traced to the manner in which prevailing labour orthodoxies are being questioned, as well as the raising of fundamental problems regarding the goals of work, how is it done and where, as well as by whom. The pandemic has revealed the art of the possible with regard to remote working, virtual collaboration and work outside the traditional 9-5 workday – with some cases indicating productivity increasing (ACCA, 2023). ACCA also indicates that newcomers to the profession have higher expectations on these matters, partially due to changes during the pandemic, in relation to wellbeing standards and remote working (2023:26).

At a roundtable that took place on June 15th in 2023 at Sofia University, the representatives of professional organisations clearly stated the need for a new generation of accounting cadres in the field of business. In more specific terms, the challenge of relevance can be defined through the lens of digital skills and future specialists' knowledge in accounting software. The professional field expects digital skills in combination with soft skills to define the new image of the profession and provide a basis for problem solving. For most organisations, the shock and turmoil caused by COVID-19 has revealed vulnerable spots that have otherwise remained unidentified by employers. Despite this, many organisations are managing this challenge, with digital opportunities playing a decisive role for this resilience. Deloitte (2021a) argues that since the opportunities for face-to-face shopping are disappearing, shoppers are able to find digital alternatives – as a result, the traffic in services such as Etsy has doubled. Moreover, the use of cloud computing is on the rise, since it offers an easy solution and support for the online retailer to manage the increase in demand. In a parallel example, Deloitte reports for a newly established practice in organisations such as Bank of America (Magana, 2020) and Comcast (Robuck, 2020), which have started to respond to customer queries via digital assistants as a way of managing the high volume of calls.

According to the Future of Jobs report of the World Economic Forum (Di Battista et al, 2023) in the next five years the introduction of technologies will remain a key factor for the transformation of business. Machines and algorithms can automatise multiple repetitive tasks and processes, and because of this, workplaces that require human skills such as creativity, collaboration, communication, problem solving, and empathy would continue to grow. Soft skills do not only radically demarcate human presence from AI, but also complement and compensate the deficits that arise from AI use (see Dolev and Itzkovich, 2020:57). Precisely because of this, the development of modern technologies and the demand for soft skills in specialists is growing (Di Battista et al, 2023).

Digital transformation offers a significant opportunity to organisations to radically change their processes through incorporating digital tools and technologies. Through the utilisation of innovative solutions such as cloud computing, AI, big data analysis and automation, companies can rationalise their processes, increase their efficiency and gain a competitive advantage (see Stancheva-Todorova, 2022:33). Digital instruments allow for unproblematic cooperation, provide tools for remote working and access to data in real time, thereby allowing workers to be more productive regardless of location. Additionally, digital transformations open up avenues for improving client's experiences through personalised interactions, quicker response time and personalized solutions. Digital transformation is the foundation that current business is using in order to fulfil its long-term strategy in the future (Deloitte, 2021b). For each organisation, the appropriate utilisation of strategy with reference to digital transformation is of decisive significance. Deloitte (2021b) notes that even though 85% of surveyed CEOs have accelerated their digital initiatives during the pandemic, a great part of executives cannot articulate their overall strategy beyond a desire to invest in digital technology. Instead, the strategy should be formulated around the available digital opportunities. Even more important is the need for strategy with regards to cybersecurity. Precisely because of this, technological and operational decisions should be adaptive and coordinated.

A key problem facing any strategy for digital transformation is most frequently the basis on which such changes have to be enacted as it tends to be a complex of inherited systems and outdated technologies. Many organizations still rely on legacy systems, which might have been in place for years. A congruent factor is that existing systems are directly connected to established practices, knowledge bases and

interpersonal relationships. On a deeper level, it must be said that such systems often are not compatible with contemporary technology and, as such, can prevent the integration of new digital solutions. Thus, whatever the upgrade or replacement of such systems a given organization undertakes, there is a requirement for not only significant investment and potential interruptions, but also radical changes of ongoing operations as well as detailed planning and people management.

The context of such global changes in business as a whole and specific organizations in particular could be summarised with the term Industry 4.0, or the fourth industrial revolution. The term encapsulates multiple phenomena and practices, but researchers such as Ghobakhloo (2020) successfully summarise the discussion around its key characteristics. A key factor is the sustainability of production and finance, keeping in mind that Industry 4.0 has developed on the basis of production practices begun in the first industrial revolution and thus at its core represents production on the basis of limited resources. The sustainability described by Ghobakhloo (2020:2) is multifaceted and inclusive of economic and social aspects, as well as concerns about the environment. In this sense, the term sustainability is in keeping with the UN's use of the term – meeting 'the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987:16). Environmental sustainability relates to the planet's ecological systems as well as the consumption, use and restoration of natural resources. Economic sustainability is connected to long-term economic growth without it being at the expense of natural resources and ecological wellbeing. A key dimension is also social sustainability, which Ghobakhloo defines (2020:2) as the process of recognition and management of positive and negative business activities, as well as both economic and technological consequences on both the environment and people.

Table 1
Fundamental design principles and technology trends of Industry 4.0.

Research	Design principles										
	Decentralization	Horizontal Integration	Interoperability	Modularity	Product and service individualization	Real-Time Capability	Service Orientation	Smart Factory	Smart Product	Vertical Integration	Virtualization
Ardito et al. (2019)		x							x		x
Braccini and Margherita (2019)											x
Fatorachian and Kazemi (2018)				x							
Ghobakhloo (2018)	x	x	x	x	x	x	x	x	x	x	x
Ghobakhloo (2019)	x	x	x	x		x		x	x	x	x
Gilchrist (2016)	x	x	x	x		x	x	x	x	x	x
Hofmann and Rüsch (2017)		x				x	x				x
Jabbour et al. (2018a, b)											x
Junior et al. (2018)		x	x	x				x	x		
Kamble et al. (2019)		x			x				x		x
Kang et al. (2016)		x	x		x				x		x
Lasi et al. (2014)	x	x					x	x	x		
Lee et al. (2015)											
Li (2018)	x		x				x			x	
Liao et al. (2017)	x	x						x	x	x	x
Lu (2017)	x	x	x	x		x	x	x	x	x	
Moeuf et al. (2018)											
Mohamed et al. (2019)		x							x	x	x
Mosterman and Zander (2016)											
Posada et al. (2015)		x		x		x			x	x	
Qi and Tao (2018)										x	
Roblek et al. (2016)		x		x			x	x			
Sikorski et al. (2017)											
Strandhagen et al. (2017)		x			x		x		x		x
Strange and Zucchella (2017)		x			x						x
Sung (2018)	x		x		x					x	
Theorin et al. (2017)						x			x		
Tortorella and Fettermann (2018)	x		x	x	x	x				x	x
Vogel-Heuser and Hess (2016)			x	x	x	x				x	
Wan et al. (2016)											
Wang et al. (2016)				x	x						
Wang et al. (2017)					x						
Wollschlaeger et al. (2017)							x	x			
Zhang et al. (2019)	x		x		x		x	x			
Zhang et al. (2019)	x							x			

Fig. 1. Fundamental Design Principles and Technology Trends in Industry 4.0

Source: Ghobakhloo, M., 2020. Industry 4.0, digitization, and opportunities for sustainability. Journal of cleaner production, 252, p.119869.

More specifically, Industry 4.0 is closely related to technology, innovation and digital transformation. Ghobakhloo (2020:4) presents a thorough analysis of the relevant literature by way of systematising the different design principles (see fig.1). Importantly, many of the changes require both horizontal and vertical integration, but also many of the practices and methods of production require a complete system integration on multiple levels (2020:3). Relevant examples in a more technological dimension include: modern production (such as 3D printing), augment and virtual reality, automatization and industrial robotics, Big Data, cloud computing, cybersecurity, simulation and modelling, among others (2020:5).

World Economic Forum experts claim that the integration of new technology will remain a key factor for business transformation in the next five years. To summarise, over 85% of surveyed organisations, when asked about tendencies most likely to lead to transformation in their organisation, state that those are the accelerated adoption of new and cutting-edge technologies as well as the expansion of digital access (Di Battista et al, 2023:5). Technologies most likely to shake up workplaces are Big Data, cloud computing, educational technologies, platforms and applications, e-commerce and digital business, as well as artificial intelligence (for example, see Stancheva-Todorova, 2022:26). As Stancheva-Todorova (2020:21) demonstrates, the employees' competencies and skills are of great significance for facing the challenges of Industry 4.0. More than 75% of the same survey companies plan to integrate such technologies in the next five years, according to the summary report by the World Economic Forum (Di Battista et al, 2023).

Such turbulent changes present both a great challenge and an excellent opportunity for development through transformation, adaptation and the addition of new skills in the accounting profession in the next five years. The upgrade and positive transformation of skills will both expand the role of professional accountants and open new paths for development. Regardless of whether an exceeding amount of accounting's technical demands would be managed via automation, or, whether an exceeding amount of roles traditionally executed by accountants would be performed by others, the education and preparation of accountants must respect these parallels of expansion and decrease in accountancy expertise in order to remain relevant. Deloitte (2021a) reminds of the first days of internet commerce. At the end of the 1990s, and thus acquire an advantage of being first. In reality, every company created a website resulting in competition being primarily only on the basis of their overall strategy's strength. Deloitte's experts expect the same in the case of companies adoption of digital strategies and support for digital organisations. Cloud computing, automation and artificial intelligence by themselves would not provide significant differentiation. Instead, they will become the new platform on which companies will compete. The actual power to compete will come from expert competencies, which will be able to collaborate with data as well as flexibly add hard and soft skills in their expertise. Digitally oriented strategies will offer organisations the opportunity to succeed long term through ensuring sustainability: the ability to develop in conditions of uncertainty and change. The other benefit is the stimulation of differentiation: the ability to offer value which cannot be found anywhere else.

Digital technologies help organizations to develop in conditions of uncertainty and change. In order to survive and thrive in an uncertain and fast-changing world, organizations will have to implement innovations at an unprecedented pace, remain current with technological and industrial changes and develop a higher degree of sustainability.

2.3. The Challenge of Change

Due to the introduction of new systems, as well as the improvement of existing ones, and also in cases of overlapping new and old modalities, employees in a given organization facing Industry 4.0, or more specifically digital transformation, are being challenged to develop their abilities, to adapt to a variable environment, and also acquire new competencies. It is exactly new technologies which will change human involvement in work in the coming decade. Still, the true impact of this challenge is most visible not through the lens of technological transformations, but through the lens of work power (ACCA, 2023). Returning to Hunter's formulation (2022), the third challenge consists of the fact that the new image of the profession places a bigger emphasis on specialists who in turn need clearly defined and more specific skills – all of which the contemporary accountant must be able to list in their portfolio, as well as regularly actualise them and flexibly acquire new ones.

An analytical review of the modern accountant's professional characteristics and qualities, published in a collection of articles from the University of National and World Economy (Sofia, Bulgaria), highlights the following aspects (Atanasov, 2022:111):

- "chronological recording of performed economic operations;
- maintaining systematic (synthetic and analytical) accounting records to summarise accounting information;
- exercising control over the revenue and expenditure of the enterprise;
- participating in the planning of financial activities and the preparation of estimates for the financing of capital expenditure for major repairs and for the acquisition of non-current (fixed) assets;
- determining and paying taxes, fees and social security contributions;
- charging and paying wages and salaries to the enterprise's staff and remuneration under civil contracts;
- calculation and deduction of social security contributions on behalf of employees and of tax under the Personal Income Tax Act (PITA);
- calculation and payment of benefits under the Labour Code (LC) and the Social Security Code (CSC) to employees;
- preparation of primary and secondary accounting documents, and of turnover statements;
- carrying out interim and annual closure of the accounting records;
- carrying out current accounting, including, where necessary, the preparation of adjusting (reversing) entries;
- storing accounting information in accordance with the procedures laid down in the Accounting Act;
- participating in the development of the company's individual accounting policy, the preparation of the annual financial statements, carrying out inventories and verifications of material persons;
- respect for professional secrecy in respect of confidential information made available in connection with the work performed."

Moreover, Atanasov adds the following definition for the accounting function:

> "Contemporary accounting work is strictly based on regulatory norms and social responsibility. Most generally it includes the execution of several tasks related to the proper creation, processing and storing of primary accounting documents, it also includes control functions in relation to acquisition and spending of monetary means and material resources, as well as the timely accounting of business transactions, and the keeping and archiving of accounting records." (Atanasov, 2022:110)

Many of the abovementioned tasks could be directly linked to digital transformations of various kinds, but more specifically with the application of artificial intelligence (cf. Stancheva-Todorova, 2022:29-30). More specifically, it can be added that there are particular tendencies of digital transformation that are respectively linked to desired actions on behalf of accountants. For example, in relation to the tendency of digitalisation of payment systems, it is expected that accountants acquire new skills in order to adapt and use new methods for exchange and currency, to use their experience with the goal of innovation and adaptability in relation to existing systems, to assume the role of consultants in the transition process from banks to alternative systems, as well as develop their expertise and guidance in relation to the areas of online and virtual payroll and related taxation (Stancheva-Todorova, 2022:28). This is but one element of the wide-ranging changes in the profile of knowledge, competence and skills of Accountant 4.0; namely, Stancheva-Todorova (2022:24) defines six main elements of this profile: digital technologies, Big Data and data analysis, robotics and AI, cybersecurity, taxing implications and legal and regulatory requirements.

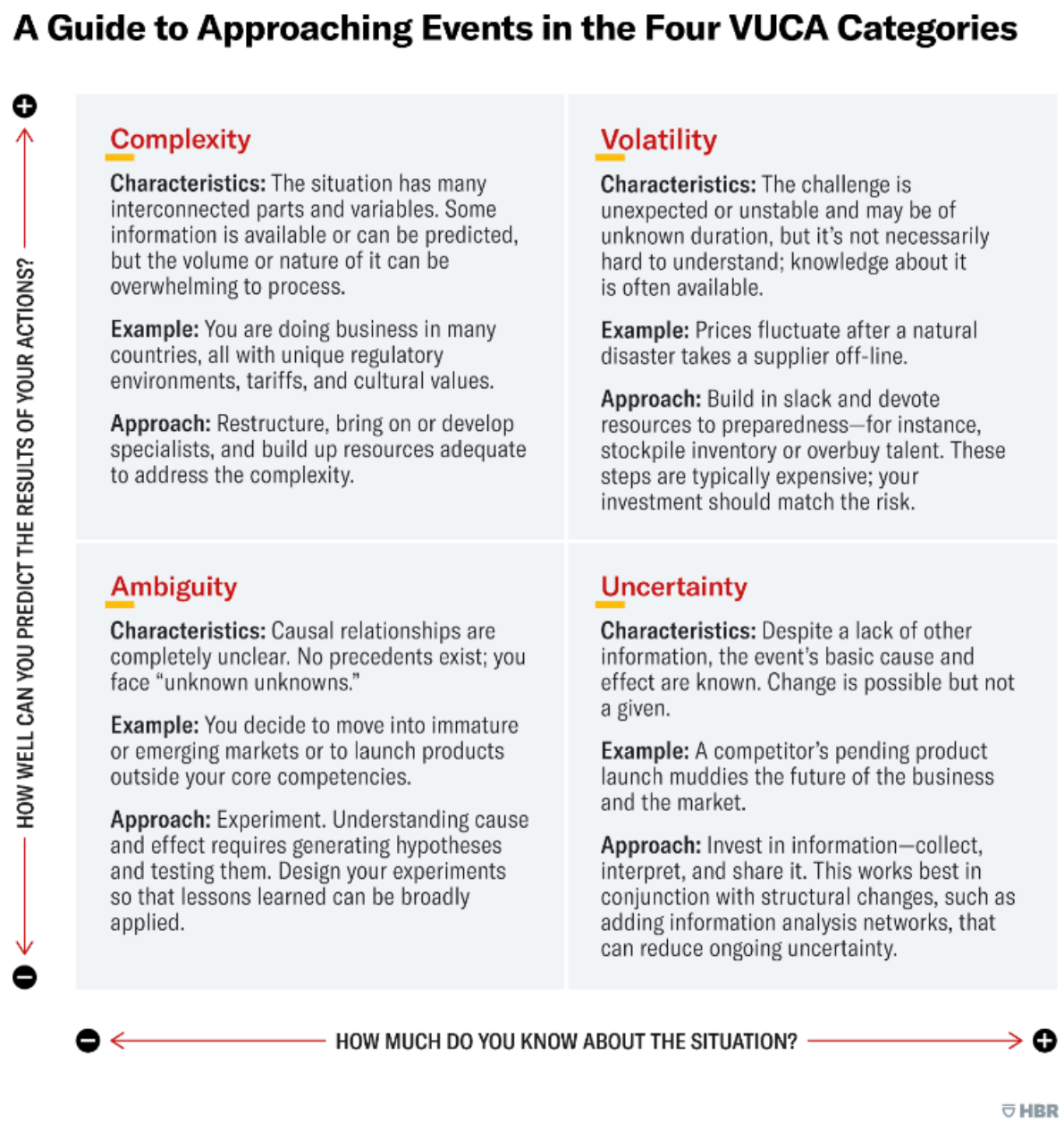

Fig. 2. VUCA Categories and Approaches

Source: Bennett, N. and Lemoine, J., 2014. What VUCA really means for you. Harvard Business Review, 92(1/2).

People with good problem-solving skills, critical thinking and decision-making will be able to deal with the challenges and opportunities with which they are faced. Following the healthcare crisis and the establishment of remote working, companies demand from their talented workers to be able to collaborate at a distance, regardless whether with colleagues, business partners or clients. Employers are looking for people who can work in a team, communicate clearly and listen to others. In the end, employers look for people who can lead teams and guide others. For this purpose, leadership skills are exceedingly in demand, such as the ability to communicate effectively, to motivate others and to resolve conflicts. Moreover, the literature on soft skills indicates that they allow an individual to remain resilient to change. This is also relevant to specific synonyms such as metacognition, socio-emotional intelligences, or interpersonal skills. Soft skills are also connected to a high capacity for self-reflection, which indicates not only desire but also ability to develop one's personal sills as well as the acquisition

of necessary new ones. This means that the primary education and certification of accountants would no longer be sufficient in order to guarantee employment and success throughout a person's career trajectory. Ankova claims that 'the combination of specific knowledge and soft skills ensures an added value in the suitability of graduates for meeting the profession's challenges' (2020:200). This means that educational programmes will include an exceedingly more significant focus on the acquisition of soft skills, because precisely those skills would guarantee a sustained development in the profession and would, in turn, guarantee sustainability in the quality of the accounting service in conditions of a fast-changing dynamic business environment.

Putting aside the discussion above of strategy, it is also necessary to discuss the skills which allow for understanding changes beyond predictability. In a constantly changing world, the ability to adapt flexibly to changes is of vital importance. The world is changing so fast that even the business is following in the suit of military service (Berinato, 2014) – particularly, the VUCA framework: volatility, uncertainty, complexity, and ambiguity. The term describes the situation of constant, unpredictable change which is now the norm in some branches and areas of business (Bennett and Lemoine, 2014). In support of understanding the intensity of changes in a technological, economic, as well as social and cultural aspect, the VUCA technique (fig.2) was primarily developed for the confusing conditions of the battlefield; today, it is especially applicable to cybersecurity scenarios, for example.

The appropriate use of the VUCA term lies in its application to a specific situation in order to assist the quantitative definition of risks and the development of strategies for its mitigation. As a method it entails going through what is and is not known about a situation or plan in order to create a better understanding of the situation and determine what are the vulnerabilities and risks. As a technique of thinking and analysis, VUCA could assist specialists in the management of changes in the context of Industry 4.0. As Cousins (2018:2) shows, in the traditional understanding of a stable environment entails reliance on experience, routine, established knowledge and clear scale, but the current environment of volatility forces organizations to form connections with even more stakeholders. In other words, in an volatile environment, changes are frequent and need to be expected. Precisely this leads to the second dimension of the model – uncertainty. More specifically, the term points to the lack of ability to predict the frequency or significance of changes in a given environment. As figure 2 shows, the appropriate approach in such an environment is the collection of information, its correct interpretation and appropriate sharing with stakeholders. Bennett and Lemoine (2014) add that an appropriate solution is the introduction of structural changes in the form of networks for information analysis with the goal of preventing future uncertainty. In this sense, the factor of uncertainty could be interpreted as an absence of information and/or appropriate understanding. Uncertainty arises when events and results are unpredictable. In such cases, the underlying reason and effects are not understood well, while past experience may not applicable to the situation. Bartscht (2014) understands complexity as a matter of established models, whose effect is the complexity in question. Moreover, Bartscht (2014:262) claims that in order for a given complex situation (or environment) to be understood it must focus its examination on the unknown so that the identification of dynamic models and relationships which produce complexity could be identified. Cousins (2018) summarises that organizations need to adopt the appropriate structure in response to the environment by way of adapting to the latter so that they can take advantage of the complexity in question (cf. Bennett and Lemoine, 2014). The factor of ambiguity could be described, similarly to uncertainty, as an absence of knowledge. More specifically, ambiguity indicates an absence of knowledge regarding a new type of situation. In this sense, ambiguity is directly related to novelty as a characteristic of the environment – it is possible that there is no data or a known precedent for a given moment (Cousins, 2018).

3. CONCLUSION

In summary, there is a clear indication that either in isolation or collectively the three challenges described in this paper lead to significant changes in the quality of the accounting function. It is precisely because of this that the appropriate framing of these phenomena as challenges is significant. As Hunter (2022) indicates, it is necessary to take them under consideration in order to overcome them. The end

goal of this is the restoration of the accounting profession as attractive, relevant, resilient to change and adaptable.

The contemporary accountant is the ideal candidate to meet the challenge of sustainable development. The symbiosis of hard and soft skills, which can actually guarantee the shaping of the role of the accountant as a specialist in sustainable business, is of key significance for handling the abovementioned challenges. It is precisely specialists who possess good skills for problem-solving, critical thinking and decision-making will be able to handle the challenges and opportunities, in front of which they are faced. After the healthcare crisis (COVID-19) and the emergence of remote work, companies demand their talents to be able to collaborate at a distance with all kinds of counterparts such as colleagues, business partners, and other stakeholders and clients. Employers are looking for people who possess team-working skills, can communicate clearly and are capable of guiding and leading others. It is because of this, that we see more and more frequent mention of soft skills such as the ability to communicate effectively, to motivate others and to resolve conflict situations. As Ankova (2020:200) emphasises:

> 'The contemporary management accountant needs to be able to resolve a wide array of business tasks and assist the management by interpretation of financial and non-financial information, as well as by the assessment of strategic consequences of possible alternative solutions – it is in this sense that the accountant role is already proactive and strategically guided.'

Moreover, contemporary management accountants often need to apply precisely those skills which are related to the improvement of processes and the development of strategies for future activities. More specifically:

> 'The necessary skills for management accountants in the 21st century are related not to the creation of information, but rather to the processing and assessment of data and their interpretation, which is at the basis of diagnostics as well as the taking of management decisions, the communication of information with others, and so on' (Ankova, 2020:200)

Precisely these skills need to be at the centre of strategies for the future development of the accounting profession in order to guarantee its attractiveness, relevance and flexibility when it comes to change.

REFERENCES

1. Ankova, I., 2020, *'Soft skills in management accounting education'*, Annual Book of Sofia University 'St. Kliment Ohridski', 19(1), pp.199-218.
2. Association of Chartered Certified Accountants, 2023, *'ACCA Integrated Annual Report 2023'*, viewed 30 July 2024 <https://www.accaglobal.com/gb/en/about-us/annual-reports/annual-report.html>
3. Atanasov, A., 2022, *'An analytical look at the professional characteristics and qualities of the modern accountant*', Scientific works of UNWE 4:109-116.
4. Bartscht, J., 2015, 'Why systems must explore the unknown to survive in VUCA environments', *Kybernetes*, 44(2), pp.253-270.
5. Bennett, N. and Lemoine, J., 2014, 'What VUCA really means for you', *Harvard business review*, 92(1/2).
6. Berinato, S., 2014, 'A framework for understanding VUCA', *Harvard Business Review*, 59(9).
7. Bérubé, J. and Gendron, Y., 2022, 'Through students' eyes: Case study of a critical pedagogy initiative in accounting education', *Accounting Education*, 31(4), pp.394-430.
8. Brundtland, G.H., 1987, *'Report of the World Commission on Environment and Development: Our Common Future'*, United Nations, viewed 30 July 2024, <http://www.un-documents.net/our-common-future.pdf>

9. Cernusca, L. and Balaciu, D.E., 2015, 'The perception of the accounting students on the image of the accountant and the accounting profession', *Journal of Economics and Business Research*, 21(1), pp.7-24.

10. Cousins, B., 2018, 'Design thinking: Organizational learning in VUCA environments', *Academy of Strategic Management Journal*, 17(2), pp.1-18.

11. Deloitte, 2021a, *'Putting digital at the heart of strategy'*, viewed 30 July 2024, <https://www.deloitte.com/global/en/our-thinking/insights/topics/digital-transformation/digital-acceleration-in-a-changing-world.html>

12. Deloitte, 2021b, *'A new language for digital transformation'*, viewed 30 July 2024, <https://www.deloitte.com/global/en/our-thinking/insights/topics/digital-transformation/digital-transformation-approach.html>

13. Di Battista, A., Grayling, S., Hasselaar, E., Leopold, T., Li, R., Rayner, M. and Zahidi, S., 2023, May*, 'Future of jobs report 2023'*, In World Economic Forum, Geneva, Switzerland, viewed 25 June 2024, <https://www. weforum. org/reports/the-future-of-jobs-report-2023>

14. Dolev, N. and Itzkovich, Y., 2020, 'In the AI era soft skills are the new hard skills', *In book: Artificial intelligence and its impact on business*, pp. 55-71.

15. Germanou, E., Hassall, T. and Tournas, Y., 2009, 'Students' perceptions of the accounting profession: a work values approach', *Asian Review of Accounting*, 17(2), pp.136-148.

16. Ghobakhloo, M., 2020, 'Industry 4.0, digitization, and opportunities for sustainability', *Journal of cleaner production*, 252, p.119869.

17. Hatane, S.E., Emerson, B., Soesanto, O., Gunawan, R.A. and Semuel, H., 2022, 'Accounting students' perceptions of work–life balance, accounting career image and intention to pursue accounting careers', *Higher Education, Skills and Work-Based Learning*, 12(3), pp.401-418.

18. Helliar, C., 2013, ''The global challenge for accounting education', *Accounting Education*, 22(6), pp.510-521.

19. Hermanson, D.R., Hermanson, R.H. and Ivancevich, S.H., 1995, 'Are America's top business students steering clear of accounting?', *Ohio CPA Journal*, 54(2), p.26.

20. Hunter, A., 2022, *'The Future for Accounting. International Federation of Accountants'*, viewed 30 July 2024, <https://www.ifac.org/knowledge-gateway/discussion/future-accounting>

21. King, R. and Fitzgerald, L., 2016, 'Challenges facing the accounting profession: maintaining relevance in a changing environment', *In Perspectives on contemporary professional work* (pp. 187-210), Edward Elgar Publishing.

22. Magana, G., 2020, 'Bank of America's Erica usage is spiking during the coronavirus lockdown', *Business Insider*, June 30, 2020.

23. Oliver Deacon Coaching, 2022, *'The future of finance: Skills and technologies'*, ICAEW, viewed 25 July 2024, <https://www.icaew.com/-/media/corporate/files/learning-and-development/aca-employers/the-future-of-finance-skills-and-technologies.ashx>

24. Rebele, J.E. and Pierre, E.K.S., 2019, 'A commentary on learning objectives for accounting education programs: The importance of soft skills and technical knowledge', *Journal of Accounting Education*, 48, pp.71-79.

25. Robuck, M., 2020, *'How Comcast changed the customer care landscape with its digital tools during Covid-19'*, Fierce Telecom, August 20, 2020.

26. Rogers, R.K., Dillard, J. and Yuthas, K., 2005, 'The accounting profession: Substantive change and/or image management', *Journal of Business Ethics*, 58, pp.159-176.

27. Stancheva-Todorova, E., 2020, 'The Knowledge and Skills Profile of Accountant 4.0', *Horizons Series* A, 25.

28. Stancheva-Todorova, E., 2022, '*Contemporary Issues in Accounting: The Accounting Profession*', St. Kliment Ohridski University Press.

29. Sugahara, S. and Boland, G., 2006, 'Perceptions of the certified public accountants by accounting and non-accounting tertiary students in Japan', *Asian Review of Accounting*, 14(1/2), pp.149-167.