

# COVID-19 BLACK SWAN'S IMPACT ON THE INTERNAL AUDIT PROFESSION: THE CASE OF THE REPUBLIC OF NORTH MACEDONIA

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## **Abstract**

*In the past two years, the COVID-19 pandemic has been identified with the "black swan", an unpredictable event beyond what is normally expected of a situation and has potentially severe consequences. After the initial health shock later complemented by the economic crisis we lived in, we needed to learn some lessons. In search of an answer to the question of what we learned from the pandemic and what it was like to work and 'survive' in the shadow of many uncertainties, this research focuses on the internal audit profession in the Republic of North Macedonia. The research was conducted with a detailed structured questionnaire submitted to the internal auditors from the public and private sector in the Republic of North Macedonia who are members of the Institute of Internal Auditors - North Macedonia. The obtained answers were analyzed through descriptive statistics and ANOVA. From the results, it can be seen that there is a small significant difference between the answers of the groups of respondents, but, in general, it can be concluded that the internal auditors have already adapted to the situation with COVID-19, also that the unpredictable situation did not lead to a violation of the Code of Ethics' principles and rules of conduct for internal auditors in the Republic of North Macedonia. In the post-covid period, internal auditors expect to live in the 'New Normal' by using more technology for work. The internal auditors' current mental health is exceptionally good. To the best of our knowledge, this paper is the only one that explores the COVID-19 impact on the internal audit profession in the Republic of North Macedonia. Furthermore, it provides a good basis for further detailed research on areas relevant to the issue. We believe that this research will enrich the existing body of literature on internal audit by offering empirical evidence for the internal audit functioning in terms of crisis and the internal auditors' mental health. The limitations concern the measurement of the variables from the survey being based only on the perception of the internal auditors. Such a measurement method might be*

*considered less accurate in describing the actual situation.*

**Keywords:** internal audit, mental health, pandemic, COVID-19, black swan

**JEL classification:** M42, I10

## **Introduction**

Since the beginning of the pandemic, the internal audit profession has been operating globally in the shadow of COVID-19. The pandemic has caused unprecedented social and economic paralysis. The way of life and work of individuals and companies changed overnight. Quarantine measures, recommendations for isolation, and sitting at home put barriers between internal auditors and audited units, and thus faced the internal audit profession with unexpected and serious challenges. Now more than ever, remote work has become a preferred alternative for internal auditors in the race to complete audits on time.

The virtual practice has posed serious challenges and opened many dilemmas for internal auditors. How to carry out the planned activities, reconsider the previously assessed risks, implement the necessary procedures for obtaining sufficient and appropriate audit evidence in the absence of communication with the audited units, assess the internal controls, recognize the symptoms of fraud, exercise the necessary dose of professional scepticism, and how to write an evidence-based report to stakeholders.

Health experts warn that even in the post-covid period, social distance will be an integral part of our lives. In that regard, the large professional associations and regulatory bodies point to the need to prepare internal auditors to work in the so-called "New Normal".

After the initial health shock later complemented by the economic crisis we lived through last year and a half, we needed to learn some lessons. In search of an answer to the question what we learned from the pandemic and what it was like to work and survive in the shadow of many uncertainties and unpredictability, we decided to conduct research in which the focus was on the internal audit profession in the Republic of North Macedonia.

The subject of this paper is the impact of COVID-19, post-covid consequences, and the mental health of the internal auditors in the Republic of North Macedonia, and the purpose of this paper is to determine the implications of COVID-19 on the internal audit, what the internal auditors have learned from the crisis and how well is their mental health that was affected by the pandemic.

More specifically, the target group in our research were the internal auditors in the private and public sectors of the Republic of North Macedonia, who from a position of the third line of defence in the institutions directly faced serious challenges imposed by the pandemic. For the research, a questionnaire was created with several questions that lead to the conclusion of whether and how much the pandemic changed the approach of internal auditors in conducting audit engagements, how much they managed to amortize the initial shock, whether they have prepared a strategy for virtual work in the ambiance of the so-called "New Normal" and what are the biggest challenges they expect to face in the post-covid period. The research goes a step further by shifting the focus of attention from the audit approach and the challenges posed by the pandemic of working remotely to the mental health of internal auditors. More specifically,

an integral part of the questionnaire was the issues related to the mental health of the internal auditors during the crisis with COVID-19, which is given significant attention in the past by scientists and practitioners in the field.

We believe that the research topic is quite current and relevant, from the aspect that the COVID-19 pandemic is ongoing, and we investigated the effects of internal audit practice during the pandemic, but also for the post-covid period and how the whole situation affects the mental health of the internal auditors in the Republic of North Macedonia.

## **The internal audit during COVID-19 and the post-covid period**

There is limited research on this topic, mainly because the outbreak of COVID-19 started at the beginning of 2020 and is ongoing (Johnsson & Persson, 2021). The few studies and reports published within this area are convinced that there will be consequences for auditing (Albitar, Gerged, Kikhia, & Hussainey, 2020; Goodell, 2020). Albitar et al. (2020) published a paper that studied the effects of COVID-19 on auditing and audit quality. They only discussed the theoretical impact of COVID-19 with a desk study method without empirical evidence. Except for Goodell (2020) and Albitar et al. (2020), scientific articles and research papers are almost non-existing in the area of COVID-19, and this creates a research gap within this area. However, at the same time, the biggest auditing firms in the world, i.e., Deloitte, EY, KPMG, and PwC, and the professional associations and organizations, i.e., IFAC, IIA, ACCA, manifest that the impact of COVID-19 will be significant and impose tough challenges. As the auditing practitioners, i.e., the auditors within Big Four, are evident in their reports that COVID-19 will cause them trouble, this is an important research gap to fill (Deloitte 2020; EY 2020; KPMG 2020 and PwC 2020).

Brachio (2020) indicates that at a big-picture level, the most powerful learning to take away from the COVID-19 crisis is that there is always a potential "black swan" event around the corner – that is, an unpredictable event that has a severe impact. And with today's global connectivity, that event could again impact the entire world. The risks associated with "black swan" events tend to be so big and so rare that many businesses do not contemplate them, much less plan for them. The auditors need to have a mindset where they are always prepared to think the unthinkable – because the "black swan" will show up (Brachio, 2020).

Every crisis teaches us something new about how best to prepare for, mitigate, or even try to prevent the next event (IFAC, 2020). At a time when many organizations are operating in crisis mode, some first and second-line managers may think internal audit, as an activity that operates at the third line, is irrelevant. However, a period when public sector systems and activities are under stress is arguably when the internal audit is needed the most. The value and relevance of internal audits need to be demonstrated by the current activities of internal auditors. All public sector entities (and therefore also internal audit functions) will need to address additional risks generated by COVID-19. Internal audit functions could usefully focus their interactions with budget users on risks in five key areas: people, operations, supply chain, financial management, and technology/security (PEMPAL IACOP, 2020).

PEMPAL IACOP (2020) considers how the pandemic will change the way internal audit works. It addresses the main issues impacting internal audit work – planning, risk management, remote working, communication, and reporting/open items – and identifies some of the specific challenges and opportunities that exist in each area.

Audit plan achievement is usually a key indicator of the performance of an internal audit function. However, all audit plans are based on the underlying assumption that there is an ongoing business model. During the pandemic most organizations are operating in survival or crisis management mode, so internal audit needs to adapt its priorities. Arguably, internal audit functions that continue to deliver on their plans may not be doing the right things in these new circumstances (PEMPAL IACOP, 2020). Furthermore, in these times of crisis, internal audit needs to ensure that they follow the principle of “no harm.” This has always been a consideration in terms of the timing of audits.

"The internal audit function should fully assess the operational impacts organizations are facing and the new control environments they are operating under (mostly working from home and electronic-based) and adjust the audit plan accordingly. This is so that the internal audit can provide targeted and valuable contributions to organizations across their immediate priority areas over the coming months. Organizations must understand and mitigate the crisis risks they currently face in the context of their obligations, activities, objectives, and values. Changing priorities at organizations should translate to changed priorities for the internal audit. The internal audit should provide relevant insights and assurance for the management of emerging risks due to the crisis. The internal audit should also be proactive and continue to play an important role in helping organizations understand the impact of COVID-19 on their control environment. This includes helping organizations build and shape their control environments in the context of home working arrangements and to provide insight and assurance on how effectively those controls are operating. The internal audit has the role to provide consulting advice and front-line support under Global Internal Auditing Standards" (Mazars, 2020: 4).

The Institute of Internal Auditors (IIA) President and CEO Richard Chambers describes the current economic downturn as one where occupational fraud can thrive. He warns that anyone who has any understanding of fraud is familiar with the concept of the fraud triangle, which identifies pressure, opportunity, and rationalization as key factors. The pandemic is increasing the initial pressure in many ways as its economic impact threatens the economic well-being of millions of organizations and billions of workers around the world (Chambers, 2020).

As the COVID-19 pandemic continues to wreak havoc on global markets, the perfect fraud storm is brewing. Organizations are more vulnerable to corporate fraud as all three elemental drivers impacting employee behaviour (pressure, opportunity, and rationalization) are negatively heightened. This crisis is creating unprecedented disruption and opportunities for corporate wrongdoers. Anti-fraud specialists and past crises signal that a significant uptick in fraud is just around the corner (Nelson, 2020). On the other hand, during the pandemic, it was a major challenge for the internal auditors to carry out their duties in accordance with the principles and rules of conduct set out in the IAA Code of Ethics (IIA, 2009). The IIA identifies the principles of the Code of ethics (which include 4 components: Integrity, Objectivity, Confidentiality and Competency), and numerous studies have been conducted in the past on the ethical and professional conduct of the auditors (Campbell, 2005; Suddaby, Gendron & Lam, 2009; Whittington & Pany, 2011; Ntsiful, 2011; Rahahle, 2017), but there is definitely a lack of research on their behavior whether it complies with the rules of conduct during crises such as the COVID-19 pandemic.

The ACCA (2020) indicates that there is a positive side to this significant challenge for auditors, and that is that the audit profession was already on a journey to becoming more digital, and the investment in digital capability has allowed many firms and practitioners to adapt to the new

circumstances relatively quicker than other industries. Recently, great attention has been paid to agile auditing and there are many publications, surveys and case studies that address the agile approach (Gartner, 2020; Mkoba & Marnewick, 2020; Newmark, Dickey & Wilcox, 2018; KPMG, 2020). According to Joshi (2021), the Agile approach is particularly suitable for complex audits that necessitate a qualified team of experienced auditors, shorter audit cycles, and faster delivery of services to the clients, as well as timely information to stakeholders for decision-making and market competitiveness. Due to technology disruptions and the necessity for quick and timely assurance on material issues, the use of an Agile methodology in internal audit is becoming more common.

For the post-covid period, PwC (2020) concludes from their conducted research that with COVID-19 globally destabilizing the business environment in many industries, audit committees are looking even more to internal audit to provide relevant and timely insights on how risks are being managed in organizations and the reliability of controls – even with travel restrictions in place. Internal Audit has to evolve with the ‘new normal’ and find ways to continue to deliver its remit. Here we see a clear call for Internal Audit to introduce more digital solutions, leverage remote models of working and get more out of the system and transactional data with the help of analytics. Finally, building on what is has learned from COVID-19, Internal Audit can play a key role in helping management to better understand the critical risks in the new normal and provide insights to maintain effective governance and internal control over key business processes (Ambuhl, 2020).

## **The mental health of the internal auditors**

In recent times, more and more attention is paid to the health, but also the happiness of employees. Mental health disorders are the leading cause of work disability and are estimated to cost the global economy up to \$ 23 trillion by 2030 (Hawkes, 2020). In Hawkes’s (2020) story, according to Dr. Tyler Amell a global expert on workplace health, poor mental health in the workplace can directly trigger physical health problems, heightening unproductivity or presenteeism (sick workers at work). No matter what the stressor, in this case, we took the Pandemic as a situation that could have an impact on the mental health of the internal auditors, but whatever the stressor is, most people want to enjoy their work and will be psychologically healthier, more motivated and productive if they do (Hawkes, 2020). However, with rapidly changing work environments, increased pressure to meet deadlines and budgets, longer hours, and conflict in relationships, a certain kind of toughness is required.

The report of PEMPAL IACOP (2020) states that the health and well-being of employees during the outbreak is a key risk, as well as a necessity in the continuing management of other areas of risk. Budget users should (PEMPAL IACOP, 2020: 11):

- " • Ensure that risk assessments are conducted and regularly reviewed to ensure a safe place of work for employees and contractors, including good hygiene practices and availability of personal protective equipment as appropriate.
- Support staff who are at higher risk because of pre-existing health conditions that may require them to shield themselves from possible exposure to the virus. Make and implement plans to reduce travel and facilitate working from home where possible. The use of technology to enable work to continue without physical proximity will be essential.

- Give employees clear guidance on when they should attend work and when they should stay away. Review this advice regularly, based on the changing situation and good management information.”

Furthermore, the employers have the same health and safety responsibilities for home workers as for any other workers. With the government’s social distancing and self-isolation measures, there are now greater risks to the mental and physical well-being of individuals. Organizations have rapidly made home working arrangements for most of the workforce to follow government guidelines and ensure that operations can carry on. Consequently, the typical health and safety checks might not have been fully undertaken. It’s expected that the current government lockdown will remain in force for a prolonged period and to a lesser extent beyond the summer period. Therefore, organizations will want assurance from the internal audit that they are providing appropriate support for their employees to enable them to work in a safe environment. This includes putting in measures to support employees’ mental well-being, in addition to their physical well-being (Mazars, 2020).

The internal audit profession in the first half of 2020 was faced with unknown circumstances due to COVID-19. To assess the current mental health of internal auditors in the Republic of North Macedonia, we used a resilience questionnaire that is not scientifically validated but allows us to cure certain conclusions related to the mental health of internal auditors during the COVID-19 pandemic.

Based on the relevant literature and the objectives of the research, we assume that: “Internal auditors in the Republic of North Macedonia dealt with the pandemic quite well, their mental health is stable, and they expect to work in the “New Normal” in post-covid period.”

## **Methodology**

In addition to a thorough examination of the literature related to the issue, for the research, we used the survey method, i.e., an online structured questionnaire, which was submitted to internal auditors in the public and private sectors in the Republic of North Macedonia. The survey questionnaire was developed based on the ACCA (2020) “COVID-19 Global Survey Report: Inside Business, Impacts, and Responses”, which was used in our previous research paper with a focus on external audit (Bozhinovska, Trpeska, Atanasovski & Dionisijev, 2020).

The questions were tailored for the internal audit and cover some aspects of the internal audit process, in order to access the five main research objectives:

- Internal auditors’ responses to the new unforeseen situation.
- Key challenges.
- Violation of the principles and rules of conduct of the IIA Code of Ethics.
- Expectations for the future of internal audits in the post-covid period.
- Mental health of internal auditors.

The population in the research are all active 176 internal auditors that are employed in the public and private sector in the Republic of North Macedonia and who are active members of the IIA - North Macedonia, which is a full member of The IIA - Global.

All questions (except introductory and preliminary questions) were answered on a Likert scale from 1 to 5, where 1 is "totally disagree" and 5 is "totally agree". The questions are divided into

2 main sections: the first one is for the internal audit profession during COVID-19 and post-covid expectations and consequences, and the second section is for the mental health of internal auditors.

The collected data based on the respondents' answers is analyzed through several statistical tests:

1. *Cronbach's alpha*, through which the internal consistency of the respondents' answers can be identified. According to many authors, it is considered a measure of certainty, and the coefficient  $\alpha$  must be greater than 0.7 ( $\alpha \geq 0.7$ ) for the answers to be considered relevant and acceptable for further analysis.
2. *Descriptive statistics* for descriptive comprehension statistics that quantitatively describe the characteristics of responses.
3. *ANOVA analysis* to examine the differences in the mean values of the responses between the internal auditors in the public and private sectors. In the research, we use a significance level of 5%, which means that any indicator that is  $<0.05$  is significant.

## Results and discussion

As it is stated earlier in the study, the principal reason for this research is to give empirical evidence on Macedonian internal auditors' perceptions about working in a pandemic climate, the post-covid consequences, and their mental health. The survey was web-based, and it was sent to all active 176 internal auditors that are members of the IIA - North Macedonia. Participants received an invitation email that provided a link to the questionnaire. After a second reminder by email, **80 responses** were received, representing a **45.45 %**. The questionnaire supporting this research was issued on **02 November 2021**.

Furthermore, Table 1 shows the descriptive statistics of the characteristics of the respondents.

*Table 1: Descriptive statistics of the characteristics of the respondents*

Feature	Description	Number	Percent
Type of organization	Public Sector	50	62.50%
	Private Sector	30	37.50%
	<b>Total</b>	<b>80</b>	<b>100.00%</b>
Gender	Female	51	63.75%
	Male	29	36.25%
	<b>Total</b>	<b>80</b>	<b>100.00%</b>
Work Experience	1-5	2	2.50%
	6-9	8	10.00%
	10-20	35	43.75%
	21-30	25	31.25%
	above 30	10	12.50%
	<b>Total</b>	<b>80</b>	<b>100.00%</b>
Professional Certification	Does not have	45	56.25%
	TIAPS	9	11.25%
	CIA	17	21.25%

Feature	Description	Number	Percent
	CA	6	7.50%
	FRM	1	1.25%
	CIPFA	2	2.50%
	<b>Total</b>	<b>80</b>	<b>100%</b>

Source: Author's calculation

Before starting with any research analysis of the results, a reliability analysis was carried out. Cronbach's alfa coefficient was calculated to measure the internal consistency and reliability of the questionnaire.

Table 2: Reliability statistics

Cronbach's Alpha
0.91

Source: Author's calculation

As can be seen in Table 2, Cronbach's alfa coefficient is 0,91 which implies high internal consistency, and all items appeared to be worthy of retention.

The analysis of the received answers was made based on a structured sample divided into two groups: internal auditors from the **public sector** (50 respondents) and internal auditors from the **private sector** (30 respondents). Table 3 presents the descriptive statistics for each question used in the research.

Table 3: Descriptive statistics – Internal audit during COVID-19 and post-covid period

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
1. How much has the COVID-19 pandemic changed the approach to your professional engagement?	80	1.0	5.0	272.0	3.400	1.0626
2. In the new circumstances initiated by the COVID-19 pandemic was your company prepared to implement the IIA COVID Policy?	80	1.0	5.0	256.0	3.200	1.2263
3. What were the key challenges you faced in conducting your audit engagement at the beginning of the COVID 19 pandemic?						
[Pressure to complete the fieldwork within the stipulated deadline in conditions of quarantine measures, and self-isolation of the employees in the audited function]	80	1.0	5.0	274.0	3.425	1.3666
[Updating the audit plan due to inability to implement the planned activities]	80	1.0	5.0	272.0	3.400	1.3369
[Inability to meet the deadlines for completion of audit procedures and timely submission of the report]	80	1.0	5.0	284.0	3.550	1.2619
[Opportunity to assist audited units in improving their resilience to pandemic impacts and continuing to operate in line with the company's goals]	80	1.0	5.0	271.0	3.388	1.1528
[Weaknesses in the internal control system]	80	1.0	5.0	241.0	3.013	1.1306



	N	Minimum	Maximum	Sum	Mean	Std. Deviation
[Restrictions on the scope of obtaining and documenting sufficiently appropriate audit evidence]	80	1.0	5.0	273.0	3.413	1.1550
[Increased risk of fraud]	80	1.0	5.0	243.0	3.038	1.1412
[Opportunities to assist audited units in digital transformation]	80	1.0	5.0	230.0	2.875	1.1733
4. Working in the COVID-19 pandemic has influenced you to increase your level of professional skepticism during your audit engagements.	79	1.0	5.0	266.0	3.367	1.1114
5. COVID-19 pandemic created favorable conditions for the risk factors of fraud related to the three elements of the fraud triangle (motive, opportunity, and rationalization), even more than that - to be present in the operation of business entities.	80	1.0	5.0	256.0	3.200	1.1296
6. In your opinion, working remotely even in case of an increased level of professional skepticism imposed certain barriers to identifying the symptoms of fraud (so-called "red flags") due to the impossibility of interviewing to establish closer contact with employees and body language follows.	80	1.0	5.0	287.0	3.588	1.0024
7. In your opinion, the new environment imposed by the COVID-19 pandemic will lead the management of audited units to be more often tempted to disregard laws and regulations (NOCLAR - Non-Compliance with Law and Regulation).	80	1.0	5.0	229.0	2.863	1.1109
8. Working in a pandemic situation has affected your service by not fully fulfilling the planned engagements in the audit plan for 2020.	80	1.0	5.0	264.0	3.300	1.4443
9. The implementation of audit engagements one year after the start of the COVID-19 pandemic, as internal auditors have faced you with new and hitherto unknown challenges. In your opinion, what are the key audit risks initiated by the COVID-19 pandemic for the year ending 31.12. 2021?						
[Internal controls - how they are designed and how they work]	80	1.0	5.0	265.0	3.313	1.1970
[Risk of fraud related to the three elements of the fraud triangle (motive, possibility, and rationalization)]	80	1.0	5.0	254.0	3.175	1.2198
[Non-compliance with laws and regulations (NOCLAR)]	80	1.0	5.0	236.0	2.950	1.1681
[Audit of accounting estimates]	80	1.0	5.0	220.0	2.750	1.0966
[Risk of obtaining sufficient appropriate audit evidence]	80	1.0	5.0	271.0	3.388	1.1746
[Risk of fulfilling the audit plan]	80	1.0	5.0	282.0	3.525	1.3214
10. In conditions of remote work, limited communication with the management and employees of the audited units, closure of offices, quarantine measures introduced, supply chain interruptions, and complete paralysis of the work of audited entities, internal auditors must not sacrifice the quality of internal audit.	80	1.0	5.0	358.0	4.475	.8565

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
11. Working in a pandemic has influenced the fulfillment of your mission as internal auditors to be trusted management advisers and to add value to the organization in meeting its goals.	80	1.0	5.0	238.0	2.975	1.2526
12. The uncertain environment in which the business entities imposed by the COVID-19 pandemic operate will tempt internal auditors to compromise the principles and rules of the IIA Code of Ethics.	80	1.0	5.0	182.0	2.275	1.3118
13. In your opinion, when conducting an internal audit in the context of the COVID-19 pandemic, which of the principles of the IIA Code of Ethics were most susceptible to compromise?						
[Integrity]	80	1.0	5.0	161.0	2.013	1.1637
[Objectivity]	80	1.0	5.0	188.0	2.350	1.2539
[Confidentiality]	80	1.0	5.0	181.0	2.263	1.2803
[Competency]	80	1.0	5.0	164.0	2.050	1.1573
14. Working in a pandemic has imposed new and unexpected ethical dilemmas and pressures on you as internal auditors.	80	1.0	5.0	229.0	2.863	1.3192
15. In resolving ethical dilemmas, you have been guided by the moral compass and have shown the necessary dose of moral courage.	80	1.0	5.0	333.0	4.163	.9865
16. Based on your experience to date, you feel that there is a deficit of moral courage among internal auditors when they are required to limit the scope of investigations, change evidence, not disclose all findings in the report, etc.	80	1.0	5.0	244.0	3.050	1.3862
17. In a time of a pandemic, your organization provides you with regular training and updating of the necessary knowledge	80	1.0	5.0	270.0	3.375	1.4873
18. In the next six months, what do you think your work environment will look like:						
[Full return to the office]	80	1.0	5.0	299.0	3.738	1.3477
[Hybrid of remote work/office work]	80	1.0	5.0	250.0	3.125	1.3060
[For most of the distance, maybe just one or two meetings with a physical presence]	80	1.0	5.0	217.0	2.713	1.2033
[Completely from a distance]	80	1.0	5.0	146.0	1.825	1.0647
19. What do you think can have the greatest impact on the internal audit profession in the Republic of North Macedonia in the post-covid period?						
[Regulation]	80	1.0	5.0	252.0	3.150	1.2437
[Technologies -General]	80	1.0	5.0	303.0	3.788	1.2086
[Technologies, especially automation]	80	1.0	5.0	314.0	3.925	1.1112
[Technologies, especially data analytics]	80	1.0	5.0	304.0	3.800	1.2159
[Technologies, especially blockchain]	80	1.0	5.0	274.0	3.425	1.3099
[Changed management requirements and expectations]	80	1.0	5.0	290.0	3.625	1.1840
20. How do you imagine the "New Normal" in the functioning of the internal audit profession in the Republic of North Macedonia in the post-covid period?						
[Protection of employees' health - remote work with staff rotation]	80	1.0	5.0	294.0	3.675	1.3002
[Operation in the premises of the audited units with mandatory application of protective measures]	80	1.0	5.0	315.0	3.938	1.1512

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
[Using technologies as a substitute for certain audit procedures]	80	1.0	5.0	320.0	4.000	1.1138
[Social distancing - implementation of the engagement exclusively with the application of technologies]	80	1.0	5.0	266.0	3.325	1.2904
21. The lesson that the internal audit profession has learned in the past year since the beginning of the COVID-19 pandemic is that there is always a danger of an unpredictable event happening around the corner that could have serious consequences for the lives and work of individuals. auditors you could learn from the pandemic.						
[To have a mindset with which you will always be ready to think the unthinkable - because danger can arise at any moment]	80	1.0	5.0	340.0	4.250	.9613
[It is vital to continue working on a strategy developed to protect the health and well-being of employees]	80	2.0	5.0	353.0	4.413	.8221
[Transform operations by making greater use of the power of technologies to connect people and extend the operations of companies]	80	3.0	5.0	345.0	4.313	.7729
[Organizations must prepare for change whether they want to or not, by adapting to new ways of working, using new business models, promoting technological tools such as virtual reality]	80	1.0	5.0	346.0	4.325	.8078
22. Under the influence of the pandemic, your organization has shown a willingness to digitize processes and facilitate remote operations for internal auditors.	80	1.0	5.0	281.0	3.513	1.3216
23. Under the influence of the increased risks posed by the pandemic, your organization has shown a willingness to move from classical auditing to agile auditing.	80	1.0	5.0	265.0	3.313	1.3178
24. In the post-covid period, more than ever before, internal auditors will need different skills and knowledge to be incorporated into professional title programs.	80	2.0	5.0	333.0	4.163	.8634

*Source: Author's calculation*

It should be emphasized even at the very beginning of this analysis how much the COVID-19 pandemic has changed the approach of internal auditors in terms of their professional engagement (Q-1). The mean value of the answers to this question is 3.40, which can be concluded that to some extent the COVID-19 pandemic changed the approach to professional engagements, and yet, in general, the pandemic did not pass quietly in this small profession. For the statement that the conditions of remote work, limited communication with the management and employees of the audited units, quarantine measures, supply chain interruptions, and complete paralysis of the work of auditing units, internal auditors must not sacrifice the quality of internal audit (Q-10), the mean value is 4.47, with which the internal auditors answered this question with high certainty, and they are very sure in maintaining the quality of the internal audit.

Regarding the agile auditing, the importance and relevance of which were discussed earlier in the paper, the respondents were asked if the organization in which they are employees has shown a willingness to move from traditional auditing to agile auditing (Q-23). The mean value is 3.31, but the ANOVA analysis, as shown in Table 4, indicates that there is a significant value

(<0.05), but looking in more detail at the individual answers, the significance is due to the difference in the answers between the respondents in each group, i.e. individual answers vary from their group mean.

*Table 4: ANOVA – Agile auditing*

		Sum of Squares	df	Mean Square	F	Sig.
Under the influence of the increased risks posed by the pandemic, your organization has shown a willingness to move from classical auditing to agile auditing.	Between Groups	9.901	1	9.901	6.067	.016
	Within Groups	127.287	78	1.632		
	Total	137.188	79			

*Source: Author’s calculation*

For the question about the key challenges the internal auditors faced in conducting the audit engagement at the start of the COVID-19 pandemic (Q-3), the most crucial challenge, according to the obtained results, is the inability to meet the deadlines for completion of the audit procedures and timely submission of the report.

The research consists also of several questions that refer to the Code of Ethics, as one of the principal areas that deserve attention in the internal audit. To the statement that the uncertain environment in which the business entities imposed by the COVID-19 pandemic operate will tempt internal auditors to compromise the principles and rules of the IIA Code of Ethics (Q-12), the internal auditors generally do not agree with this statement (mean value: 2,27), but according to the ANOVA, the responses by groups are different. The answers from internal auditors in the private sector have a mean value of 1.7, which indicates a high certainty that they will not violate the principles and rules of conduct, and the answers from internal auditors in the public sector have a lower degree of certainty with a mean value of 2.6.

*Table 5: ANOVA - Compromising the principles and rules of the IIA Code of Ethics*

		Sum of Squares	df	Mean Square	F	Sig.
The uncertain environment in which the business entities imposed by the COVID-19 pandemic operate will tempt internal auditors to compromise the principles and rules of the IIA Code of Ethics	Between Groups	12.403	1	12.403	7.831	.006
	Within Groups	123.547	78	1.584		
	Total	135.950	79			

*Source: Author’s calculation*

In case a certain principle of the IIA Code of Ethics is endangered, the internal auditors were asked in their opinion when conducting an internal audit in the context of the COVID-19 pandemic, which of the principles of the IIA Code of Ethics were most susceptible to compromise (Q-13). The answers obtained are as follows: integrity 2.01, objectivity 2.35, confidentiality 2.26, and competence 2.05. It reaffirms that internal auditors are convinced that a pandemic will not jeopardize their behaviour and violate the principles of the IIA Code of Ethics.

For resolving ethical dilemmas, the internal auditors have been guided by the moral compass and have shown the necessary dose of moral courage (Q-15), they have also agreed and answered with high certainty with a mean value of 4.16. Next, based on their experience so far,

the internal auditors are not so reliable for the statement that there is a lack of moral courage among internal auditors when they are asked to limit the scope of investigations, change the evidence, not disclose all the findings in the report, etc, internal auditors are not so reliable (Q-16).

The question about the opinion of the internal auditors and the new environment regarding NOCLAR (Q-7) is answered with a mean value of 2.86, but according to the ANOVA analysis, presented in Table 6, we are shown that there is a significant difference between the groups in the given answers. According to the answers received, the result is due to the difference between the mean values of the answers of the groups, i.e., public sector internal auditors believe that the management of audited units is more likely to disregard laws and regulations than the internal auditors from the private sector.

*Table 6: ANOVA - NOCLAR*

		Sum of Squares	df	Mean Square	F	Sig.
The new environment imposed by the COVID-19 pandemic will lead the management of audited units to be more often tempted to disobey laws and regulations (NOCLAR - Non-Compliance with Law and Regulation).	Between Groups	15.188	1	15.188	14.394	.000
	Within Groups	82.300	78	1.055		
	Total	97.488	79			

*Source: Author’s calculation*

Finally, during a pandemic, the organization allows the internal auditors to regularly attend training and update the necessary knowledge (Q-17), the internal auditors have provided answers with a mean value of 3.37, which generally not everyone agrees with this statement.

Regarding the post-covid period, the internal auditors were asked how they imagine the "New Normal" in the functioning of the internal audit profession in the Republic of North Macedonia in the post-covid period (Q-20). Namely:

- Employee health protection - remote work with staff rotation, with a mean value of 3.67.
- Operation in the premises of the audited units with mandatory application of protective measures, with a mean value of 3.93.
- Using technologies as a substitute for certain audit procedures, with the highest mean value of this issue of 4.00.
- Social distancing - implementation of the engagement exclusively with the application of technologies, with a mean value of 3.32.

The internal auditors were asked that the lesson that the internal audit profession has learned in the past year since the beginning of the COVID-19 pandemic is that there is always a danger of an unpredictable event happening around the corner that could have serious consequences for the lives and work of individuals, in their opinion as internal auditors what they could learn from the pandemic (Q-21). They answered with high certainty that organizations must prepare for change whether they want to or not, by adapting to new ways of working, using new business models, promoting technological tools such as virtual reality (mean value: 4.32), and transforming operations by making greater use of the power of technologies to connect people and extend the operations of companies (mean value: 4.31), it is vital to continue working on a strategy developed to protect the health and well-being of employees (mean value: 4.41) and to

have a mindset with which you will always be ready to think the unthinkable - because danger can arise at any moment (mean value: 4.25).

The following Table 7 shows the descriptive statistics for the answers to the statements related to the current mental health of internal auditors.

*Table 7: Descriptive statistics – Mental health of internal auditors*

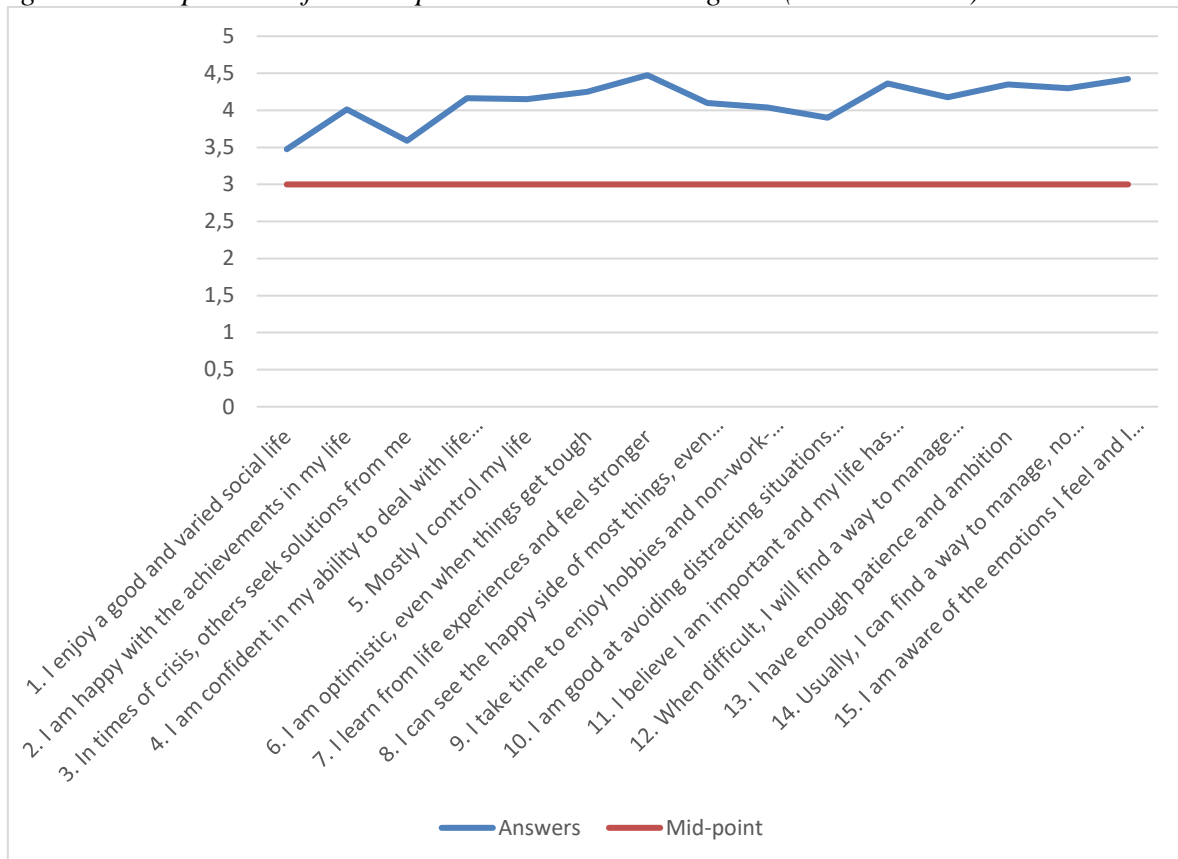
	N	Minimum	Maximum	Mean	Std. Deviation
1. I enjoy a good and varied social life	80	1.0	5.0	<b>3.475</b>	1.2115
2. I am happy with the achievements in my life	80	1.0	5.0	<b>4.013</b>	.9479
3. In times of crisis, others seek solutions from me	80	1.0	5.0	<b>3.588</b>	1.0150
4. I am confident in my ability to deal with life problems	80	2.0	5.0	<b>4.163</b>	.8335
5. Mostly I control my life	80	1.0	5.0	<b>4.150</b>	.8873
6. I am optimistic, even when things get tough	80	1.0	5.0	<b>4.250</b>	.8642
7. I learn from life experiences and feel stronger	80	2.0	5.0	<b>4.475</b>	.7111
8. I can see the happy side of most things, even in difficult situations	80	2.0	5.0	<b>4.100</b>	.8509
9. I take time to enjoy hobbies and non-work-related activities	80	2.0	5.0	<b>4.038</b>	1.0119
10. I am good at avoiding distracting situations and completing tasks on time	80	1.0	5.0	<b>3.900</b>	1.0138
11. I believe I am important, and my life has meaning	80	2.0	5.0	<b>4.363</b>	.8456
12. When difficult, I will find a way to manage the situation calmly and effectively	80	2.0	5.0	<b>4.175</b>	.8233
13. I have enough patience and ambition	80	2.0	5.0	<b>4.350</b>	.7480
14. Usually, I can find a way to manage, no matter the situation	80	2.0	5.0	<b>4.300</b>	.7361
15. I am aware of the emotions I feel, and I understand what causes them	80	3.0	5.0	<b>4.425</b>	.7252

*Source: Author's calculation*

The received answers to all statements related to the mental health of the internal auditors range from 3.58 to 4.47, and most of the answers have an average mean value above 4, which indicates the fact that now the internal auditors are exceptionally good at dealing with the consequences of the pandemic. With the analysis of ANOVA (Appendix A-2), we found that for these responses there are no significant differences in terms of the answers given by the defined groups of internal auditors.

Figure 1 also shows that all the answers related to the mental health of the internal auditors are drastically above the mid-point, which in our case is 3.

Figure 1: Comparison of the midpoint and the answers given (mental health)



Source: Author's calculation

Finally, the internal auditors were asked four general questions to assess issues related to their health, as follows:

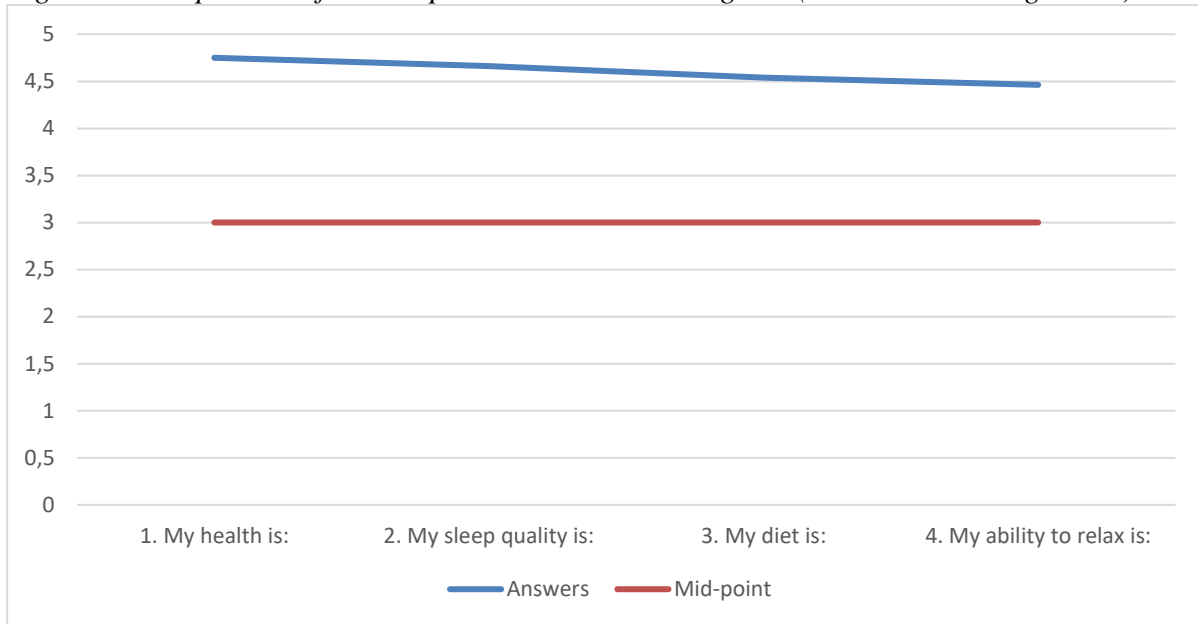
Table 8: Descriptive statistics – Mental health in general

	N	Minimum	Maximum	Mean	Std. Deviation
1. My health is:	80	1.0	5.0	<b>4.750</b>	.8930
2. My sleep quality is:	80	1.0	5.0	<b>4.663</b>	1.0305
3. My diet is:	80	1.0	5.0	<b>4.538</b>	1.1131
4. My ability to relax is:	80	1.0	5.0	<b>4.463</b>	1.1794

Source: Author's calculation

As can be seen in Table 8, all internal auditors have answered the last four questions with high reliability without significant differences in the groups. Given the fact that the mean value above 4.5 means "excellent", then without a doubt we can conclude that the internal auditors in the Republic of North Macedonia at this time feel great in terms of their health, quality of sleep, diet, and their ability to relax.

Figure 2: Comparison of the midpoint and the answers given (mental health in general)



Source: Author's calculation

As before, Figure 2 shows the responses to the last four questions by the internal auditors, compared to the midpoint: 3. The ANOVA (Appendix A-3) found that there are no significant differences between the answers given by the groups of internal auditors, ie the conclusion is general for all internal auditors in the Republic of North Macedonia that their mental health is excellent.

## Conclusion

The impacts of COVID-19 have forced internal auditors around the world to seek answers to questions they may never have previously imagined. The internal auditors in the Republic of North Macedonia, as members of a small profession, have been operating for more than a year and a half in the great shadow of the COVID-19 Pandemic.

With the conducted research we can conclude that the internal auditors from the public and private sectors in the Republic of North Macedonia have coped quite well with the pandemic and do not believe that it would have consequences in terms of greater opportunities for fraud and believe that the managers of the audited units will comply with legal regulations regardless of the crisis. Remarkably, all internal auditors agree that the quality of internal audits should not be sacrificed under any circumstances and that the principles and rules of conduct governed by the IIA Code of Ethics should be always adhered to. In the post-covid period, they expect to function in the "New Normal", with a change in certain business models, as well as greater use of technology tools. The mental health of internal auditors is currently excellent.

The limitation in the research is the measurement of the variables from the survey that is based only on the perception of the internal auditors. It may make this measurement method to be less accurate in describing the actual situation. Also, the internal auditors' mental health analysis is based on a resilience questionnaire that is not scientifically validated.



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## Appendix A-1

Table A-1: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
<b>How much has the COVID-19 pandemic changed the approach to your professional engagement?</b>	Between Groups	3.413	1	3.413	3.104	.082
	Within Groups	85.787	78	1.100		
	Total	89.200	79			
<b>In the new circumstances initiated by the COVID-19 pandemic was your company prepared to implement the IIA COVID Policy?</b>	Between Groups	.053	1	.053	.035	.852
	Within Groups	118.747	78	1.522		
	Total	118.800	79			
<b>What were the key challenges you faced in conducting your audit engagement at the beginning of the COVID-19 pandemic?</b>  Pressure to complete the fieldwork within the stipulated deadline under conditions of quarantine measures, and self-isolation of the employees in the audited units	Between Groups	.030	1	.030	.016	.900
	Within Groups	147.520	78	1.891		
	Total	147.550	79			
Updating the audit plan due to the inability to implement the planned activities	Between Groups	.213	1	.213	.118	.732
	Within Groups	140.987	78	1.808		
	Total	141.200	79			
Inability to meet the deadlines for completion of audit procedures and timely submission of the report	Between Groups	3.000	1	3.000	1.906	.171
	Within Groups	122.800	78	1.574		
	Total	125.800	79			
Opportunity to assist audited units in improving their resilience to pandemic impacts and continuing to operate in line with the company's goals	Between Groups	9.901	1	9.901	8.122	.006
	Within Groups	95.087	78	1.219		
	Total	104.988	79			
Weaknesses in the internal control system	Between Groups	18.008	1	18.008	16.927	.000
	Within Groups	82.980	78	1.064		
	Total	100.988	79			
Restrictions on the scope of obtaining and documenting sufficiently appropriate audit evidence	Between Groups	3.741	1	3.741	2.871	.094
	Within Groups	101.647	78	1.303		
	Total	105.388	79			
Increased risk of fraud	Between Groups	2.708	1	2.708	2.108	.151
	Within Groups	100.180	78	1.284		
	Total	102.888	79			
Opportunities to assist audited units in digital transformation	Between Groups	1.470	1	1.470	1.069	.304

		Sum of Squares	df	Mean Square	F	Sig.
	Within Groups	107.280	78	1.375		
	Total	108.750	79			
<b>Working in the COVID-19 pandemic has influenced you to increase your level of professional skepticism during your audit engagements.</b>	Between Groups	1.176	1	1.176	.951	.332
	Within Groups	95.179	77	1.236		
	Total	96.354	78			
<b>COVID-19 pandemic created favorable conditions for the risk factors of fraud related to the three elements of the fraud triangle (motive, opportunity, and rationalization), even more than that - to be present in the operation of business entities.</b>	Between Groups	.213	1	.213	.165	.685
	Within Groups	100.587	78	1.290		
	Total	100.800	79			
<b>In your opinion, working remotely even in case of an increased level of professional skepticism imposed certain barriers to identifying the symptoms of fraud (so-called "red flags") due to the impossibility of interviewing to establish closer contact with employees and body language follows.</b>	Between Groups	.368	1	.368	.363	.549
	Within Groups	79.020	78	1.013		
	Total	79.388	79			
<b>In your opinion, the new environment imposed by the COVID-19 pandemic will lead the management of audited units to be more often tempted to disregard laws and regulations (NOCLAR - Non-Compliance with Law and Regulation).</b>	Between Groups	15.188	1	15.188	14.394	.000
	Within Groups	82.300	78	1.055		
	Total	97.488	79			
<b>Working in a pandemic situation has affected your service by not fully fulfilling the planned engagements in the audit plan for 2020.</b>	Between Groups	1.333	1	1.333	.636	.428
	Within Groups	163.467	78	2.096		
	Total	164.800	79			
<b>The implementation of audit engagements one year after the start of the COVID-19 pandemic, as internal auditors have faced you with new and hitherto unknown challenges. In your opinion, what are the key audit risks initiated by the COVID-19 pandemic for the year ending 31.12.2021?</b>  Internal controls - how they are designed and how they work	Between Groups	1.021	1	1.021	.710	.402
	Within Groups	112.167	78	1.438		
	Total	113.188	79			
Risk of fraud related to the three elements of the fraud triangle (motive, possibility, and rationalization)	Between Groups	.163	1	.163	.109	.743
	Within Groups	117.387	78	1.505		
	Total	117.550	79			
Non-compliance with laws and regulations (NOCLAR)	Between Groups	.333	1	.333	.242	.624
	Within Groups	107.467	78	1.378		
	Total	107.800	79			
Audit of accounting estimates	Between Groups	1.613	1	1.613	1.348	.249
	Within Groups	93.387	78	1.197		
	Total	95.000	79			
Risk of obtaining sufficient appropriate audit evidence	Between Groups	.701	1	.701	.505	.480
	Within Groups	108.287	78	1.388		
	Total	108.988	79			
Risk of fulfilling the audit plan	Between Groups	2.430	1	2.430	1.399	.241
	Within Groups	135.520	78	1.737		
	Total	137.950	79			
<b>In conditions of remote work, limited communication with the management and employees of the audited units, closure of offices, quarantine measures introduced, supply chain interruptions, and complete paralysis of the work of</b>	Between Groups	5.070	1	5.070	7.478	.008
	Within Groups	52.880	78	.678		
	Total	57.950	79			

		Sum of Squares	df	Mean Square	F	Sig.
<b>audited entities, internal auditors must not sacrifice the quality of internal audit.</b>						
<b>Working in a pandemic has influenced the fulfillment of your mission as internal auditors to be trusted management advisers and to add value to the organization in meeting its goals.</b>	Between Groups	.270	1	.270	.170	.681
	Within Groups	123.680	78	1.586		
	Total	123.950	79			
<b>The uncertain environment in which the business entities imposed by the COVID-19 pandemic operate will tempt internal auditors to compromise the principles and rules of the IIA Code of Ethics.</b>	Between Groups	12.403	1	12.403	7.831	.006
	Within Groups	123.547	78	1.584		
	Total	135.950	79			
<b>In your opinion, when conducting an internal audit in the context of the COVID-19 pandemic, which of the principles of the IIA Code of Ethics were most susceptible to compromise?</b>	Between Groups	1.541	1	1.541	1.140	.289
	Within Groups	105.447	78	1.352		
	Total	106.988	79			
<b>Integrity</b>						
Objectivity	Between Groups	2.253	1	2.253	1.441	.234
	Within Groups	121.947	78	1.563		
	Total	124.200	79			
Confidentiality	Between Groups	2.521	1	2.521	1.549	.217
	Within Groups	126.967	78	1.628		
	Total	129.488	79			
Competency	Between Groups	1.080	1	1.080	.804	.373
	Within Groups	104.720	78	1.343		
	Total	105.800	79			
<b>Working in a pandemic has imposed new and unexpected ethical dilemmas and pressures on you as internal auditors.</b>	Between Groups	5.201	1	5.201	3.067	.084
	Within Groups	132.287	78	1.696		
	Total	137.488	79			
<b>In resolving ethical dilemmas, you have been guided by the moral compass and have shown the necessary dose of moral courage.</b>	Between Groups	1.401	1	1.401	1.447	.233
	Within Groups	75.487	78	.968		
	Total	76.888	79			
<b>Based on your experience to date, you feel that there is a deficit of moral courage among internal auditors when they are required to limit the scope of investigations, change evidence, not disclose all findings in the report, etc.</b>	Between Groups	.653	1	.653	.337	.563
	Within Groups	151.147	78	1.938		
	Total	151.800	79			
<b>In a time of a pandemic, your organization provides you with regular training and updating of the necessary knowledge</b>	Between Groups	11.603	1	11.603	5.548	.021
	Within Groups	163.147	78	2.092		
	Total	174.750	79			
<b>In the next six months, what do you think your work environment will look like:</b> Full return to the office	Between Groups	4.441	1	4.441	2.491	.119
	Within Groups	139.047	78	1.783		
	Total	143.488	79			
[Hybrid of remote work/office work]	Between Groups	.563	1	.563	.327	.569
	Within Groups	134.187	78	1.720		
	Total	134.750	79			
[For most of the distance, maybe just one or two meetings with a physical presence]	Between Groups	4.688	1	4.688	3.333	.072

		Sum of Squares	df	Mean Square	F	Sig.
	Within Groups	109.700	78	1.406		
	Total	114.388	79			
[Completely from a distance]	Between Groups	4.083	1	4.083	3.727	.057
	Within Groups	85.467	78	1.096		
	Total	89.550	79			
<b>What do you think can have the greatest impact on the internal audit profession in the Republic of North Macedonia in the post-covid period?</b>	Between Groups	.120	1	.120	.077	.783
	Within Groups	122.080	78	1.565		
<b>Regulation</b>	Total	122.200	79			
	Between Groups	4.687	1	4.687	3.303	.073
[Technologies -General]	Within Groups	110.700	78	1.419		
	Total	115.388	79			
	Between Groups	.963	1	.963	.778	.380
[Technologies, especially automation]	Within Groups	96.587	78	1.238		
	Total	97.550	79			
	Between Groups	1.333	1	1.333	.901	.346
[Technologies, especially data analytics]	Within Groups	115.467	78	1.480		
	Total	116.800	79			
	Between Groups	.750	1	.750	.434	.512
[Technologies, especially blockchain]	Within Groups	134.800	78	1.728		
	Total	135.550	79			
	Between Groups	.403	1	.403	.285	.595
[Changed management requirements and expectations]	Within Groups	110.347	78	1.415		
	Total	110.750	79			
<b>How do you imagine the "New Normal" in the functioning of the internal audit profession in the Republic of North Macedonia in the post-covid period?</b>	Between Groups	.963	1	.963	.567	.454
	Within Groups	132.587	78	1.700		
[Protection of employees' health - remote work with staff rotation]	Total	133.550	79			
	Between Groups	.041	1	.041	.030	.862
[Operation in the premises of the audited units with mandatory application of protective measures]	Within Groups	104.647	78	1.342		
	Total	104.688	79			
	Between Groups	3.413	1	3.413	2.815	.097
[Using technologies as a substitute for certain audit procedures]	Within Groups	94.587	78	1.213		
	Total	98.000	79			
	Between Groups	3.630	1	3.630	2.213	.141
[Social distancing - implementation of the engagement exclusively with the application of technologies]	Within Groups	127.920	78	1.640		
	Total	131.550	79			
<b>The lesson that the internal audit profession has learned in the past year since the beginning of the COVID-19 pandemic is that there is always a danger of an unpredictable event happening around the corner that could have serious consequences for the lives and work of individuals. auditors you could learn from the pandemic.</b>	Between Groups	1.613	1	1.613	1.763	.188
	Within Groups	71.387	78	.915		
	Total	73.000	79			

		Sum of Squares	df	Mean Square	F	Sig.
[To have a mindset with which you will always be ready to think the unthinkable - because danger can arise at any moment]						
[It is vital to continue working on a strategy developed to protect the health and well-being of employees]	Between Groups	.301	1	.301	.442	.508
	Within Groups	53.087	78	.681		
	Total	53.388	79			
[Transform operations by making greater use of the power of technologies to connect people and extend the operations of companies]	Between Groups	1.141	1	1.141	1.932	.168
	Within Groups	46.047	78	.590		
	Total	47.188	79			
[Organizations must prepare for change whether they want to or not, by adapting to new ways of working, using new business models, promoting technological tools such as virtual reality]	Between Groups	2.803	1	2.803	4.486	.037
	Within Groups	48.747	78	.625		
	Total	51.550	79			
<b>Under the influence of the pandemic, your organization has shown a willingness to digitize processes and facilitate remote operations for internal auditors.</b>	Between Groups	18.501	1	18.501	12.077	.001
	Within Groups	119.487	78	1.532		
	Total	137.988	79			
<b>Under the influence of the increased risks posed by the pandemic, your organization has shown a willingness to move from classical auditing to agile auditing.</b>	Between Groups	9.901	1	9.901	6.067	.016
	Within Groups	127.287	78	1.632		
	Total	137.188	79			
<b>In the post-covid period, more than ever before, internal auditors will need different skills and knowledge to be incorporated into professional title programs.</b>	Between Groups	.241	1	.241	.320	.573
	Within Groups	58.647	78	.752		
	Total	58.888	79			

Source: Author's calculation

## Appendix A-2

Table A-2: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
<b>1. I enjoy a good and varied social life</b>	Between Groups	.403	1	.403	.272	.603
	Within Groups	115.547	78	1.481		
	Total	115.950	79			
<b>2. I am happy with the achievements in my life</b>	Between Groups	.608	1	.608	.673	.414
	Within Groups	70.380	78	.902		
	Total	70.988	79			
<b>3. In times of crisis, others seek solutions from me</b>	Between Groups	.301	1	.301	.289	.592
	Within Groups	81.087	78	1.040		
	Total	81.388	79			
<b>4. I am confident in my ability to deal with life problems</b>	Between Groups	.241	1	.241	.344	.559
	Within Groups	54.647	78	.701		
	Total	54.888	79			
<b>5. Mostly I control my life</b>	Between Groups	.120	1	.120	.151	.699
	Within Groups					

		Sum of Squares	df	Mean Square	F	Sig.
	Within Groups	62.080	78	.796		
	Total	62.200	79			
<b>6. I am optimistic, even when things get tough</b>	Between Groups	.013	1	.013	.018	.895
	Within Groups	58.987	78	.756		
	Total	59.000	79			
<b>7. I learn from life experiences and feel stronger</b>	Between Groups	.003	1	.003	.007	.936
	Within Groups	39.947	78	.512		
	Total	39.950	79			
<b>8. I can see the happy side of most things, even in difficult situations</b>	Between Groups	.213	1	.213	.292	.590
	Within Groups	56.987	78	.731		
	Total	57.200	79			
<b>9. I take time to enjoy hobbies and non-work-related activities</b>	Between Groups	.187	1	.187	.181	.671
	Within Groups	80.700	78	1.035		
	Total	80.888	79			
<b>10. I am good at avoiding distracting situations and completing tasks on time</b>	Between Groups	0.000	1	0.000	0.000	1.000
	Within Groups	81.200	78	1.041		
	Total	81.200	79			
<b>11. I believe I am important and my life has meaning</b>	Between Groups	.521	1	.521	.726	.397
	Within Groups	55.967	78	.718		
	Total	56.488	79			
<b>12. When difficult, I will find a way to manage the situation calmly and effectively</b>	Between Groups	.270	1	.270	.395	.531
	Within Groups	53.280	78	.683		
	Total	53.550	79			
<b>13. I have enough patience and ambition</b>	Between Groups	.333	1	.333	.593	.444
	Within Groups	43.867	78	.562		
	Total	44.200	79			
<b>14. Usually, I can find a way to manage, no matter the situation</b>	Between Groups	.053	1	.053	.097	.756
	Within Groups	42.747	78	.548		
	Total	42.800	79			
<b>15. I am aware of the emotions I feel and I understand what causes them</b>	Between Groups	.163	1	.163	.308	.581
	Within Groups	41.387	78	.531		
	Total	41.550	79			

Source: Author's calculation

## Appendix A-3

Table A-3: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
<b>1. My health is</b>	Between Groups	1.080	1	1.080	1.360	.247
	Within Groups	61.920	78	.794		
	Total	63.000	79			

		Sum of Squares	df	Mean Square	F	Sig.
<b>2. My sleep quality is</b>	Between Groups	2.521	1	2.521	2.417	.124
	Within Groups	81.367	78	1.043		
	Total	83.888	79			
<b>3. My diet is</b>	Between Groups	.041	1	.041	.033	.857
	Within Groups	97.847	78	1.254		
	Total	97.888	79			
<b>4. My ability to relax is</b>	Between Groups	1.841	1	1.841	1.329	.253
	Within Groups	108.047	78	1.385		
	Total	109.888	79			

*Source: Author's calculation*