INSTITUTO
UNIVERSITÁRIO
DE LISBOA

AUDITING IN TIMES OF SOCIAL DISTANCING: THE IMPACT OF COVID-19 ON AUDIT

Denisa Stefania Herteg

Supervisor:

Prof. Alexandra Marques Fernandes, Professora Auxiliar, Departamento de Marketing, Operações e Gestão Geral, ISCTE Business School

October, 2022

Department of Marketing, Strategy and Operations

AUDITING IN TIMES OF SOCIAL DISTANCING: THE IMPACT OF COVID-19 ON AUDIT

Denisa Stefania Herteg

Supervisor:

Prof. Alexandra Marques Fernandes, Professora Auxiliar, Departamento de Marketing, Operações e Gestão Geral, ISCTE Business School

October, 2022

Acknowledgement

The pandemic was a challenging period. To reconcile the audit work with the investigation of the present study is an achievement for me, especially during these controversial times.

I would like to start by thanking to my parents Mihaela Herteg and Calin Herteg who always supported me and encouraged me to invest in my education and to particularly focus on the present thesis.

Secondly, I would like specially to thank José Monteiro for all the unconditional support during this chapter of my life. Without him, this thesis would not have been possible. Many thanks to Daniela Lima and Rita Moreno for all the strength they gave me. To all my friends who endured this long process with me and who always offered support and love my biggest thanks.

Thirdly, I wish to show my appreciation to the interviewees, who generously took time out of their schedules to participate in my research and make this study possible.

Finally, I would like to extend my special thanks to Professor Alexandra Fernandes. Her encouragement to write this thesis made me confident that the topic was worthy of my investigation and that my investigation was worthy of the topic. Also, her guidance and advice were crucial to the development of this investigation.

Resumo

A rápida propagação do Covid-19 teve consequências notáveis não só na vida quotidiana das pessoas como também nas empresas, materializando os seus efeitos na área da auditoria. Assim, é fundamental avaliar quais são os efeitos e de que forma afetou esta área. O método tradicional de trabalho foi contestado. Antes da pandemia, a atividade de auditoria era realizada presencialmente. Esta situação obrigou a mudança para um ambiente remoto. O próprio trabalho de auditoria foi testado. A eficiência no cumprimento de prazos durante o processo de adaptação foi também afetada. Não existe dúvida que a auditoria perdeu qualidade. Além disso, notou-se uma pressão crescente para cometer fraude devido às preocupações sentidas. Assim, surgiram três problemas:

Problema 1 (P1): A transição para auditorias remotas causadas pela pandemia facilita a atividade de auditoria;

Problema 2 (P2): o tempo de entrega do relatório de auditoria é igual à anterior situação sem pandemia;

Problema 3 (P3): a pandemia aumenta o risco de fraude na auditoria.

Através de um estudo qualitativo, estes problemas foram investigados. Foram conduzidas entrevistas para dar uma resposta aos problemas apresentados. Os participantes são profissionais com experiência na área de auditoria. Os resultados indicam que o trabalho à distância não facilita a atividade de auditoria. O tempo de entrega do relatório de auditoria depende de dois fatores: nível tecnológico da empresa e resposta de adaptação à pandemia. Por fim, a pandemia aumenta, inquestionavelmente, o risco de fraude.

Palavras-chave: Covid-19, pandemia, auditoria, fraude, trabalho remoto, *audit report leg*

Classificação JEL:

M42: *Auditing*

O33: *Technological Change: Choices and Consequences*

Abstract

The fast spread of Covid-19 had notable consequences not only on day-to-day life but also on businesses, materializing its effects in the audit area. For that reason, it is critical to evaluate which are the effects and how impacted this area. The traditional method of work was contested. Usually, before the pandemic, the normal course of the auditing activity was performed by face-to-face methodology. The exceptional situation has forced the change to a remote environment. The audit work itself was tested. The efficiency to comply with deadlines during the adaptation process was also affected. Undoubtedly, the audit lost quality. Additionally, the distress of Covid-19 created increased pressure to commit fraud. Thus, three main problems arose:

Problem 1 (P1): The transition to remote audits caused by the pandemic facilitates the audit activity;

Problem 2 (P2): The audit report leg is equal to before the pandemic;

Problem 3 (P3): The pandemic increases the risk of fraud in auditing.

Through a qualitative study, these problems were investigated. The interviews were conducted to provide an answer to these problems. The participants are professionals with experience in the audit field. The results indicate that remote work does not facilitate the audit activity. The audit report leg depends on two factors: the technological tools and the response of the company to the new situation. Finally, the pandemic unquestionably increases the risk of fraud.

Keywords: Covid-19, pandemic, audit, fraud, remote work, audit report leg

JEL Classification System:

M42: Auditing

O33: Technological Change: Choices and Consequences

Index

Resumo i
Abstract iii
List of Abbreviations vii
1. Introduction 1
2. Literature review 7
   2.1. Auditing 7
      2.1.1. Auditing in Covid-19 times 9
      2.1.2. Audit quality 10
      2.1.3. Audit evidence 11
   2.2. Audit report delay 12
   2.3. Auditing fraud 14
      2.3.1. Types of fraud 15
      2.3.2. The Fraud Triangle 16
3. Research Design 19
   3.1. Research problem and research questions 19
4. Methodology 23
   4.1. Research method 23
   4.2. Sample 25
   4.3. Interview Process 26
   4.4. Data Collection 28
5. Findings and Content Analysis 31
   5.1. Changes in audit because of the pandemic 31
      5.1.1. General changes 31
      5.1.2. Changes in the audit evidence 32
      5.1.3. Remote audit work 34
      5.1.4. Materiality impacted by Covid-19 37
      5.1.5. Technological changes imposed by Covid-19 37
      5.1.6. Audit fees 38
   5.2. Audit report delay 39
   5.3. Fraud 40
      5.3.1. Fraud inquiries and interviews 40
      5.3.2. Regulation regarding fraud during Covid-19 41
      5.3.3. Internal control 42

5.3.4. Types of fraud 43
5.4. Content Analysis.. 45
6. Conclusion 47
7. Limitations and Future Research 49
8. Bibliography 51
9. Annexes.. 55

List of Abbreviations

ACFE - Association of Certified Fraud Examiners

AGM - Annual General Meeting

CEO - Chief Executive Officer

ICT - Information and Communication Technology

IFRS - International Financial Reporting Standards

ISA - International Standards on Auditing

IT - Information Technology

MOC - Management Override of Controls

NPPD - National Professional Practice Director of the Audit

OROC - *Ordem dos Revisores Oficiais de Contas*

PCAOB - Public Company Accounting Oversight Board

PM - Performance Materiality

SAS - Statement on Auditing Standards

U.S. GAAS - United States Generally Accepted Auditing Standards

1. Introduction

The magnitude of disruption from the Covid-19 pandemic during the years 2020 and 2021 has had a notable impact on organizations. Public health measures taken to attenuate the spread of the Covid-19 pandemic have changed business operations and processes. The field of auditing was no exception.

Auditing is critical to confirm the accuracy of the financial statements which gives a perspective and a relevant opinion of how the company's results evolve throughout the fiscal year. More broadly, the undertaking of the audit itself provides valuable insights. Audits help to keep the capital markets safe and secure for public investment. Investors have confidence that an independent third party has performed an objective audit to verify that the financial and other information disclosed by management is fairly stated. The detection of errors and fraud is necessary, especially for the interest of investors. The feedback provided by the auditing firm can enhance the level of confidence and understanding of the management information.

While there remains uncertainty as to the duration and depth of the social and economic crisis associated with the pandemic, people and companies, the Government and several national and international bodies had revealed some measures to be followed during these disruptive times. The Covid-19 coronavirus pandemic that has gripped the world in the last two years had substantial developments almost day by day. The decisions of the international health authorities and the legislation passed by the Government and the European authorities to combat the outbreak have conditioned families and businesses, and it is estimated that the effects of the measures adopted will be long-lasting. The restrictions imposed on the exercise of some economic activities and on the mobility of people have implications for the work performed.

Regarding the audit field, the pandemic created a sudden need to work remotely. The auditing companies made an effective and responsive shift to the new method of work. The primary focus was to adopt this method while maintaining the audit quality. The inability to interact in person with each other and with the entity management or personnel was a unique challenge which impacted the foundational auditing principles.

It is important, therefore, to consider the consequences that the measures of social lockdown and the restrictions imposed on the whole world have had not only at the economic level but also at the social level. The impacts are certainly expressed in the activity, performance results, and assets of companies, which will be reflected in the financial and non-financial information with reference to the fiscal years of 2020 and 2021. These new circumstances necessarily require special attention from the auditor on several matters in all phases of the audit. The auditor must consider the possible increase in the vulnerability of the company due to the exposure of its business to markets significantly affected. In this way, Covid-19 may affect the accounting estimates that should be recognized and/or disclosed in the financial statements. However, consideration should be given to the fact that an audit cannot predict the unknown factors or all possible future implications for a company, and this is particularly the case concerning Covid-19.

Considering the pandemic macro-business work environment, many challenges have emerged for auditing companies. Inherently, the method of work changed entirely. There is not even an option to repeat or to maintain what was performed in the prior year as the world is a different place. New ways of working are being adopted by companies around the world. There is a need to adapt to restrictions to mitigate the spread of the virus. This process enhances the development of resilience and encourages the learning of new ways of working. Indeed, there will be several implications for the task of auditing. The quality and quantity of narrative reporting will be certainly affected. More than ever was important to communicate in a timely, transparent, and mutually understood form. For high-quality audit work, alternative methods of direction and supervision the work were necessary. Since there were no longer possible to commute, the frequency of phone calls and videoconferences increased significantly.

The auditor is responsible for designing and performing audit procedures to obtain sufficient and appropriate evidence. The main purpose is to draw reasonable conclusions on which to base his or her opinion. In light of the pandemic environment, logistical challenges were raised in terms of how to obtain the audit evidence. The onset of the global pandemic has resulted in enormous pressure on auditors to find alternative ways to collect audit evidence and complete the auditing process. The traditional methods of collecting audit evidence rely upon in-person procedures that were impossible or impractical because of the pandemic. The auditing process was kept active with the help of technology, as it was possible to implement remote virtual auditing, including document collection, remote inventory observation and risk assessment. The investments in innovation and technology of the auditing companies helped the information sharing in the remote environment. Although it facilitated the process of information flow, it is important to consider that certain technologies did not replace entirely the old methods of audit evidence.

The new situation imposed a new assessment of the companies' procedures for the auditors. They needed to identify and understand the implications of Covid-19 on the entity being audited. The time needed to perform the audit work also requires to be assessed, after discussing with the client upon deadlines.

Materiality is another important matter of the audit activity. It implies professional judgment and is related to the importance of the information conveyed in the financial statements to the decision-makers. In determining materiality, the auditor should assess any Covid-19 implications, for example, in the identification of the benchmark.

Additionally, this environment can create an incentive or opportunity not only to make an unintentional error but also to commit fraud. The auditor must be especially alert to fraud risk factors. It is important to note that several lines of support were available for companies which were severely affected by the crisis. In order to permit the company's ability to operate, the support lines were a relevant factor. There is an incentive to access government support by providing false information. The risk of submission of enhanced financial information when contracting financing or other forms of raising capital by the company being audited is also a risk. During the audit, the auditor may be faced with unusual situations and, in such cases, must consider to what extent they may or may not be associated with fraud risk.

Several companies decided to require support given by the Government such as lay-off measures. In some companies, these measures have been implemented for some employers or employees with less involvement in internal control systems. In other companies, the lay-off measures have been transversal for all key employees. In these cases, any anti-fraud controls in place may have been interrupted and the auditor may have to adjust its audit procedures to address the potential fraud risks in an appropriate manner.

According to Financial Reporting Council (2020) "at a time when entities are under increased pressure, and internal controls may not be operating as planned, the auditor should also consider whether their assessment of the risk of material misstatement due to fraud or irregularity needs to be heightened as a result, and additional audit procedures need to be carried out".

The Association of Certified Fraud Examiners (ACFE, 2020) declared that an average organization loses an estimated 5% of its annual revenue to fraud, being one of the major risks facing an organization. Ensuring the accuracy of financial records at a micro level and promoting transparent financial reporting at a macro level are the principal purposes of auditing.

The present report aims to develop a dissertation thesis to analyse the potential consequences of the Covid-19 pandemic when auditing in social distancing times. The three main questions of the study assigned as problems are related to the facility of auditing in times of Covid-19, the time of the auditing report delivery, and the incentive to commit fraud during the pandemic.

My career path is also a motivation to initiate the present study. Starting a career during the pandemic is a challenge and brings a lot of uncertainty. However, I start my career as an auditor in October 2020. My function consisted in executing auditing procedures on the core business of one entity. Given my career path, detecting fraud was part of my life's work. The present investigation will help and develop my critical thinking to be more accurate when it takes to identify fraudulent activity. In addition, exploring this subject is important to develop my business and industry knowledge by staying on top of the latest critical and relevant news. Understanding the issues faced regarding this subject is crucial for me nowadays to be able to face and solve all the problems. It is important to gain theoretical knowledge to take it to a further step. As a matter of fact, being able to determine a company's financial picture led to making auditing more efficient. The principal aim of the present study is to provide evidence and conclusions on an unexplored theme.

The rapidly moving fact pattern suggests that this area will suffer changes. To improve my effectiveness in business and stay ahead of the curve in a constantly evolving auditing and business environment my contribution is vital.

Firstly, it is important to understand the relevance of this theme, so to introduce the topic this report contains a literature review. Beginning from the theory, the study presents the literature review which is allied to the subject of auditing. Auditing is presented through a historical evolution, where is also mentioned its definition and how it emerged. The subject of auditing is addressed in four topics. The first topic exhibit how the audit activity changed due to the pandemic and how to audit in Covid-19 times. The second topic reveals the challenges imposed on audit quality. The third topic investigates the new forms of audit evidence. The audit report delay designates not only the fourth topic but also a relevant problem. Then, the topic of how to audit fraud is approached. In this part, the fraud definition is contemplated by Manurung (2013) and Sridhar (1995). The three types of fraud: manipulation, misrepresentation and misappropriation are also expressed with examples in the context of the pandemic. The theory of the Fraud Triangle is also crucial for the present analysis. This theory was developed through three pillars: pressure, opportunity and rationalization, which are presented with examples in the context of Covid-19.

The following section is regarding the research problematic design. In this section, the research problems and questions are presented. The research problem represents a contextualization of the 3 main questions named as problems which emerged in the audit field due to the pandemic.

There is no doubt that is crucial to examine the real impact of Covid-19 provided through investigation. For that reason, the methodology for the subject under investigation will also be presented. In the methodology section, the following main aspects will be covered: the research method and the sample size and its characterization. Given the fact that the methodology used is the qualitative method by interview, the interview process and data collection will be contemplated. The interview process expresses in essence the structure of the interview. The data collection contemplates the number of participants, the used media for interviewing and the interviewing style. Aiming to employ interviews in my future research, though this paper I would critically assess the values of the interview as a research instrument.

The findings section is the fifth section of this paper. The answers of the participants to the questions of the interview are the findings. To provide a complete view of all results is important to cross the information collected from the literature with the information collected from interviews, which is made also in the fifth section in the content analysis subsection.

The limitations of the present study are also expressed in the conclusion and limitation section. The next steps regarding the dissertation are disclosure in same the section. The interview guide used can be found in the annexes.

2. Literature review

2.1. Auditing

With its origin in the 1800s, the auditing field was urged because of the economic and political forces of the time (Knechel & Salterio, 2017). In the same period, the audit profession had as its main purpose the prevention of fraudulent actions. In fact, the honesty of those responsible for the accounting was tested (Ali & Teck-Heang, 2008). The only activity associated with the audit used in the past and nowadays is the verification in detail of the transactions of one company (Knechel & Salterio, 2017).

The role of auditing started to gain importance because of the concerning issues of the investors. They started to express more concern with future profitability as it became the basis for assessing and predicting share values. Accordingly, measuring and verifying financial results became the principal concern of accountants and auditors (Knechel & Salterio, 2017). Besides that, for society, it plays a crucial domain in maintaining welfare and stability. The history of auditing suggests that it arises both naturally from economic activity and is in part a social contact between the government and entrepreneurs (Knechel & Salterio, 2017). Given the influence of the government, many authors believed that the audit was principally related to the detection of fraud (Ali & Teck-Heang, 2008).

The objective of auditing has been changing depending on the needs and expectations of society. Indeed, after the industrial revolution, more and more companies emerged in the market. Given this fact, the concept of materiality emerged (Ali & Teck-Heang, 2008). The term of materiality is important from the initial part of the task of auditing denominated as planning, to the evaluation of the tested analysis during the audit process. Materiality defines the extension of work needed to be conducted (Houghton *et al*., 2011). This quantitative guidance is based upon indicators or benchmarks that are representative of the nature of the company's business. Since it ensures the reasonable limit of misstatement that can be accepted, the materiality is related to the professional reasoning of the auditor (Joldos, 2010). The judgment of materiality is crucial in the activity of auditing (Ali & Teck-Heang, 2008).

Additionally, the implementation of the sampling in the audit was indispensable. There is no need to analyse in detail every transaction of the company. To implement such a technique, the audit must have reliance on the internal control of the company being audited (Ali & Teck-Heang, 2008).

Although the fact that the principle of auditing remains the same when compared to the past, there was a notorious advance in terms of relying more on the system rather than on verifying transactions in the books (Ali & Teck-Heang, 2008).

In general, modern business auditing firms have several aspects in common. The specifics of operations, however, may vary dramatically from business to business and even more so between companies in different industries. All need relevant and reliable information since the quality of decision-making at all levels is directly affected by the quality of information used to make decisions (Knechel & Salterio, 2017).

All organizations have some type of accounting and information system. In some organizations, the accounting system is highly sophisticated and complex. In these cases, computerized databases may be used to capture desired information which can be then sorted, aggregated, and reported in different ways depending on the needs of the audience. The need for reliable information is important. Furthermore, businesses operate in a global, real-time marketplace in which developing and maintaining a competitive advantage has become increasingly difficult. The cycle of reporting and using information has become increasingly dynamic, almost fluid, to the extent that users of information are looking for ways to understand not only how well an organization is performing now, but also how well it can be expected to perform in the future (Knechel & Salterio, 2017).

Having access to good information is pointed out as a form of acquiring wealth and power as opposed to the lack of good information that led to failure. Accountants who inspect the company's information systems and auditors who audit the financial statements are positioned to increase the usefulness of information which for instance contributes to the economic growth of a society (Knechel & Salterio, 2017).

To resume and as stated by Coates IV (2007) auditing is intrinsically a way to verify financial statements as truthful. The audit is performed principally because it is required by law or regulations. It also can be requested by shareholders or governing bodies and/or can be requested by specific interested parties in the financial statements. Audits are crucial to verify whether firms and operators meet a particular level of performance obtained in contrast with the certification and labelling rules. In many instances, audits include in-person or on-the-ground, physical visits to the firms and to the organizations that apply to be certified (Loconto & Busch, 2010).

2.1.1. Auditing in Covid-19 times

Despite the current situation of the pandemic, it is crucial to pursue the activity of auditing. As a matter of fact, the use of technology is already a common and used tool to conduct this type of activity. In this way, the work of the auditor can be simplified by using information of technology (Minialo & Nezhyva, 2020). The auditing process is affected by technology in a strategic form since it enhances the order and the methods of the conduct of auditing. In addition, it facilitates the audit planning process, the documentation process and more importantly the implementation of audit procedures and evaluation of the audit evidence. To cope with a large amount of information, the audit process needs constant digitization. To achieve a high-quality audit in a challenging environment, it is also crucial to share data and other information that can lead to stronger growth (Helfrich, 2021).

Nevertheless, it is important to take into consideration the challenges imposed on the auditing field by the pandemic of Covid-19. Because of the pandemic, the lockdown was imposed. Since the travel restriction was imposed, the auditors had to work from home during the pandemic time. This situation has generated an increased risk and therefore a demand for the practice of auditing to beware of the magnitude of the outcomes. Given the fact that there was a need for research in this area, the field of auditing has become more sophisticated (Rinaldi *et al.*, 2020). Auditors had to rely on technology to perform the audit procedures. These circumstances affect not only the auditors but also the clients (Illuzzi *et al.*, 2020). The increasing automation and digitization will lead to a greater need for process and systems testing in auditing (Beechem, 2021).

Considering the spread of Covid-19, one of the precautionary procedures implemented by the government was remote work. In March of 2020, the international audit community stated the mandatory use of remote auditing. Prior to the pandemic, the process of remote auditing has been an option. As a fact, remote auditing was not used with frequency before the pandemic (Daoud & Serag, 2021). The definition of remote auditing by Teeter *et al.*, 2010 (p. 73) is: "the process by which auditors couple information and communication technology (ICT) with data analytics to assess and report on the accuracy of financial data and internal controls, gather electronic evidence, and interact with the auditee, independent of the physical location of the auditor". When face-to-face practices are not allowed remote audits imply the use of information and communication to collect audit evidence (Daoud & Serag, 2021).

The contrast between the before and after a pandemic is notorious. The most impactful change is related to the in-person interactions that were non-existent during the pandemic.

Interactions have become less personal when performing auditing remotely. These are now practiced in video conferences sometimes without a camera. It is a risk to the relationship between the auditor and the auditee (Eulerich *et al.*, 2021). In fact, the most used information technology (IT) tools by auditors are E-mail and Video Conferencing. The usage of the IT tools during the pandemic increased with exception of the E-mail which maintained the same level of usage as before the pandemic (Beechem, 2021). Another tool whose usage was intensified in the pandemic was the mobile phone. The mobile transmits more real-time information (Ferreira, 2021).

Considering the variety of IT tools, it is important to highlight that auditors use regularly automated tools to extract and analyse data. The advantages of using it are related to the low cost of technology, improved audit quality, expanded audit coverage and increased perceived contact time (Beechem, 2021).

Several advantages arise from remote auditing. When taking into consideration the time, remote auditing generates audit efficiency by reducing not only the latency of work but also the time spent travelling to the audit locations (Beechem, 2021). A study reveals that when compared with the normal audit process, the remote audit process is a slightly modified audit process, in other words, very similar to the normal audit process (Eulerich *et al.*, 2021).

2.1.2. Audit quality

The audit quality is meaningful nowadays. Audit quality is in the first place a synonym for auditing professionalism (Knechel & Salterio, 2017). The audit quality is related to the capability of the auditor to detect fraud and its intention to report it (Qatamin & Salleh, 2020). In accordance with Generally Accepted Auditing Standards (GAAS) the audit quality is reached when a certain audit activity is carried out with the desired standards. It is believed by many authors that audit quality is associated with the number of audit assignments made by the auditor (Qatamin & Salleh, 2020).

According to Eulerich *et al.*, (2021) the transition to remote audits caused by the pandemic does not affect in a negative way the audit quality. A possible way that audit quality can be affected is by the reduction of audit fees. In order to survive to the financial crisis of 2008, the firms reduced their audit fees. The truth is that when an external event occurs, there is a need to adjust the audit fees. Indeed, several studies indicate that the reduction of audit fees leads to a reduction in audit quality (Sonu *et al.*, 2016). According to Sonu *et al.*, (2016), the entity PCAOB (2010) stated that the pressures of a reduced budget could lead to audit deficiencies such as reduced audit efforts or inappropriate operation of audit firm-level quality control programs.

On the other side, especially, in times of financial difficulties, auditors have incentives to increase the audit fees since there is more risk given the fact that there is a higher possibility of bankruptcy, firm failures, earnings manipulation and fraud (Sonu *et al.,* 2016). Since the adoption of the IFRS in financial reporting, audit costs have increased because the new reporting model requires greater effort from the audit firms that must comply with additional information (Ettredge *et al.,* 2014).

The well-known auditing firms with international brand names, for example, the Big four firms of auditors suggest a higher level of quality of the services provided than small audit firms. Industry expertise is a key point for the success of the firm and recognition in the marketplace. The audit fee is related to the market price. Since the Big four are popular for providing better quality services related to auditing, they charge a higher fee for the services provided (Choi *et al.,* 2010).

In the case of the pandemic, Andrej Suskavcevic, president and CEO of Financial Executives International and the Financial Education & Research Foundation stated on 25 February 2021 that "the partnership between public companies and their external auditors, especially this year, was paramount to being able to continue to report high-quality information in a timely manner." (Cohn, 2021).

Additionally, remote auditing can improve audit quality since it expands the audit coverage and reduces travel and entertainment expenses (Teeter et al, 2010). A study shows that the efficiency of a remote audit is positively affected when compared to a regular audit (Eulerich *et al*., 2021). Another important aspect to take into consideration is the client persuasion techniques that turn out to be less persuasive by e-mail than in person, so for that reason, remote audits improve audit quality. (Eulerich *et al*., 2021).

2.1.3. Audit evidence

Given the fact that the actual pandemic consequence relies on remote auditing, alternative ways to collect audit evidence had to be implemented (Appelbaum, 2020). Defined by GAAS on June 2020 (p. 14) as "all of the information used by the auditor in arriving at the conclusions on which the audit opinion is based", the audit evidence is the main key to the activity of auditing. This type of information is more authentic, if it derives from external sources of the entity being audited. The reliability and quality of this evidence influence the sufficiency or quantity of evidence needed to pursue the audit (Appelbaum, 2020).

To provide an opinion, the auditor needs to investigate the documentation of evidence. The collection of evidence supports the justification of the report. For that reason, the documents must be descriptive. As an example of documents, there is the copy of minutes of the board of directors and general assembly, copies of contracts of loans, contracts of the employees, contracts of bond issuance approval and other documents (Aslani & Niktaba, 2015).

Auditors need to establish what type of audit evidence can be obtained remotely (Illuzzi *et al*., 2020). It would be easier to access the documentation more quickly due to the expansion of digital evidence (Teeter *et al.*, 2010). The clients should copy or scan the audit evidence according to the auditor's needs (Illuzzi *et al.*, 2020). All the documentation selected by the auditors should be available electronically. The communication through e-mail should be revised to be a secured source. It is required for the auditor to identify the authenticity of the information provided (Appelbaum, 2020). Nowadays, not all companies have data stored in digital form. By contrast, sometimes the data needed as audit evidence is presented in paper documents. The conversion of these documents into a digital form can lead to potential falsification and errors. The auditor must evaluate the electronic documentation received as audit evidence from the client as a good practice of the activity of auditing (Teeter *et al.*, 2010).

In the actual environment, there are some areas of evidence collection that are demanding physical presence. The example of the counting of inventory is one of them. Large gatherings and travelling were forbidden during this pandemic. To continue the job, the inventory count could be conducted by live video streams or video recordings (Appelbaum, 2020). Although this type of audit evidence may be weak, it can be appropriate when the inventory is not a relevant subject in the accounts. Recording live video streams may be a more suitable solution since this type of technology offers the possibility of reviewing the videos and pictures at a magnified scale and as often as required. Although it allows visualisation, in these circumstances, it can be difficult to detect details such as identifying damaged/dusty goods. (Appelbaum, 2020).

2.2. Audit report delay

The question that arises is whether the audit report lag it is equal to before the pandemic. The audit report lag is defined as the time between a company's fiscal year-end and the date of the audit report (Sagin & Shil, 2019).

Even before the pandemic, there were problems concerning the safety of the information. Cybersecurity never lost its importance. As a matter of fact, it gained a lot of attention recently. Considering that the pandemic forced the need to work from home, some measures had to be implemented. To get access to the information, the companies had to implement different tools, such as new systems. For example, the security implications enhanced the use of cloud services. Enhanced use of cloud technology allows auditors to continue their work (Martinelli, 2020).

Based on studies, diverse authors propose to use technology as a primary tool of auditing and data analytics in planning and implementing audit tasks. The technology enables the expansion of the audit scope and increases the audit coverage. The relationship between the audit team and the client can be also facilitated since it is easier to discuss important issues having a meeting with the use of technological tools. It can save time and effort (Daoud & Serag, 2021).

Although it has many advantages, because of these changes and reprioritizations, the audits are delaying the time of delivery. Due to the pandemic, there are more procedures to be tested. In addition to that, the audit effort increase. In other words, the number of hours working rises (Martinelli, 2020). All workers needed to adapt to new technologies and features had to be learned. Considering this fact, the deadlines of time were impacted (Ferreira, 2021).

In fact, there are many causes of the audit report delay. Many authors agree that the lack of cooperation in providing the needed documentation can be the cause of the audit delay. In addition to that, there is another plausible reason: delay in the audited entities commenting on the draft audit report. After the conclusion of the draft audit report by the audited company, it is sent to the auditing institution. If changes must be done, the entity must respond rapidly to the draft in order to comply with the deadline for the emission of the audit report. The main cause that delays the audit report is the company’s inability to keep its accounts up to date. The accounting changes, the exceptional events which arise as a disclosure item, and the loss contingencies are some other reasons that delay this task (Sagin & Shil, 2019).

It is also important to note that it can be more difficult to gather the information needed as evidence in the remote audit activity. If there is a delay in the information provided the audit report lag can increase. (Minialo & Nezhyva, 2020).

2.3. Auditing fraud

Among management, fraud is defined to be an intentional act by one or more individuals, employees or third parties who present errors in financial reporting. Fraud has increased fastly over the last few years and this trend is professionally affecting companies. According to the definition of ACFE's of fraud, the intent of this act is to take a profit by abusing a position, title or stealing assets, and resources within the organization (Manurung, 2013). The legal definition states fraud as "a known misrepresentation of the truth or the concealment of a material fact to induce another to act to their detriment". The term of fraud is also related to the concept of "white-collar crime", which has become the origin of further theories related to fraud. Typical white-collar crimes include financial reporting fraud, asset misappropriation, false advertising, labour relations, conflicts of interest, money laundering and many other anti-trust violations (Sridhar, 1995).

The term fraud auditing implies a much more specialized approach and methodology to perceive fraud. The principal objective of the audit regarding this subject is to look for evidence of fraud. Indeed, this task involves different types of skills, knowledge and especially experience to detect and document fraud. It is usual to assume that this type of activity can occur even in accounting systems that have tight controls. Any level of management or society can commit fraud. The most accurate way to detect it is to look long and deep enough into the records of accounting and financial transactions. Another important aspect to consider is the amount that is subject to fraud. The visible part of the transaction may implicate a small amount of money, still the invisible portion can be considerable. Multiple and distinct areas are decisive to discern fraud. The auditors must know what fraud from a legal, audit, environmental, and cultural perspective is, and even from a perpetrator's perspective. Fraud auditors look behind and beyond the transactions and audit trail to focus on the substance of the transactions (Singleton *et al.*, 2006).

According to Morton (1993), there is no doubt that the audit strategy is definitively affected by the information obtained by the auditor. It is mandatory to obtain supplementary information to provide a more accurate opinion in the audit process. Based on the model developed by Morton (1993) misreporting is never detected under the optimal audit policy. Misreporting is a fraud that is made intentionally. Considering simple errors or unintentional mistakes can also lead to misstatement. The auditor must perform and interview regarding fraud. Since those interviews cannot be performed in person, the alternative to continue to perform these types of procedures is by video conferencing. The standard requires auditors to have discussions with the client respecting the client's assessment of the risks of fraud and the client's process for identifying, responding to, and monitoring the risks of fraud. There is a high redefinition in fraud risks given the uncertain times (Illuzzi *et al.*, 2020).

Indeed, with the pandemic, there is a need for the interviews to be conducted by the way of online tools such as Zoom, Skype, and GoToMeeting. Given the pandemic, remote auditing permits to easily tracking of transactions. Auditors can respond remotely to the detection of fraud (Daoud & Serag, 2021). Since it is rare to discover fraud, the first step to take as an auditor should be the identification of aspects of the client and its environment which can be related to fraud. Sometimes the process of identification may not be easy especially if the client is risky and presents a large and different characteristic (Graham & Bedard, 2003).

2.3.1. Types of fraud

It is important to take into consideration that there are various forms of fraud: manipulation of financial results, misrepresentation of facts or misappropriation of assets (Deloitte, 2020).

Manipulation can be a potential fraud on the account of Covid-19. Accounting manipulation is "the use of the flexibility of generally accepted accounting principles related with the reporting or the alterations made in the financial information in order to falsify the financial situation and the results of activities on the contrary with the current standards" (Uyar, 2019, p. 43). In a situation where all the workers are working remotely is easier to change accounting records and supporting documentation. Transactions can also be transformed to suppress their impact on the financial statements. Since people have more privacy and more time while working at home, there is an incentive to modify supporting evidence. It is also common to detect manipulation of performance measures and other key performance indicators. Thus, manipulation of ratios of performance regarding the debt loan can occur. In order to keep the financial situation stable to remain eligible to receive funding is important to accomplish with the covenants. To attract new capital finance or short-term loans, manipulation of forecasts and ratios is also a potential fraud practice (Deloitte, 2020).

Another potential fraud due to Covid-19 is misrepresentation. The legal definition of fraud is related to the term misrepresentation. The concept of "misrepresentation" includes concealment, false representation or nondisclosure. The misrepresentation shall be sustained by a material fact rather than a mere opinion. However, if stated by an individual with superior knowledge, opinions might become misrepresentations. Concealment is cited as the suppression of facts, also being a crucial aspect of misrepresentation (Vona, 2008). In the presence of remote work, entities might try to misrepresent the true position of the company. Examples may include omitting information that could modify the reader's opinion about the company's performance. Missing or limited scenario analysis is also a potential motive for fraud since scenarios that were already considered remote may now be important to the readers of the financial information. Hence, excluding information with intention from reporting could impact a reader's perspective of the company. Cover up related party transactions, giving extreme importance to change performance measures intended to hide the true reality of the company's position and the intentional failure to disclose post-balance sheet events are actions associated with the misrepresentation type of fraud (Deloitte, 2020).

Fraud can also be seen as misappropriation that consists of embezzlement, theft, or any attempt to steal or illegitimately capture, abuse or harm the assets of an organization (Manurung, 2013). Regarding this type of fraud, there will be an increase in the risk of theft of valuable, marketable inventory or fixed assets. Reduced physical security may create an opportunity for theft. Examples can include the disposal of non-profitable assets, an unusual write-off of stock and new suppliers that have not gone through appropriate verification processes. The alignment of the staff with suppliers which conducts to inflated pricing for the company is also an indicator of fraud. Not only the payments to suppliers that are not approved by the supplier or intervention to change payments but also the payments to related parties or members of staff outside the payroll normal payments also increase this type of risk. There is also an increased risk of misappropriation of funds where the disruption demands modifications to authorization controls. Unrecognized payments or new suppliers are two of the aspects to be considered related to this type of fraud. Several studies conducted by the Association of Certified Fraud Examiners (ACFE) estimate that asset misappropriation schemes are the most common and least costly. (Deloitte, 2020).

2.3.2. The Fraud Triangle

The fraud triangle theory proposed by Cressey (1953) states that three conditions are always present in every occurence of fraud: pressure, opportunity and rationalization (Manurung, 2013).

The first element of the fraud triangle is "pressure". Pressure incorporates the pressure related to lifestyle, economic demands and other factors that can be financial or non-financial terms. Four common types of conditions on the pressure are pointed out in SAS No. 99 to be the cause of fraud. The conditions are the following: financial stability, external pressure, personal financial need and financial targets. Therefore, pressure incentives the need for fraud (Manurung, 2013). Pressure is a condition where the perpetrators are in a state of urgency so that they are unavoidably forced to commit fraud to meet their needs. Pressure is an encouragement from within a person (internal factors) or from the surrounding environment (external factors) that motivates a person to an action. Someone who is under pressure will tend to act fraudulently. This is intentionally done with the objective of realizing something proposed (Melati & Hapsari, 2018). The pressure in relation to auditing fraud in times of social distancing represents an important matter to analyse. The pressure to commit fraud created by the present situation of Covid-19 concerns the pressure to keep the company a going concern, the pressure to pay dividends and thereby maintain distributable reserves. Additionally, the pressure to continue to pay employees and suppliers and the pressure to meet bank and other covenants due to cuts, unpaid leave, lost jobs and no bonuses or promotions are relevant pressures that can arise. Lastly, the industries (travel, hospitality, retail) that have been impacted more seriously by the economic impact of Covid-19 will have elevated pressure to commit fraud (Deloitte, 2020).

"Opportunity" is the second element of the fraud triangle. The typical illustration of opportunity for fraud is the opportunity created by the weaknesses of internal control. The perception of the ability to perpetrate fraud, by the perpetrators themselves, incentives an immediate action of fraud commitment. This decision is solidified by the opportunity of not being discovered by others (Melati & Hapsari, 2018). The present situation of Covid-19 is an opportunity. In other words, the opportunity to perpetrate fraud created by the distress of Covid-19 incorporates the change needed in the internal controls due to the disruption and the changing working patterns. In this manner, financial decisions may diverge if the key people are off work and the system access rights for employees are off work. To allow remote working, it is necessary to increase the system access for employees. Jointly, documentation requirements may be reduced. Although disruption may cause existing fraud schemes to emerge as the perpetrators are unable to keep them covered, management should be always alert to pre-existing frauds, not just recent ones (Deloitte, 2020).

The third and last element of the fraud triangle is "Rationalization", that is, the attitude, character or set of ethical values that approve certain parties to commit acts of fraud. Different people in an environment can induce the rationalization of fraudulent actions. As a part of the fraud triangle is the most difficult element to assess the effects associated (Manurung, 2013). Rationalization is an act generally done before committing fraud, not afterwards. Finding rationalization is a part that must exist in the fraud itself, not part of the motivation to commit it. This element explains the cause of the fraud. Fraud can be committed because no one will be harmed by the action and the excuse that fraud is committed with good final intentions is the generally applicable answer to justify the fraud. The rationalization is abandoned after the action since there is no longer need for it. Firstly, the perpetrators feel guilty because they have resisted the existing rules, but when repeating the act, they will feel easy and familiar (Melati & Hapsari, 2018). Rationalization affects those who previously or in a normal situation would not commit fraud. This happens because they may see it acceptable in the circumstances of the pandemic to protect their company, employees, or themselves. This element of rationalization is related to the opportunity to commit fraud since there is a belief that there is less probability to get caught since the attention of the management is drawn into other areas (Deloitte, 2020).

It is fundamental to note that the three elements of fraud coexist at different levels within the organization and influence each person in a distinctively way. The strength of one element can induce the practice of fraud because can mitigate the perpetrator's fear of detection (Vona, 2008). According to SAS 99, financial statement fraud can occur in three categories of the condition. The nature of the industry, the ineffective monitoring and the organizational structure are affirmed to be the conditions (Manurung, 2013).

3. Research Design

3.1. Research problem and research questions

The unexpected new situation of the pandemic of Covid-19 impacted the audit area. The transition to the remote method of work brought some challenges to the audit field. One relevant impact is related to the method itself. Before the pandemic, the work was predominantly made directly in person. With the imposition of the lockdown, the radical adjustment to a remote method was mandatory. This adaptation to the remote method had to be fast. Adjustments in when, where and how work is completed had to be disclosed during the diffusion of the pandemic. Although the fact that, in the audit area, the work is completely feasible from home, the abrupt modification of the method of work was profound. Technological advances have been introduced to facilitate work across spatial distances. Thus, it was possible to have a synchronized collaboration despite the work environment. At the same time, the ability to interact at work was achieved even with boundaries. Several video meetings, virtual coffee breaks and informal communication occurred during the pandemic to reduce social isolation. To the detriment of physical presence at the workplace adjustment in the way of conducting the meetings were imposed. The use of a camera, for example, attenuates the absence of physical presence (Jose, 2021). With a view to manage all the changes, the development in technology grants the use of IT tools at the workplace to align places and people. It is normal for a relationship to take time to be established given the virtual context. Hence, maintaining team cohesion was a challenge imposed by the pandemic. Notwithstanding, embracing technology is a key success factor. It is important to invest in technology considering the facilities from which the company may benefit. On the other side, the technology of communication also brings problems causing a higher level of work virtuality (Ferreira, 2021).

There are lasting benefits resulting from remote work. Staying at home also eliminates commuting time, which privileges the intensification of work. It is difficult to disengage from work since the work is in the same place as the home. The higher level of work addresses simultaneously an advantage and a disadvantage. It is advantageous since more time can be committed to work. At the same time is disadvantageous since it suggests a lower satisfaction with the work due to technological deficiencies. Having set up the workplace at home can lead to problems in disentangling personal life from working life. Despite this fact, remote work improves the organization of the work processes, empowering greater work-life balance, and flexibility. Since the work is done outside of the office, there are fewer distractions, and it is possible to make better use of the time. Several studies suggest that remote work is not averse to productivity. In a remote environment, people are connected online demonstrating availability which may lead to an increase in productivity. At home, people are more available than if they would be in the office. Being close to the computer it is easier to check anytime if there are any new notifications or e-mails (Ferreira, 2021).

Many questions arise if this type of work may strengthen the quality of work, considering the circumstances (Ferreira, 2021). The disadvantages of practising remote work are related to technology dependency problems, increased workload, lack of physical interaction problems and lack of monitoring by the upper levels. Some of the presented disadvantages are also problems in a physical method of work.

Since there are more advantages than disadvantages of implementing remote work, the first research question is related to the following problem of study:

Problem 1 (P1): The transition to remote audits caused by the pandemic facilitates the audit activity.

On the other side, for the auditors, the current remote working environment makes it more difficult not only to schedule meetings but also to obtain sufficient and appropriate audit evidence. Even though was possible to obtain substitute sources of information, time is needed to learn to work with new technological tools (Sagin & Shil, 2019).

Considering that the main objective of the auditor is to give an opinion reflected on the audit report, the preparation of it was contested. Because of the situation, delays are expected. For the companies, there is a benefit and great incentive to publish their reports early to maintain the positive interest of the stakeholders. To give an accurate and transparent opinion regarding the financial statements some factors must be considered. However, there were obstacles and inefficiencies in the process of auditing caused by the pandemic. The audit report suffered modifications. The uncertainty lived in the pandemic increased the audit delay (Sagin & Shil, 2019).

The auditor is responsible for obtaining sufficient and accurate audit evidence which is the base to formulate an opinion. Keeping in mind that under the pandemic circumstances there are limitations on access to clients' offices and restrictions on movement, it may be difficult to obtain such evidence. Auditors should therefore adjust their work programs to use the appropriate alternative procedures in each case, making maximum use of the technological means available. To ensure the quality of the audit work, the preparation must be efficient. Since Covid-19 brought obstacles, was critical to make decisions to mitigate the disruptive impact of the pandemic. The measures taken took time. The adaptation to a new method of working and the adaptation to new technological tools is another factor. This may lead to an extension of the expected duration of the work to obtain the evidence and, if necessary, the timing of the issue of the audit report (Sagin & Shil, 2019).

Another factor which influences the timeline of the preparation of the audit report is related to the company being audited. The inability to keep the accounts up to date is a factor which means that the auditor cannot review the accounts immediately. There was no possible way to accelerate the release of their financial statements. This implies waiting some more time to do a meaningful audit review (Sagin & Shil, 2019).

Other factors associated with significantly longer audit delays are related to the characteristics of the clients: smaller clients, non-financial clients, the existence of extraordinary items and nonstructured firms (Sagin & Shil, 2019).

During the pandemic, it was indispensable to create a new regulatory framework. One of the actions taken was the extension of the Annual General Meeting (AGM). There was a possibility to delay this meeting compared with the timeline that in the past this meeting was held. It is true that companies should put in place measures of reducing the time lag between the financial year and the AGM. Yet, the contrary happened due to the pandemic (Harmand, 2021). As a special case and in order to mitigate the impact of the pandemic, the government also allowed the companies to hold virtual and hybrid AGM. Portugal was not an exception according to *Decreto-Lei n.º 10-A/2020, de 13 de março*. The time limit for holding the AGM in some countries extended from eight months to a fiscal year, as the case of Germany. The audit report issuance should be adjusted with the management body in line with the legislative measures that allow for the postponement of General Meetings.

The audit report leg is the time between a company’s fiscal year end and the date of the audit report. The time to prepare an audit report may have increased during the pandemic (Sagin & Shil, 2019). Since there were some measures taken to alleviate the restrictions on movement or other difficulties. Hence, the second research question is related to the following problem:
Problem 2 (P2): the audit report leg is equal to before the pandemic.

Due to the new pandemic of Covid-19, some risks were urged. The critical situation of this pandemic is putting enormous pressure on many companies’ financial results and individual employees. As financial pressures increment, the possibility of incurring improper acts grows since internal controls may be weakened due to remote working. The risk of fraud is a current risk that companies face every day. Even though the companies have different mechanisms to detect fraudulent activity, Covid-19 has originated meaningful financial and operational disruption. Some of the effects of Covid-19 are the increasing pressure on employees, stakeholders and businesses. Indeed, because of the weakened control environment of the entity, there is a greater opportunity to commit fraud.

In line with Karpoff (2020) financially troubled firms are more likely to commit fraud. In the current scenario of Covid-19 pandemic and because of the economic shutdown in 2020 there are more difficulties financially. For this reason, it is more likely to assist to more fraudulent actions. Fraud is characterized as a significant threat to the existence and efficiency of capital markets. Hence, it is important for the auditing team to report any type of fraud disclosed in the financial reporting. Further, an entity must present all disclosures in its annual and interim financial statements. It is indispensable to explore any event and condition which was identified as a going concern about the entity's ability to survive. (Amiram *et al.,* 2018).

Auditors must carefully consider the circumstances and risk exposures of the organizations being audited when analysing how recent events may impact their financial reporting. Particularly, financial reporting and related financial statement disclosures need to consider all material current or potential outcomes of the Covid-19 pandemic (Amiram *et al*., 2018).

As stated by Hinman and Chariman (2020) in the Financial Reporting Council the more investors know about how management is assessing, planning for, and taking steps to address, the effects of Covid-19, the better investment decisions investors will make. Accordingly, the more confidence investors have, the more willing investors will be to provide credit and other financings to the company since is believed that a company has a well thought out and executable strategy for addressing the impacts of Covid-19.

According to KPMG (2020), fraud risk is increasing dramatically but controls are decreasing. 83% of executives believed their organization was vulnerable to fraud taking place in the new working environment. 95% of executives believe that cyber-enabled fraud and corruption will rise during Covid-19. Additionally, 42 % of executives said that their ability to investigate fraud was inhibited by Covid-19. 27% of executives said that their organizations have had to delay their fraud prevention programs due to the impacts of Covid-19. The remote work, the distraction of the business due to Covid-19 and not focusing on the controls are the causes that increased the fraud risk. It is reasonable to assume that this problem will continue as a going concern. Accordingly, is critical to understand better the risks faced and how they are affecting the auditing process.

Hence, the third research question is related to the following problem:

Problem 3 (P3): the pandemic increases the risk of fraud in auditing.

4. Methodology

4.1. Research method

The information expressed in the literature review is presented in diverse forms. The topic has as its focus of research the information provided on the internet including relevant papers, articles and journals of academic pertinence. The help, experience and advice of the supervisor also played a decisive role.

The methodology for the present dissertation is based on qualitative research. The main aim of the methodology chosen is to reflect upon the contextual real-world knowledge and to investigate results from a subjective perspective. The qualitative method decided to be conducted are the interviews. The methodology chosen will cover the three problems presented in this study. The type of interview used is the semi-structured interview. This type is a more flexible version of the types of interviews existing. A semi-structured interview is useful because it is flexible enough for interviewees to raise questions and concerns that can be useful for the purpose of the study. In a structured interview form, the questions asked are standardized. By contrast, the unstructured interviews have little present structure. It is not possible not to have a structure considering the questions under investigation (Brinkmann, 2020). A semi-structured interview contributes to incentive the interviewee to talk. Even though in a semi-structured interview, there is a plan of topics to be covered, there is flexibility in the order that the questions are presented. The prime intent of the interviewer is to obtain relevant data. The questions in this type of interview are open questions, encouraging respondents to formulate answers in their own words. The semi-structured interview is a synonym for a conversation and conversations are a rich source of knowledge. The objective of the semi-structured interviews is to obtain a detailed narrative of the lived experiences. During the interview, giving primacy to the lived experience of the interviewee might be closer to the everyday lived (Brinkmann, 2020).

The interviews have the advantage of providing detailed information in terms of the range of possible answers. Qualitative methods, such as interviews contribute to a deeper perception of social phenomena (Gill *et al.*, 2018). The aim is to obtain data collection through an extendable conversation. A large amount of data is expected to be discovered through the medium of the interview. The use of this qualitative method is related to the interest in exploring sensitive topics as the impacts of the pandemic in the audit field including fraud. The value of interviewing is mostly related to the advantage of obtaining in-depth information (Brinkmann, 2020). Although there are many valid benefits, the disadvantages are associated to the fact that the interview is time-consuming. The interview has a moment of data collection which consumes time. The analysis is also a slow process since it engages the process of transcription and sometimes translation. Unquestionably, despite the fragilities, the interview is a powerful research instrument. It yields observation as a complementary research method since it is possible to assign the behaviour of the participants.

The objective is to drive individual interviews. In a one a one interview, the interviewer conducts the interview in pursuit of the research subject. With an atmosphere of trust and discretion, the interviewee can address taboo or sensitive aspects that might be relevant (Brinkmann, 2020).

It is conceivable to have interviews using different media. The end in view for the present study is to conduct internet interviews using an IT tool available. Utilizing a video conference meeting through the application Microsoft Team is like having a face-to-face interview. Both two methods occur in “real-time” and in a synchronous way. Through the medium of electronics, there is a screen-based interaction. The interviewee has the chance to reply promptly to the questions. The interviewer can make clear what lies behind a given question, to ensure mutual understanding. It is important to emphasize that there is not much loss of the richness of the context using a video conference interview compared with the normal format (Brinkmann, 2020).

In relation to the validity and reliability of the interview as a research instrument, these two features can be confirmed. The validity is associated to the degree to which an investigation can reflect the specific theme under study. Hence, generalized findings assure validity. The answers which are supported with real examples can also assure validity. Besides that, minimizing the hazard of bias safeguard the validity. Reliability is associated with the extent to which a research instrument can lead to the same results on repeated trials. The hint is to not ask leading questions to the interviewees but to give them a possibility to be as clear as possible in order to clarify ideas (Alshenqeeti, 2014). All participants agree with the transcription of the answers, so these two aspects are verified.

The use of the qualitative research method permits to accumulate a detailed perspective of the problems to be studied within the context they occur. The objective is to explore and describe the experience and understanding of the participants under the thematic being investigated. The interview is an attractive method of data collection (Alshenqeeti, 2014).

4.2. Sample

Defining the sample size of participants to be interviewed can be difficult to establish. The real object of the research questions is the professional setting of the respondents which is the auditing profession. The respondents should represent meaningful experience. The aim of the interview is to figure out what is the experience of the respondent performing auditing on a pandemic context. Notwithstanding, this situation of pandemic is a completely new and unknown situation. It is important to have various perspectives on this situation being investigated and not to have many respondents. For this reason, interview-based studies can evoke a small number of participants. Considering the context of the research, the one a one in-depth interview generates valuable insights. This is not something that can be done reasonably with a large sample size. All the responses will be carefully analysed under the thematic dimensions. A small sample size permit to monitor the interview accordingly to the theoretical issues. The analysis of the theme requires the interpretation of the researcher and a conceptual effort. There is a need to establish contact between the individual experience and the conceptual background under study. It is preferable for the research to be intensive rather than extensive. Combining the individual experience and the social context is by nature very intensive. Several studies have pointed out that just one case can bring new knowledge. The variety of experiences in the source of data helps to address the inherent conclusions (Crouch, 2006).

In sum, there is no ideal number of respondents. The nature of tasks to be done under the research investigation demand the use of a small sample size. Exists argumentation which justifies the choice of a small sample to be the best practice in an inductive and exploratory study (Crouch, 2006).

The target audience for the present research is composed of professionals with at least five years of experience in the field of Audit. The experience of the participants represents a relevant factor for this study.

Participants have experience in the auditing sector in two different periods: in a pre-pandemic period with in-person work method and a post-pandemic period with remote work. Participants are professionals from one of the Big four firms. A total of seven (four males and three females) individuals were interviewed. The sample ranged from 27 to 53 years old. All participants have experience in financial statements and helping clients in its preparation. Some participants have inclusive experience in auditing major players with a presence in several countries besides Portugal as Brazil, Angola, and East Timor. The responsibility of the participants in the certification of the effectiveness of the internal controls of the listed companies according to the standards described in the Sarbanes-Oxley Act is also an added value to the research. The participants' experience in auditing varies from seven to 29 years. The category in the profession differs. To have at least five years of experience in a Big four firm means that the level of manager was achieved. Considering the major goal of the study, the upper levels in the company have more experience. Managers and partners are providing audit services for longer years which allows them to gain significant experience in managing assignments, namely financial reporting matters. For that matter, only managers and partners were interviewed. Considering the level of managers, three of the interviewees were managers and four were partners. It was important to understand the point of view from a manager with only one year of experience as a manager. Regarding the other two managers interview, both had five years of experience as managers. Speaking with regards to the level of partners, the respondent with the least experience as a partner has seven years of experience and the respondent with the most experience has 14 years of experience as a partner. A partner is also the NPPD (National Professional Practice Director) of the Audit area of Deloitte Portugal. In terms of academic qualifications, all participants have at least a bachelor's degree. Two of the participants have post-graduation. All the partners are certified public accountants.

4.3. Interview Process

The participants started to point out some personal information and professional information regarding their experience in the audit field.

The interview driven is presented in the annexe A. The objective of the first section was to obtain information regarding the Problem 1 under investigation. For that reason, the first 11 questions are regarding remote work, the technological tools used during this period and about the impact on the audit evidence and audit quality. The main questions in this section were regarding the opinion of the participant in identifying the main changes that happened during the Covid-19 pandemic in the audit activity. To limit the spread of Covid-19 public policy measures were taken. Since one of the major changes was the work method modification to remote, was important to question what are the main advantages and disadvantages of performing a fully remote audit work. The limitations of remote work in the audit were also addressed. Additionally, it was questioned whether remote work will continue to be implemented completely in the future and what is the expectation for the methods of work soon.

Remote work in the audit was only possible due to technological innovations. The identification of the major technological changes coming from Covid-19 is an important question. In a remote environment, virtual meetings and collaborations were critical to move the project and the daily responsibilities forward, for that reason the interviewees were asked if in their opinion there an increased usage of video conferences was. The IT tool most used was also asked as a part of the previous question. The changes that occurred at the level of relationship with the audit team during the remote work were also approached.

Still regarding section 1 was important to ask questions concerning the audit evidence. It is important to address how the process of obtaining audit evidence was impacted by the pandemic. What were the methods used alternatively to obtain information is also an important question. Was asked the interview to give examples of real cases. The interviewees also gave insight about how the procedure of physical inventory count has been impacted, a procedure that needs to be 100% face-to-face and that relies on physical observation. The objective was also to understand the interviewees' opinion on the impact on the audit quality caused by the pandemic.

The auditor only analyses some areas which are materially relevant, so for that reason, it is important to know if the definition of materiality was impacted by the Covid-19 pandemic and how was impacted. Therefore, the second part of the interview highlights the topic of the audit delay giving an overview of Problem 2 under investigation, present in questions 12 to 16 inclusive of section 2 of annexe A. Since the audit quality can be influenced by the audit fee there were two questions asked regarding this issue. During the pandemic since there was more risk, there could be an incentive to increase fees. It was important to understand whether the interviewee considers that audit fees increased during the covid period. The interviewee was asked to indicate which was the factor that most impacted the fees during the pandemic.

Examining the respondent's opinion about the time of the audit report issuance is imperative. Comparing the previous homologous period without Covid-19 with the period with the pandemic, it is important to examine if the issuance period increased. In an affirmative situation, it is important to inquire about the participants' opinions of the factor that most impacts the delay of the audit report issuance.

The third part of the interview presented in the third section of annexe A investigates the theme of fraud, from question 17 to question 25. These questions were raised taking into consideration Problem 3. First, it was asked whether it is common to conduct customer surveys/interviews about fraud. Given the critical times, one relevant question was how was possible to master these interviews during the pandemic. It was interrogated if the conventional way was used or if these interviews were performed remotely. Discussing the important aspects to consider for fraud identification (in client interviews) helps the investigation. These aspects were addressed by the participants.

The significance of the pressure, opportunity and rationalization as incentives to commit fraud is an important mark of the present study. The participants discussed and gave answers upon their opinion and experience if there was an increased possibility of committing fraud and of fraud detection under the remote audit work. The interviewees were questioned if they felt as a professional in any instance that a company's internal control was less rigorous than usual and might be vulnerable to fraud during the pandemic. The type of fraud more likely to happen in remote work was also a key point discussed. To what extent there is a need for additional regulation regarding fraud was a topic induced in the interview. The interview allowed participants to talk about the existence of such regulation and how it was fitted in this sensitive period. Finally, was requested to illustrate examples of fraud during the remote audit.

4.4. Data Collection

The interviews were all performed remotely using a technological tool named Microsoft Teams for a video conference call. The interview was conducted in areas free from distraction and suitable for the participants. The distance interview helps participants to relax in the environment chosen by them. This may result in a more productive interview (Gill, 2018).

The length of the interviews ranged from 30 to 50 minutes. A word document transcript was created for each interview. The interviews were developed in Portuguese. The participants also needed to know the language to be able to understand and answer the questions. After that and to enable the analysis, the translation took place from Portuguese to English.

Before the interview took place, respondents were informed about the study under investigation. They were given assurance about ethical principles, such as anonymity and confidentiality. This type of introduction gives participants some idea of what to expect from the interview. It is important to highlight that the respondents agreed to participate in the interview entirely voluntary. In addition, the informed consent process enables the likelihood of honesty.

Since the topic of the impact of Covid-19 brings a completely new and unknown context, detailed insights are required from the individual participants since there is little already known about the study phenomenon. The purpose was to have not only semi-structured interviews but also recorded ones. The objective is to code and closely examine the data to identify broad themes and patterns in conformity with the intent of the thematic analysis.

Regarding the number of interviews necessary in qualitative research, some authors argue that there is no specific number (Alshenqeeti, 2014). There are different understandings of how many express representativeness. The number of interviews necessary depends on the research question. Given the fact that the present study analyse three research questions, seven interviews were performed. Even if it is not a convenient sampling, a mix of different participants according to gender, the number of years of experience in the auditing field and job role were selected to reduce contextual bias.

After some introductory remarks and an initial briefing, the interview started. The participants were given the opportunity to recount their experiences as fully as possible, without unnecessary interruptions. Respondents had the opportunity to contemplate their responses, talk, elaborate and clarify ideas. In an interview, the participant can use their voice and express their feelings and thoughts. The open questions enable the possibility to the participant to expand the response. Discussing the key impacts of Covid-19 on audit activity resulted in obtaining an overview of how were monitored activities of auditing by professionals. Responding to the crisis to prepare a thrive in a new normal environment was and is a challenge nowadays. The real showcases that the partners presented about the impacts of Covid-19 on their audits and how they addressed and navigated through the obstacles contributed positively to the collection of insights. All the relevant areas were covered which were traced out by the aim of the study. The conceptual problems were considered constantly during interviews. During the interview was important to reflect on the remarks of the participants to conclude.

Finally, at the end of the interview, it was important to thank the participants for their time. Interviewees were asked if there was anything they would like to add. This permitted respondents to deal with issues that they have thought about regarding the theme under study. Additionally, interviewees could mention everything they thought was important but had not been dealt with by the interviewer. This gave the advantage of discovering new or unanticipated information.

After the interview has finished, all interviews recorded must be transcribed. Afterwards, this protects against bias and grants a permanent record of what was and was not said. During and immediately after the interview notes were taken with reference to observations, thoughts, and ideas about the interview.

Furthermore, from the analysis of the interview conclusions were drawn. The results of the data analysis process regarding the phenomena and problem formulation were compared with the theory and then discussed.

5. Findings and Content Analysis

5.1. Changes in audit because of the pandemic

5.1.1. General changes

All respondents agreed that the most notorious change in the audit activity because of the pandemic was the contact with the client which was lost. It is in contact with the client that the main modifications in the company being audited are identified. There is a loss of the relationship and a loss in gathering detailed knowledge about the entity being audited. Additionally, there is also a loss of insight on the part of the audit team since it is difficult to understand how the company works because the audit team cannot visit factories or visit warehouses or production processes, given the restrictions of the pandemic. The aspects previously mentioned are related to the loss of physical contact.

How to work as a team remotely was another challenge imposed by the pandemic in the audit activity. It is difficult to manage the audit work without questioning, teaching or even reviewing the work with the same effectiveness as in a face-to-face method. In terms of the relationship with the team, while doing a remote audit, the remote mode limits the work by the fact that the team is composed of different learning levels. The biggest challenge is related to the capacity to teach the junior members of the team since auditing has a pedagogical role. A generation did a whole peak season of auditing in a remote form. There are noticeable differences between these two types of auditing: in-person audit and remote audit. It is completely different to be together in a room working as a team, not only in terms of social interactions but also in terms of learning and directing the work. At the level of the relationship between the audit team, there was much less interaction and less capacity to learn from all team members. This challenge had to be addressed in a short space of time. The solutions were associated to have more meetings with more frequency with the teams and keep in touch at all levels. The status and scrum meetings were all proceeded by video conferences.

Nevertheless, considering the way the audit firms are handling the transformation process, the audit team is more pragmatic in their approach in comparison with the client (entity being audited).

The other challenge is the aspect of technical execution - how to manage to test the internal controls of a company and how to manage to perform a set of tasks in a remote environment of work. The auditor's work is evidence-based. The challenge was how to validate the evidence obtained from the client. A standard procedure was to visualize the control being executed, to observe and inspect the client extracting the information required by the auditor in person. With the pandemic, it was not possible anymore to perform the typical procedure. Markets did not operate normally during the pandemic, so there were increased challenges for the auditors either to the audit processes or to validate the financial reporting. At the level of financial reporting itself, given the pandemic scenario, companies were exposed to unbiased topics. The restructuring issues emerged. Factors such as onerous agreements, measurement of own stock and allocation of fixed costs began to jeopardize the continuity of the companies' operations and cause concerns. The auditors were also affected and had to consider other factors that were not previously taken into consideration.

In some cases, the audit quality was impacted by the pandemic due to the loss of the relationship with the client. Some details were no longer taken into consideration by the virtue of the pandemic. It is also important to note that auditors never have done a full season of remote work before the pandemic. The management of people and tasks was difficult during the pandemic. Still, with sacrifice, the difficulties were overcome. The audit activity has some pressure. With the pandemic, the pressure on the audit increased. The limitation regarding the test of the internal controls impacted the audit quality. The quality of auditing was reduced substantially because the auditor had to adapt very quickly to the situation. He had to try to issue reports many times faster because it was necessary. Sometimes it was difficult to track the information when the origin of the information was lost. The audit still had access to information but was no longer the same access. The reduced contact has also meant a reduction of people working in an audit firm. Therefore, if there is a reduction in the number of auditors and the amount of work remains the same, inevitably the work can be completed but with less quality.

5.1.2. Changes in the audit evidence

The audit evidence was impacted by the pandemic, and it is not merely a matter of opinion, but a supported opinion by the participants. With the pandemic, essential available audit evidence was lost. The audit work is a process of gathering evidence regarding the numbers present in the financial statements. It is a matter of completeness. The process of gathering evidence is a process that has a few hypotheses at its disposal. These are inspection of documentation, external confirmation, substantive analytical procedures, and observation. Within the universe of hypotheses of evidence gathering, all of these have lapped up some weaknesses. The evidence process has a qualitative characteristic, and it is crucial to understand what the most appropriate audit evidence is. From a technical point of view, some constraints resulted from the pandemic in the four forms of gathering audit evidence.

The process of document inspection was the one that was less impacted by the pandemic. Nowadays we are in a risk phase of adapting to modern times regarding document forgery. Document inspection is associated with electronic verification of the reliability of documents. Today it is neither official nor general to use authentication tools such as the electronic signature key. The degree of reliability is in question. During the pandemic, it was usual to sign a document in a portable format (PDF). Signing documents does not have the same degree of reliability. Therefore, have raised an opportunity for a potential falsification of documents.

Regarding the issue of external confirmations, these represent a piece of extremely relevant audit evidence. This type of audit evidence was not prejudiced. Although this is true, the ability to accept some confirmations considering the context made the audit less sceptical and less rigorous. This situation increased the possibility of the client misrepresenting information. Yet, at the same time, the confirmation itself was already remote so there was no direct contact with the third party.

From the standpoint of substantive analytical procedures as audit evidence, the volatility of the market has become uncertain, allowing the use of analytical procedures based heavily on mathematical and correlation mechanisms to be impaired. The comparison of the historical evolutions or variables was disrupted because there was no correlation between the variables. This situation was the expected one due to Covid-19. This type of audit evidence was highly conditioned.

Concerning the observation as audit evidence, the restrictions were evident. There were constraints regarding physical inventories. Indeed, the sample proportions changed, so observation was constrained and, in some cases, eliminated. As a matter of fact, in terms of audit evidence, all the participants argued that inventory counting was the aspect of the audit evidence that suffered the most from the pandemic. The impacts are associated with the physical inspection issues where at the most critical time of Covid-19 it was not possible to physically observe and physically inspect the inventory or tangible assets which caused limitations for auditors. Accordingly, it created tension between auditors and clients. The audit effort was to ensure that these procedures could reoccur. The audit teams tried to find alternative mechanisms to cover the risk. One possible alternative was to follow up the counting process by video call, which means that there is a video on both sides and the auditing team follows the entire counting process carried out by the client. Still, there are tools in the audit that were designed to help the counting remotely. Despite of, it was not possible to offset all the risks. There were cases with no alternative, where the best option was physical. For instance, at the peak of covid, audit teams were unable to travel to clients located in other countries, so it was not possible to physically inspect inventories, which were material items on the financial statements. No alternative ways existed, so the audit report had to be issued with a reserve in the accounts because it was not possible to physically observe the inventories. This was a consequence of a procedure that the audit team would do every year without any kind of problem, without detecting any exceptions before, and resulted in a reserve in the accounts during the pandemic. So, a consequence of the pandemic is related to modified audit reports.

5.1.3. Remote audit work

5.1.3.1. Advantages of the remote audit work

One of the advantages of conducting a 100% remote audit is having more time available to perform the work. At the professional level, the teams instead of wasting time commuting in and out, invest that time in the work itself. Therefore, the number of hours allocated to work have had increased. Workers used to prolong their work as if they were working in a non-remote environment. At home, is easier to connect and therefore to work more. People have become educated and because of the pandemic, they can consider the home space as a working environment. Despite that this fact can be an advantage to the auditor’s work, at the personal level is a disadvantage. The lack of personal rules for setting time limits for work affects the emotional level of people.

Working remotely was transversal to all the companies, the Big fours companies are not the only ones that complained about the lack of balance between the management of private and professional life. Working remotely proves that it is possible and allows this balance. Some tasks are more efficient in remote auditing.

From the point of view of the reviewer of the work, by a senior, manager or partner in the audit team, remotely, time management was much easier. The possibility to work at home and not having to be physically in the office of the client enables the auditor to manage the work as it seems more suitable for the audit team and to work for several clients on the same day or/ and week.

Another advantage refers to the exchange of information with the client. Contrary to expectations, the exchange of information was more agile due to the availability of the client. In a face-to-face environment, the client was not always available. Being online all the time facilitates this process of sharing information. During the pandemic, there was more information circulating, back and forward. It is also important to note that the client was forced to update the systems. The fact that companies have modernized their systems is another advantage. The companies have invested more in the digitalization process. The audit evidence requested by the audit team had to be in a digital format.

5.1.3.2. Disadvantages of the remote audit work

Interviewees were also asked about disadvantages. The main disadvantage of adopting a fully remote work method in the audit profession pointed out was the lack of contact with the team of the audit work and the client. This is the critical point in terms of establishing long-term relationships, as well as understanding the business and the whole audit process. Many times, when decisions were made face-to-face through a conversation, different objectives could be reached than remotely.

From its origins, the word “audit” is related to the activity of thinking, listening and observing with the purpose of reporting. The audit work is relational. The pandemic limited the possibility of performing this activity entirely. Listening via teams is different from being in an office with one person. The limitation of physical observation is also a disadvantage. Face-to-face is easier to communicate than remotely. Being in person with stakeholders endow the possibility of feeling their anxiety and their concern in their voice. When presenting issues, the stakeholders' reactions are different in person, where it is noticeable how they react. These are fundamental aspects to develop the so-called “professional judgment” that is the main aspect that an auditor must have. This professional judgment feeds a lot of emotions. Audit firms commonly cultivate and maintain a stable client base. Having a stable portfolio of clients intensifies the historical knowledge of the auditor about the clients. The disadvantage emerges for completely new clients for which is more complicated to operate a remote audit.

In terms of the relationship between the audit team, the auditors talked less to each other, there was less rapport between them. The level of empathy and connection between people was impacted. These two factors have consequences on how people connect with the company. Without a connection between people, there are no stories shared, no emotions created and no connection to the company. The lack of the relational part has resulted in a turnover of employees. The commitment that exists in the auditing profession was definitively affected. During the pandemic, people were not connected due to difficulties in knowing the team remotely. This situation ended up creating less closeness and less interest. People became more distant. On the other hand, it created difficulties even in the future because there are people that got used to the remote mode and even prefer a 100% remote auditing.

Another disadvantage is less effective supervision. The face-to-face environment is different from the remote environment. The environment of learning was impacted as well. The learning of the junior members was impaired. The speed of the learning process is different comparing a normal method of work with a remote method. In a face-to-face mode, there is more discussion, brainstorming and accordingly more sharing of ideas and themes. Passing the message is much faster, while in a remote mode is slower and people get discouraged more easily. Thus, arises a need for a closer intervention by the person in charge of the team to ensure motivation.

5.1.3.3. Continuity of remote work

The imposition of remote work in the audit profession was clearly an exception. In auditing, is not possible to adopt a 100% remote method again, unless by governmental impositions or compulsory requirements. The objective is always to work face-to-face with the client and as a team. The pandemic has tested organizations with regard to the management of the hybrid/remote work method. For the purposes of work quality in terms of obtaining evidence and to be possible to enable learning, the face-to-face method is imperative.

The hybrid format of being half face-to-face and half remote will continue to exist. Occasionally there may be a need. The audit method of work tends toward a mixed model of face-to-face and remote, in other words, tends to evolve into a hybrid model.

One participant added that the type of method of work in the future depends on the models adopted by each client. The clients are going through a period of adaptation, and they are also moving to a hybrid model. The tendency of the audit team is to implement the same method as the client.

5.1.4. Materiality impacted by Covid-19

All participants argued that materiality was impacted by the pandemic. There is no doubt that the materiality depends on the business, and its value depends on whether that business has been affected by the pandemic. Global materiality is always indexed to a benchmark or factor. Hence, if profit-related benchmarks are impacted, a change in the benchmark may be necessary.

The way materiality is determined implies an additional degree of judgment because there may be variations in the operational activity, occurring from the pandemic situation experienced. When determining materiality, it is important to evaluate a set of unusual impacts. Based on the available information and considerations of the related uncertainties caused by Covid-19 the materiality should be established. A key consideration to be taken into account is whether the underlying business remains comparable to the business pre-Covid-19.

As a matter of fact, the work of the auditor is influenced by the determination of the performance materiality (PM). One audit company added new rules in its methodology for calculating performance materiality. The key factor is the estimated errors. The materiality minus the estimated errors corresponds to the value that indicates tolerant errors. The new guideline implies the inclusion of an additional 10% in the expected errors. Preventing some unknown effects caused by the pandemic is the explanation for the measure taken. It influences the extent of coverage to obtain a larger sample to be analysed. If the number of samples increased during the pandemic in the audit it means that there is more work. This measure was applied to all companies, and it was discussed internally over several meetings.

Execution materiality is the performance materiality that was lower during the pandemic. The performance materiality was impacted where there was more propensity for fraud because there was less connection with the client. The auditors previewed more expected errors in the financial statements and therefore the performance materiality was impacted. There was a need for a longer interval between the overall materiality and the performance materiality that could absorb the errors that were expected in a remote audit.

5.1.5. Technological changes imposed by Covid-19

All participants shared the same opinion that one of the main technological changes coming from the pandemic to be stressed out is the increase in the flow of information. In terms of audit evidence implies more criteria of analysis from the auditors. Apart from that, to provide an opinion regarding the financial statements, there is a need for documentation of support. In the pandemic, being at a distance, the audit evidence should be more consistent, and there should be more formalization.

Regarding the increased flow of information, it is important to develop strategies or technological solutions that guarantee the security of information. The relevant information from a particular client cannot be compromised. The pandemic has intensified the requirement to use an information delivery platform to try to avoid the use of e-mail as the primary mean of use or exchange of information between the auditor and the client. Even before the pandemic, auditors had transformed most of the processes with the introduction of some audit applications and with the implementation of a digital platform to get the information. These previous changes were a foresee for the transformations needed due to covid. In terms of the auditor's work, there was no significant change during the pandemic. The auditing firm already had the necessary tools before the pandemic, but during the pandemic, there was an intensification of their use, and sometimes it was almost mandatory to use them.

The most used tools during the pandemic were the communication tools: Teams and Zoom. These tools were used more frequently. The Microsoft Teams platform was leveraged. Its usage had to be intensified since it allowed contact with the customer in a face-to-face way, more than the cell phone. The Zoom platform has also gained a very relevant weight. The customer's reactions are lost behind the computer, but less is lost through video calls compared to cell phones because is still possible to observe the reactions which helps the auditor how to act at a certain moment.

On the client side, there was also a change in the digitalization of the main processes. However, it only happened during the pandemic. A participant reinforced that the main challenge is related to the fact that the companies have created more systems.

5.1.6. Audit fees

During the pandemic, there was an incentive from the side of the auditors to increase fees. However, the pandemic impacted the clients' businesses. The risk increased, which means that the depth of work increased. On the other side, there was the pressure of clients having a weaker financial position and requiring discounts because they had cut costs of consulting, reduced all variable expenses to the maximum and checked the importance of fixed expenses.

Although there was more risk, there was no increase in fees given the client's position. The client did not accept an increase in fees. The risk was absorbed by the audit firm. In fact, there was a reverse movement, companies were asking for reduced fees. More hours were allocated to projects but there was no increase in fees. There is not always a direct relationship with the fee. On the contrary, the fees were reduced because the auditors realized the client's difficulty in maintaining it.

5.2. Audit report delay

Two factors impact the audit report delay. The first is associated with the audit team. It takes longer to do the tasks of audit working remotely. The validation of the authenticity of the documents of the client and the review of the information requested by the auditor are tasks that usually take time. The information received was sometimes not what was intended so information had to be re-evaluated and the audit team had to re-do some analysis. This situation impacted effectiveness. Considering the main changes that occurred during Covid-19 in the audit activity, it is vital to highlight the less active review of the work, by the manager or the partner. With no physical presence, there was no obligation to go to the client's office to work on that specific project. The review during the pandemic happened later, since it was easier to manage projects when working by telecommuting, the review ends up happening with a greater time lag. During the pandemic, there were also more meetings with the client which contribute to more hours assigned to projects.

The second factor is associated with the client. The period for issuing the audit report has increased mainly due to the time taken by clients to adapt to the new situation. Previously, before Covid-19 almost everyone was used to the presential work mode. During the pandemic, it was necessary to adapt to the new context. Actually, there were delays in the companies themselves adapting to the new reality. The digitization of documents played a crucial role. It was necessary to go to the office to digitalize the documents so that they can be sent to the audit team. The client itself had difficulties in giving the information in time, and in preparing the information needed to give to the auditor. The preparation of the accounts to be audited also took more time given the changes needed to be implemented by the pandemic.

The audit team itself had to adapt to the new reality, but it was an easier process because the audit team is only in charge of sending the client the request list and waiting for the information to be submitted. It is relatively quick on the auditor's side, but on the other side (the client's side) it can be more difficult to get the data. Besides that, the audit team already had the technological tools installed and in terms of technological adaptation, the process was simple.

In general, the audit report lag of the most capable companies was not much impacted. The most capable companies are the companies which were previously prepared due to the automation of systems. These companies are for example banks and listed companies for which the audit report was issued with no delays because they were more structured in that sense. For example, in the market of Cape Verde, as the communication process stopped working, in the market where physical presence was essential, there was a lack of control. In the less capable companies, which were not prepared for the new coming changes there were delays. On contrary, in the more capable companies, it was not noticeable.

Overall, there were delays in the issuance of the audit report, but it was disproportional. There is a correlation between greater evolution and maturity of the companies and the delivery time.

5.3. Fraud

To respond to the Covid-19 pandemic, auditors and clients had completely new and different challenges at the personal and professional levels. The pandemic installed an atmosphere of pressure on many companies' financial results and individual employees. This environment can construct an incentive or opportunity to commit fraud or another type of mistake or wrongdoing. During this critical period, there was an increase in the temptation to engage in improper acts to address immediate financial needs or to meet stakeholders' expectations. As financial pressures increase, the line which separates acceptable behaviour from unacceptable becomes confused.

5.3.1. Fraud inquiries and interviews

During the audit work, inquiries and interviews about fraud should be carried out with the client. It is foreseen in the regulation of ISA (International Standards on Auditing). The ISA itself refers to an inquiry with the governance, the administration bodies and the remaining involved to effectively understand if they have knowledge of fraud and what are the mechanisms the company have implemented to cover it. During the pandemic, the question of how the company reinforced its procedures to guarantee that it did not enact fraud and that it was not going to have fraud situations in face of this scenario, was intensified.

In this first moment of this process is important to ask the client about the existence of fraud situations in the company. The awareness of the client regarding fraud situations and situations where the company could be susceptible to fraud is tested. Then, it is important to direct some general questions about management's perspective on what are the areas that they consider more susceptible to fraud. The identification of the fraud risk factors is also important in the primary moment. It is crucial for the auditor to understand if there are opportunities to commit fraud.

The second moment is associated with the mechanisms to cover fraud situations. In situations where the auditor believes that the company is more exposed to fraud, it is important to question the client about the controls that the company has implemented to cover it. In situations where the company considered that there is more risk of fraud, it is vital to concrete and addresses the risk in a more specific way. The aspects to be considered for the identification of fraud in the interviews with the customer are the controls that the company have in place to mitigate fraud. In addition, it is imperative to mention fraud prevention considering the mechanisms in place to identify, prevent and respond to the occurrence of fraud. It is also crucial to understand what communications are made to employees about these matters, for example through anonymous reporting channels. The fraud detection and prevention mechanisms are contemplated in the questionnaire.

Regarding the situation of Covid-19, the auditor should approach what is the response of companies to the possible consequences of this situation. Knowing how the company reinforced the procedures in this scenario is critical. In consideration of the digitalization process, the auditor should perform inquiries and other procedures to understand the process, and whenever there are additional risks that are introduced as a part of the digitalization process.

In the final part of the inquiry, the question of how to deal with a situation that the company want to make sure does not exist has to be examined.

In theory, the biggest risk as an auditor is the risk of fraud. This risk is the MOC - Management Override of Controls. There must be discipline in this regard. There are always discussions about fraud with the client. The interviews/surveys have been reinforced during the pandemic. These surveys must be performed all the time and not just when there is an event.

5.3.2. Regulation regarding fraud during Covid-19

During the pandemic, there was a need for additional regulation regarding fraud in audits. A set of regulatory guidance from the regulator was directed to the auditing firms.

There was a necessity to obtain a new Covid-19 specific written regulation, as the existing one was not designed broadly enough to generally cover the impacts of Covid-19.

From the audit firm network point of view, it issued several considerations on fraud risk in certain industries. The audit team at the time of the pandemic received a lot of guidance. The guidance developed contained what kind of procedures the auditors need to follow, such as inventory counts, fraud and continuity of operations. In extreme scenarios, the new regulation was not only internal, from the firm, but also from the OROC (*Ordem dos Revisores Oficiais de Contas*), which shared all the new information transversally with all the audit firms.

There were additional bulletins created in one of the auditing firms to reduce the Performance Materiality already with this possibility to prevent fraud and to ensure a greater framework. The objective of reducing the PM was to be more conservative in this aspect.

5.3.3. Internal control

Another risk of fraud is the reduction of internal control. Companies that have robust and significant information systems, mitigate to some extent the manipulation of information through the medium of controls implemented. The remote working, workforce reductions and distractions weakened internal control during the pandemic. In a remote work environment, part of the controls cannot be executed, namely the revision controls. It is more complex to review on the computer. At the same time, it is more manageable to review and sign on paper. In some parts, internal control may have been less rigorous in terms of evidence that required signatures. There was no possible way to carry out this task. The only option was to have access to information in the office that was not available online. During the pandemic, was not possible to get access to the office, so the associated control could not be immediately executed. There was a breakdown in the execution of some activities. However, the company later managed to mitigate this risk by developing viable alternatives.

Internal control was less rigorous during the pandemic. There is no direct association between the internal control being less rigorous and fraud having occurred. Notwithstanding, the lack of internal control and circulation of digital information clearly facilitates the risk of fraud. It varies greatly from company to company and sector to sector.

Internal control was impacted by decision-making caused by the overlap in the processes that existed in the company during the pandemic. There were processes in several areas and suddenly there was a need for change in every step of the internal control. There were changes in some steps in order to speed up some procedures. Giving a practical case, during the pandemic there was a peak in supplying the supermarkets. In a logistical company of transport, the Procurement area needed to help the warehouse. There were no people in the Procurement who handle the Procurement at that time. There was an override of controls, but it was an adjustment to a situation that was being experienced. The company had to adapt to the circumstances.

Another example is about one company that had a set of stores that shift the method of work to a remote one. The stores were open, but the administrative part worked remotely - the cash was received by the people in the store and was deposited internally. There was a risk of stealing an amount of money because there was no control of daily counts by the administrative part.

5.3.4. Types of fraud

There is more incentive to commit fraud during the pandemic. During the pandemic period when remote work dominated, people had other concerns and therefore it created a possibility for those who intend to commit fraud since the focus was not on fraud. The main concern was with the spread of Covid-19 and how companies should act at every moment. Daily decisions had to be made to understand how to act at each moment when the possibility of committing fraud by another route could increase. The fact that the auditor had to be more aware of the fraud is one of the consequences of auditing.

Considering the types of fraud, manipulation is the kind of fraud likely to happen. The results of companies were worse during the pandemic. There was more opportunity to commit this type of fraud. The company had a set of metrics to try to meet and therefore might have tendencies to manipulate the results to meet a certain end. There was the ease of manipulating information by altering digital documents because it was transacted digitally. Falsification of signatures can be an example. By omission, financial information is also manipulated.

Regarding the misappropriation of assets, this type of fraud might have impacted those industries where human presence has been reduced, asset theft might be greater. There is always that tendency. The few controls that there were, have been eliminated. However, if the method of work was remote, there was little likelihood of this situation happening. It is unlikely that the customer will appropriate assets in a remote situation.

Misrepresentation or concealment might exist, but it was not intentional. The information was scattered so a particular person might not have been aware of what the other person did.

In terms of the three pillars that lead to fraud, opportunity, pressure, and rationalization, during the pandemic there was more pressure and also more opportunity to commit fraud. In terms of rationalization, it is a response to opportunity and pressure. People were not only personally worried but also worried about the work. There were exogenous factors that ended up creating inducements within rationalization. The pandemic leveraged the incentive to commit fraud, and this incentive has not disappeared. This is enhanced by the intersection of several factors. Covid-19 has made people more concerned about their current and future well-being. Besides the incentive, there was an opportunity and that was the reason why this intersection existed. The opportunity provided by Covid-19 with the relocations of teams, and less face-to-face supervision, lead to more autonomy for each person. So, there was an opportunity to commit more fraud. There is always incentive but there might not be an opportunity if there are internal control systems in place or if they are in a presential mode. Being in an isolated environment is different. The issue of rationalization is a justification that is found to perform that act.

Companies have never had such negative and bad results but that was the environment of the economy in general, not of the company in specific. There was no need to do any kind of embezzlement on covenants and financial ratios because the financial institutions themselves provided maturity lengthening and waivers. There was a kind of window of opportunity that did not impact the accounts so there was no need for fraud.

Although there was no need for fraud, one participant experienced one example of fraud during the pandemic. Because there was a change to a remote work mode, extended access was given to certain employees. The opportunity for fraud appeared when the company wanted to ensure that everyone had the ability to work from home. For the purpose of this example, it is important to underline that people had access to the supplier master file, giving them the ability to create a fictitious supplier, making payments to their account that stemmed from the misappropriation of assets. With the extended access, the same person was able to manipulate the suppliers' master file. Because the company had no control implemented and these controls were manually proceeded, with the passage to remote mode and the use of extended access, this possibility was opened and considered. When analysing the employee registry, the audit team verified a strange situation with a fictitious employee and thus the audit team discovered the fraud. In this case, the value was not a value considered material to the date. Having identified that it was a specific user, all the entries and transactions made by that user were extracted and analysed. A relevant awareness was given to the entries made by that user and the impact was evaluated. The company registered a loss in the amount related to the misappropriation of assets. Nothing else was mentioned in the reports, ensuring that the company made the necessary corrections to what were the accesses of each of the users. The company also implemented a set of additional procedures to prevent future fraud situations.

5.4. Content Analysis

Due to the remote work, the contact with the client and the contact with the audit team was affected. The turnover of the auditors increased. The pandemic accentuated the economic impacts. For the auditor, there was a challenge in terms of the technical execution since there was a need to underscore the potential impacts of the client. Given the obstacles, the audit quality was also influenced. Contrary to the statement of Eulerich *et al.*, 2021, the transition to remote audits caused by the pandemic does affect the audit quality and it can be in a negative way. Another important factor related to audit quality is the audit fee. Despite the incentive to increase the audit fee, the audit firms maintained the fee or even reduced it. As affirmed by Sonu (2016), the quality of the audit is connected to the reduction of the fee.

The audit evidence was impacted mainly in the area of inventory counts. Concerning inventory counts, which had to be done in person, there were some limitations, especially when the audit team decided to perform counts as required by audit evidence. In warehouses, during the pandemic, there were restrictions regarding physical verification, the number of people or the period that they were monitoring the physical counts and even the periods in which they could be there were limited, and the rules were much stricter. There were situations in which there was a need to review the procedure. The in-person escort was quite restrictive. Alternative audit procedures had to be performed because of concerns over Covid-19.

So, in sum, the result of the *Problem 1* is that the transition to remote audits caused by the pandemic does not facilitate the audit activity because the audit profession demands physical presence.

The audit teams introduced a mandatory requirement to reduce the execution materiality, increasing the quantity of work. The affirmation of Martinelli (2020) is verified. Indeed, the main factor which impacted the present problem was the technological tools already implemented by the company even before the pandemic and the capacity to adapt to the new method of work. In some cases, the *Problem 2 the audit report leg is equal to before the pandemic* was verified. In others, where companies being audited were less or even not prepared for the pandemic, there were delays. The answer is: it depends on the company and its technological tools. Additionally, if there are delays on the client side the audit report leg can increase, as stated by Minialo & Nezhyva (2020). The delay in obtaining the audit evidence undoubtedly impacted the audit report leg.

It is true that the pandemic increased the risk of fraud in auditing. This problem is supported by the Fraud Triangle. The pandemic is seen as an opportunity to commit fraud believing that there is less chance to get caught as the current disruption draws management's attention to other areas. In these circumstances, those that would not commonly perpetrate fraud may see the action as acceptable, appealing to the rationalization pillar. There is also more pressure. The three elements of the Fraud Triangle exist simultaneously because they are all interconnected.

Considering the types of fraud, in terms of manipulation, when much of the workforce is working remotely, modifying accounting reports and supporting documentation is possibly easier. During the pandemic, the audit teams performed inquiries or interviews with the client regarding fraud. Hence, these were conducted through the available communications tools. The focus was to understand the effectiveness of internal control of the company and how it prevents fraud during the pandemic. The situation itself creates the possibility of fraud. In fact, one of the participants even experienced a situation of fraud by manipulation that occurred in the pandemic and happen due to remote work. As mentioned by Daoud & Serag (2021), the detection of fraud can be tracked remotely, since it is possible to analyse transactions. The situation of fraud was a consequence of weak internal control. The ineffective monitoring and organizational structure were the conditions that lead to fraud, as confirmed by Manurung (2013).

6. Conclusion

Travel restrictions, office closures and other logistical challenges raised from the Covid-19 pandemic. The Covid-19 crisis enforced organizations and their employees to abruptly replace their work environments and change their ways of working. Accordingly, the pandemic impacted audit activity.

There are several factors which are outlined as the main transformation that occurred in the audit activity during the pandemic: the contact with the client, the contact with the audit team, the challenge in terms of technical execution, the audit quality, the turnover of the auditors and changes in the audit evidence.

Notwithstanding all the measures and restrictions that may remain, the requirement to obtain sufficient and appropriate audit evidence remains. Therefore, the auditor should assess whether audit evidence can be obtained through other means, in particular by increased use of technology.

It was imperative to shift the work mode to a remote one. The advantages of the remote audit work identified were the work-life balance, time management, more efficiency when working and easier access to information. The most relevant impact is the possibility of better managing personal lives. Another significant change resulting from the pandemic is easier access to information, which was more openly available during the pandemic. The remote working environment also created challenges to schedule meetings including with non-finance client employees, to obtain sufficient and appropriate audit evidence. The lack of contact between the audit team, the effective supervision and the relationship with the client were pointed out as disadvantages. The remote working method complicate the relationship between teams but did not eliminate it. To keep in touch and to effectively supervise teams, regular or periodic team meetings via Teams or Zoom happened. Given the situation, the interactions via calls or video meetings increased during the pandemic. These meetings also helped to update the member of the team regarding the overall status of the audit work. The dialogue between the audit team and the client was also essential to organize the work and prevent potential delays in the report issuance. Given the extraordinary circumstances, audit quality is of the utmost importance. Audit reports do not get issued until all necessary work is completed and reviewed appropriately. The audit quality was questioned in the pandemic environment. Therefore, the transition to remote audits caused by the pandemic does not facilitates the audit activity.

The progress in the use of technology was notable. The documentation has been obtained electronically or virtually. There was a requisite to transform original documentation into scanned copies. Working remotely required a significant quantity of data that had to be transmitted online. The security of information gained an important role. Additionally, the usage of the technological tools available for the auditor increased. Other tools which were under construction were accelerated.

It is true that with the pandemic the frequency of working remotely increased. The pandemic symbolized extraordinary times and some flexibility was required. The audit work during the pandemic was a success although it was an exceptional situation. The continuity of the remote work is a question that remains.

The macroeconomic downturn caused by Covid-19 required increased professional judgement in the determination of materiality. Global materiality is always indexed to a benchmark or factor that can or cannot be impacted by the pandemic. The performance materiality has a direct impact on the volume of work performed. It defines the number of samples needed to be investigated. Consequently, one audit firm decided to work with lower materiality in order to correct an eventual error of the pandemic. When calculating the PM, in addition to the expected errors, which are the historical errors of the previous year, an additional 10% were added as a precautionary measure. The volume of work and the technology implemented in a company impacts the audit report leg and gives the answer if it is equal as before the pandemic.

Despite the higher incentive to increase the audit fee, this cost for the audit service provided for the companies during the pandemic was not increased. The audit firm understanded that the pandemic brought difficult circumstances for all companies, so the audit fee was equal as before the pandemic or even lower. In special cases, there was a reduction of the audit fee in accordance with the necessities of the companies.

Regarding the audit report lag, it is crucial to consider the adaptation of the audit team and the adaptation of the client as the two main factors which impacted the audit report delay. Since the situation of the pandemic was new, the adaptation of both sides took more time. The technological factor also plays an important role. The audit report lag mainly depends on the technological capacity that the company has. The delay was most common to occur in companies which were less endowed with technological tools and which had more difficulties in adapting to the new situation.

The impact of Covid-19 on the financial stability and profitability of many market participants could increase incentives, pressures, and opportunities to perpetrate fraud.

Questioning the client directly about how they guarantee the prevention of fraud is indispensable. The most important aspects: to understand if the client is aware of any situation of fraud and then try to understand what type of controls they have in place to cope with fraud. The audit team also poses hypothetical scenarios to evaluate the client's awareness of their internal controls. During the pandemic, there were interviews and inquiries performed using the communications tools available. In addition, guidance and regulation were developed for the audit firms. Those defined norms of audit procedures were conducted to cover the higher risk due caused by the pandemic's inappropriate actions and activities.

It is important to underscore that during the pandemic the internal control of companies was not robust enough. A situation of fraud was verified due to the weak internal control by the audit team.

Considering the types of fraud, misrepresentation can occur through the fraudulent reporting of financial information that may range from bias when preparing the reports, to ignoring negative events and information to outright falsification. The risk of theft of valuable inventory, fixed assets and cash increased. Sites may not be adjusted to their normal levels of physical security that were reduced, generating greater opportunity for theft. Changes to authorization controls also increase the risk of misappropriation of funds. Asset misappropriation has not materialized as much. The type of fraud that is more likely to occur is manipulation. Finally, to conclude it is important to highlight that the pandemic increases the risk of fraud in auditing.

7. Limitations and Future Research

The present study represents a particular initiative to support the auditing literature concerning remote auditing, especially in the virtue of the Covid-19 pandemic. Future research should continue to explore the implementation and the effects of remote auditing. How to improve the audit procedures during remote work should be also addressed in the future. As current uncertainty about the future continues, it will become only apparent in the future what permanent effect Covid-19 will leave on the audit activity. The possibility of the inherent risk of fraud during the pandemic should also be studied.

It is important to note that the present study is subject to various limitations. One inherent limitation is associated with the methodology used: the use of interviews as a qualitative method to obtain data. The interviewing process can be complex and even difficult to follow. Interviews are time-intensive. The activity of evaluation and transcription of the answers takes time. The activity of analysing the results also consumes time. Besides that, some participants might withhold data when answering questions. Although the interview permits detailed answers, those could also be biased due to the position of the participant in the company or for many other reasons. Another limitation is the question of the appropriate sample size.

In addition, the present study lacks diversity in terms of the firm size and geographic reach. For instance, one cannot generalize from this study whether the dominance of the Big four firms has been reignited in the area of IT usage following the pandemic and remote work. In order to make a conclusion on this matter, it is necessary to increase the firm representation across all size, including more local, regional and other Big fours firms. With this in view, other future research should be done with a larger sample and/or with another type of methodology, a quantitative method perhaps.

8. Bibliography

ACFE. (2020). *Global Study On Occupational Fraud And Abuse*. Report to the Nations. Accessed on 8th December 2020, at: https://acfepublic.s3-us-west-2.amazonaws.com/2020-Report-to-the-Nations.pdf .

Ali, A., Teck-Heang, L. (2008). The evolution of auditing: An analysis of the historical development. *Journal of Modern Accounting and Auditing*, **4:** 4-7.

Alshenqeeti, H. (2014). Interviewing as a Data Collection Method: A Critical Review. *English Linguistics Research*. **3:** 39-43.

Amiram, D., Bozanic, Z., Cox, J.D. *et al.* (2018). Financial reporting fraud and other forms of misconduct: a multidisciplinary review of the literature. *Review of Accounting Studies*.

Appelbaum, D. (2020) . Auditing and Accounting during and after the Covid-19 Crisis. *The CPA Journal*, pp. 14-17.

Aslani, A., Niktaba, A. (2015). The effect of audit evidence on the auditor's report. *International Journal of Accounting Research*. **6:** 62-66.

Beechem, O. (2021). *IT Usage in Auditing and the Impact of Covid-19*. Undergraduate Theses. Bellamine University, United States of America. 62 pp.

Brinkmann, S. (2020). *The Oxford Handbook of qualitative research*. Chapter 15. 2nd edition. Oxford University Press. New York.

Choi, J., et al. (2010). Audit office size, audit quality, and audit pricing. *Auditing: A Journal of Practice & Theory*. **29:** 73-97.

Coates IV, J. (2007). The Goals and Promise of the Sarbanes-Oxley Act. *Journal of Economic Perspectives*. Accessed on 15th November 2020, at: https://www.aeaweb.org/articles?id=10.1257/jep.21.1.91 .

Cohn, M. (2021). Audit fees spike as complexity rises. *Accounting Today.* Accessed on 21st March 2020, at: https://www.accountingtoday.com/news/audit-fees-spike-as-accounting-complexity-rises .

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview-based qualitative research*. Social Science Information.* **45:** 483–499.

Daoud, M., Serag, A. (2021). *Uting Modern Audit Methods to Overcome the Challenges Facing the Audit Profession in the Covid-19 Pandemic*. Thesis. Faculty of commerce – Tanta university, Egypt. 8 pp.

Decreto-Lei n.º 10-A/2020, de 13 de março. Diário da República n.º 52/2020, 1º Suplemento, Série I de 2020-03-13. Presidência do Conselho de Ministros. Lisboa.

Deloitte. (2020). *Covid 19 And Fraud Risk: Managing And Responding In Time Of Crisis*.

Ettredge, et al. (2014). *Fee Pressure and Audit Quality*. Thesis. University of Kansas, United States of America. 46 pp.

Eulerich, et al. (2021). *Evidence on Internal Audit Effectiveness from Transitioning to Remote Audits because of Covid-19*. Thesis. University of duisburg-essen, Germany. 10 pp.

Ferreira, R. et al. (2021). *D*ecision Factors for Remote Work Adoption: Advantages, Disadvantages, Driving Forces and Challenges. *Open Innov. Technol*. **7:** 70.

FRC. (2020). *About The FRC I COVID - 19 I COVID19 Joint Statement - 26Th March 2020 I Financial Reporting Council*. Accessed on 4h November 2020, at: https://www.frc.org.uk/about-the-frc/Covid-19/covid19-joint-statement-26th-march-2020 .

Gill, P., Stewart, K., Treasure, E. *et al.* (2018). Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal*. **6:** 291-295.

Graham, L., Bedard, J. (2003). *Fraud Risk and Audit Planning. International Journal of Auditing*. **7:** 55–70.

Harmand, K. (2021). Digitalisation before and after the Covid-19 crisis. *ERA Forum 22*. 39–50

Helfrich, D. (2021). *Four Business Orthodoxies to Challenge in 2021*. Accessed on 10th June 2021, at: https://deloitte.wsj.com/articles/four-business-orthodoxies-to-challenge-in-2021-01610136130 .

Houghton, K.A., Jubb, C. and Kend, M. (2011). Materiality in the context of audit: the real expectations gap. *Managerial Auditing Journal*. **6:** 482-500.

Illuzzi, K., et al. (2020). Consequences of Covid-19: Potential auditing challenges. *AICPA*.

Joldos, A. M., Stanciu, I. C., and Grejdan, G. (2010). *Pillars of the audit activity: materiality and audit risk*. Thesis. The University of Petrosani Economics, Romania. 228 pp.

Jose, M. *et al.* (2021). Int. J. Environ. *Res. Public Health*. **13:** 66-69.

Karpoff, J. (2020). The future of financial fraud. *Journal of Corporate Finance*, Accessed on 7th December 2020, at: https://www.sciencedirect.com/science/article/pii/S0929119920301383#bb0205 .

Knechel, W. and Salterio, S. (2017). *Auditing*. 4th ed. Taylor & Francis. New York. pp.4-6.

KPMG. (2020). *Covid-19: KPMG Fraud Survey*. Accessed on 7th December 2020, at: https://home.kpmg/content/dam/kpmg/au/pdf/2020/Covid-19-fraud-survey-2020-infographic.pdf .

Loconto, A. and Busch, L. (2010). Standards, techno-economic networks, and playing fields: Performing the global market economy. *Review of International Political Economy*. 507-536.

Manurung, D. (2013) . *Detection Fraud Of Financial Statement With Fraud Triangle*

Martinelli, M., et al. (2020). The impact of Covid-19 on internal audit. *The CPA Journal*, **6:** 60-63.

Melati, I. and Hapsari, I. (2018). Analysis of the Effect of Fraud Triangle Dimensions, Self-Efficacy, and Religiosity on Academic Fraud in Accouting Students. *The Indonesian Accounting Review*, Accessed 6th December 2020, at: https://www.researchgate.net/publication/334265111_Analysis_of_the_Effect_of_Fraud_Triangle_Dimensions_Self-Efficacy_and_Religiosity_on_Academic_Fraud_In_Accounting_Students .

Minialo, V. and Nezhyva, M. (2020). *Digitalization of audit in the conditions of the Covid-19*. Thesis. Hearld of Jyiv National University of Trade and Economics, Ukraine. 134 pp.

Morton, S. (1993). Strategic auditing for fraud. *Accounting Review*. 825-839.

Qatamin, K., Salleh, Z. (2020). Audit Quality: A Literature Overview and Research Synthesis. *Journal of Business and Management.* 56-66.

Rinaldi, L., Cho, C. et al. (2020). Accouting in times of Covid-19 pandemic: a forum for academic research. *Accounting Forum.* 180-183.

Sagin, O., Shil, N. (2019). Effect of Audit Delay on the Financial Statements. *Sumerianz Jorunal of Economics and finance*. **4:** 37-43.

Sec.gov. (2020). *The Importance Of Disclosure – For Investors, Markets And Our Fight Against Covid-19*. Accessed 6 November 2020, at: https://www.sec.gov/news/public-statement/statement-clayton-hinman .

Singleton, T., et al. (2006). *Fraud Auditing And Forensic Accounting*. 3rd ed. [ebook]. John Wiley & Sons. New Jersey. 5-66.

Sonu, C., et al. (2016). Audit fee pressure and audit risk: evidence from the financial crisis of 2008. *Asia-Pacific Journal of Accounting and Economics*. 127-144.

Sridhar, R. (1995) . *Fraud*. Thesis. Kennesaw State University and University of Dayton, United States of America. 5 pp.

Teeter, R., et al. (2010). The remote audit. *Journal of Emerging Technologies in Accounting*. 73-88.

Uyar, S. (2019). Contemporary Approaches in Business. 1st ed. *IJOPEC Publication Limited*. London. 43.

Vona, L. (2008). Fraud Risk Assessment: Building A Fraud Audit Program. *John Wiley & Sons*. New Jersey. 12-17.

9. Annexes

Annexe A – Translated Interview from Portuguese into English

Section 1

Question 1 - What do you consider to be the main changes that happened during Covid-19 regarding the audit activity?

(Portuguese: Quais considera ser as principais alterações que aconteceram durante o Covid-19 tendo em conta a atividade de auditoria?)

Question 2 - Identify the main advantages and disadvantages of performing a 100% remote audit.

(Portuguese: Identifique as vantagens e desvantagens de realizar uma auditoria 100% remota)

Question 3 - What are the main technological changes coming from Covid-19?

(Portuguese: Quais são as principais mudanças tecnológicas provenientes do Covid-19?)

Question 4 - In your opinion, did the use of video calls increase during the pandemic?

(Portuguese: Na sua opinião, o uso das vídeo chamadas aumentaram durante a pandemia?)

Question 5 - What was the most used IT tool during the pandemic?

(Portuguese: Qual é o "IT tool" mais utilizado antes e durante da pandemia?)

Question 6 - How do you think the procedure of physical inventory counts, a procedure that needs to be 100% face-to-face and that relies on physical observation, has been impacted?

(Portuguese: Na sua opinião, como foi impactado o procedimento de contagens físicas de inventário, procedimento que necessita de ser 100% presencial e que conta com observação física?)

Question 7 - Considering that sometimes it is necessary to travel to the client in order to observe physical documents, during the pandemic what were the alternatives for obtaining physical evidence?

(Portuguese: Tendo em conta que por vezes é necessário a deslocação para o cliente com o objetivo de visualizar documentos, durante a pandemia quais é que foram as alternativas para a obtenção de evidências físicas?)

Question 8 - Do you consider that there are limitations to performing a 100% remote audit?

(Portuguese: Considera que existem limitações a realizar uma auditoria 100% remota?)

Question 9 - At the level of relationship with the team during the remote audit, in your opinion, do you feel that changes have occurred?

(Portuguese: A nível de relação com a equipa durante a realização de uma auditoria remota, na sua opinião, sente que ocorreram mudanças?)

Question 10 - In your opinion, was the audit quality impacted by the pandemic, i.e. by performing the work in a totally remote method?

(Portuguese: Na sua opinião, a qualidade de auditoria foi impactada pelo pandemia ou seja pela realização dos trabalhos num método totalmente remoto?)

Question 11 - In the past the audits were 100% face-to-face and with the pandemic there was a radical change to 100% remote. In your opinion, will this method be maintained?

(Portuguese: Antigamente as auditorias eram 100% presenciais e com a pandemia houve a mudança radical para 100% remoto. Na sua opinião, este método irá se manter?)

Section 2

Question 12 - Do you consider that the definition of materiality was impacted by the Covid-19 pandemic?

(Portuguese: Considera que a definição de materialidade foi impactada pela pandemia do Covid-19?)

Question 13 - Do you consider that audit fees increased during the covid period? If yes, please indicate which was the factor that most impacted the fees during the pandemic.

(Portuguese: Considera que os "fees" de auditoria aumentaram durante o período do covid? Se sim, por favor indique qual foi o factor que mais impactou os "fees" durante a pandemia)

Question 14 - During a pandemic because there is more risk, can there be an incentive to increase fees?

(Portuguese: Durante a pandemia devido ao facto de existir mais risco, pode existir incentivo para aumentar os "fees"?)

Question 15 - Do you consider that the audit report issuance period increased during the pandemic when compared to the previous homologous period without Covid-19?

(Portuguese: Considera que o período de emissão do relatório de auditoria aumentou durante a pandemia comparativamente ao período homologo anterior sem Covid-19?)

Question 16 – Which is the factor that most impacts the delay of the issuance of the audit report?

(Portuguese: Qual considera ser o fator que impacta mais o atraso da emissão do relatório de auditoria?)

Section 3

Question 17 - Do you consider that there was more risk of fraud in the audit during the pandemic period?

(Portuguese: Considera que existiu mais risco de fraude na auditoria durante o período de pandemia?)

Question 18 - Do you usually conduct customer surveys/interviews about fraud?

(Portuguese: É habitual realizar inquéritos/entrevistas acerca da fraude junto do cliente?)

Question 19 - During the pandemic did you conduct these interviews remotely via video calling apps like Zoom/Teams?

(Portuguese: Durante a pandemia realizou estas entrevistas remotamente através dos aplicativos de vídeo chamadas como o "Zoom/Teams"?)

Question 20 - The following question is related to the previous one. I would like to ask what are the important aspects to consider for fraud identification (in customer interviews)?

(Portuguese: A questão que se segue está relacionada com a anterior. Gostaria de perguntar quais são os aspetos importantes a considerar para identificação de fraude (nas entrevistas com o cliente)?)

Question 21 - In my study, I will analyse 3 types of fraud: manipulation, misrepresentation or misappropriation.

I will explain.

Manipulation is related to changes made to financial information in order to falsify the financial position and results, contrary to accounting standards.

Misrepresentation is related to the concealment of facts that may impact the financial statements. Bearing in mind that financial statements should be a reliable and accurate reflection of the situation of the company being audited.

Misappropriation is a type of fraud which includes embezzlement, theft, or any attempt to steal or unlawfully obtain, abuse, or damage an organization's assets.

So which type of fraud, in your opinion, is more likely to happen in a remote audit: manipulation, misrepresentation, misappropriation?

(Portuguese: No meu estudo, irei analisar 3 tipos de fraude: manipulação, deturpação ou apropriação indevida.
Passo a explicar.
A manipulação está relacionada com alterações feitas na informação financeira a fim de falsificar a situação financeira e os resultados, contrariando as normas contabilísticas.
A deturpação está relacionada com a ocultação de factos que podem impactar as demonstrações financeiras. Tendo em conta que as demonstrações financeiras devem ser um reflexo fidedigno e preciso da situação da empresa a ser auditada.
A fraude também pode ser vista como apropriação indevida que inclui desvio de fundos, roubo, ou qualquer tentativa de roubo ou obtenção ilegal, abuso ou dano de bens de uma organização.
Assim, qual é o tipo de fraude que na sua opinião, tem mais probabilidade de acontecer numa auditoria remota?)
Question 22 - In your opinion, during the Covid-19 era, do you think there was a need for any kind of additional regulations regarding fraud in audits?
(Portuguese: Na sua opinião, durante a época do Covid-19, considera ter havido necessidade de algum tipo de regulamentações adicionais referentes à fraude nas auditorias?)
Question 23 - During the Covid-19 era, for reasons of social responsibility and post-crisis preparation, most companies decided to preserve human capital in a first stage. But as governments have extended isolation and have given flexibility to the layoff regulations, many companies have found no alternative but to cut costs and expenses, including reducing wages and hours and, in more extreme cases, jobs, especially those related to functions that do not generate direct revenue, such as administrative sectors, which can affect internal control structures, including ethical processes.
With this, it is expected that some of the internal controls will be less rigorous than usual. Have you felt as a professional in any instance that a company's internal control has been less rigorous than usual and might have been vulnerable to fraud during the pandemic?
(Portuguese: Durante a época do Covid-19, por motivos de responsabilidade social e de preparação para o pós-crise, a maioria das empresas decidiu preservar o capital humano numa primeira etapa. Mas, à medida que os governos estenderam o isolamento e flexibilizaram as regulamentações relativas a lay-off, muitas empresas não encontraram outra alternativa a não ser cortar custos e despesas, incluindo a redução de salários e da carga horária e, em casos mais extremos, postos de trabalho, especialmente aqueles relacionados a funções que não geram receitas diretas, como os setores administrativos, o que pode afetar as estruturas de controlo interno, incluindo os processos de éticos.

Com isso, é esperado que alguns dos controlos internos sejam menos rigorosos do que o habitual.
Sentiu enquanto profissional em alguma instância que o controlo interno de uma empresa tenha sido menos rigoroso do que o habitual e que possa estar vulnerável à fraude durante a pandemia?)

Question 24 - Cressey's (1953) classic Fraud Triangle model helps to explain, in a simple way, why, during a pandemic, there are incentives to violate laws and regulations, as well as organizational policies, procedures, and internal controls.
The 3 concepts of the Fraud Triangle are: pressure, opportunity and rationalization.
Do you consider that there is pressure, opportunity and rationalization during the pandemic to perform fraud?

(Portuguese: O modelo clássico do Triângulo da Fraude de Cressey (1953) ajuda a explicar, de forma simples, porque, durante a pandemia, existem incentivos a violar leis e os regulamentos, bem como políticas, procedimentos e controlos internos organizacionais. Os 3 conceitos do Triângulo de Fraude são: a pressão, oportunidade e racionalização. Considera que existe pressão, oportunidade e racionalização durante a pandemia para realizar fraude?)

Question 25 - Do you have any examples of fraud during remote auditing?

(Portuguese: Tem algum exemplo de fraude que tivesse acontecido durante a auditoria remota?)