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Effectiveness of Internal Audit on Company Performance: the case of the Greek Telecommunication industry

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Abstract

The telecom industry is transforming before our very eyes. In this industry more than any other, embracing a strategic, forward-looking business model is critical to survival and success. The purpose of this research is about examining the relationship between Internal Audit and Company Performance in Greek telecommunication companies according to the upcoming considerations of the telecom industry worldwide. Every telecommunication company is unique and it is important that Internal Audit rely on a specific analysis of company's risks in developing its Internal Audit focuses areas.

The current thesis is consisted of the analysis of the theoretical background of the effectiveness of Internal Audit on Company Performance. Specifically, the theoretical background includes the definition of Internal Audit, the role it has in the company as well as the effects of Internal Audit on Company Performance. Also, it concludes a historical review of telecommunication Industry in Greece, an analysis of the critical role of Internal Audit in telecom industry and last but not least the upcoming global considerations. Furthermore, there is an empirical part with the presentation of the method we followed in order to find out if the states of part A (theoretical background) are apply in Greek telecommunication industry. The research was held by a questioner which was answered from employees of Internal Audit departments. Last but not least, in the empirical part there is an interview with an execute member from a Greek telecommunication company with some insights for our subject.

Overall, the results of the survey are in line with the expectations that were formulated before the questionnaire conduction and indicate the well-established general view that Internal Audit enhances Company's Performance. We should highlight that, the results of opinion questions, give a clear view of what employees of Internal Audit departments believe about the relationship of Internal Audit and Company Performance. In the question of Internal Audit being able to increase Company's performance they notice that it is able to increase Company's performance by consulting all the departments of the company to achieve their goals, by assessing policies for fraud prevention, by making actual reports to make any necessary adjustments, by providing change management through various practices and standards, by helping managers to expect and manage potential risks. Furthermore, in question about the effectiveness of the organization by consulting from Internal Audit they notice that it is able if the IA function operates in proper way, if the IA functions have sufficient resources, if the IA function has team members with sufficient technical knowledge. As far as the upcoming considerations for the telecom industry is concerned, all participants answered that their Internal Audit department perform a top-down risk assessment around the company's cybersecurity framework using industry standards as a guide.

Introduction

The introduction of Internal Audit was catalytic in how management controls an organization (Sobel, 2011). It is a crucial part of corporate governance structure in an organization and corporate governance covers the activities of oversight conducted by the board of directors and Audit Committees to ensure credible financial reporting process (Public Oversight Board, 1994). Internal Audit is regarded as the key element in the application of accounting systems which in turn, helps in evaluating the work of the department. The efficiency of Internal Audit helps develop the work of the company because the financial reports reflect the Internal Audit department's quality. Internal Audit assists in measuring and evaluating competence and efficiency performance, as well as in maximizing companies' capacity and adapting the best methods to use the available resources, in order to get the most possible quality and to meet the entity's goals (Eighme&Cashell, 2002).

In 1980, Gareth Morgan published the paper "Internal Audit Role Conflict: a Pluralist way" and analyzed the internal auditor's role from a perspective which emphasizes the pluralist nature of organizational life. The results indicated that the audit function initially emerged as part of a supervision process, with the establishment of the Institute of Internal Auditors and Professional Standards, was emphasized as a service of the Administration and has recently come to be considered a "service to the organization" which is an integral part of Management. Furthermore, 1994 was the years were Michael B. Adams published the paper titled "Agency Theory and the Internal Audit". The purpose of the paper was the analysis of the Agency theory and explains and predicts the appointment of external auditors and the conclusions of the research contribute to an explanation of the existence and necessity of the Internal Audit service. Moreover, 1995 Janet L. Colbert & C. Wayne Alderman published the paper "A risk-driven approach to the internal audit". The paper examined whether a different control approach was chosen depending on the effectiveness and efficiency it can have and the findings of the research have shown that a process-based approach is easier, and control based on a risk-based approach is more efficient and effective.

Nowadays, the telecom industry is transforming before our very eyes. In this industry more than any other, embracing a strategic, forward-looking business model is critical to survival and success. The purpose of this research is about examining the relationship between Internal Audit and Company Performance in Greek telecommunication companies according to the upcoming considerations of the telecom industry worldwide.

Internal Audit has nothing to do with what it was 20 years ago. There is an increasing market volatility that makes the Internal Audit function more important than ever. The Internal Audit function focused on providing core assurance around business process risk and controls. Organizations require for Internal Audit to deliver deeper insights and value beyond assurance, particularly in the areas of strategy execution, emerging risks and increasing the use of analytics. As far as telecom industry is concerned, changes in technology and consumer have led the companies to be alert to managing the risks they face. In the light of the increasing worldwide Internal Audit and taking into consideration the greater efforts by the Instruction of Internal Auditors (IIA) and the enforcement agencies, telecommunication companies will need to be alert to the upcoming risks.

In the first part, there is an analysis of the theoretical background of the effectiveness of Internal Audit on Company Performance. Specifically, this part includes the definition of Internal Audit, the role it has in the company as well as the effects of Internal Audit on Company Performance. Also, it concludes a historical review of telecommunication industry in Greece, an analysis of the critical role of Internal Audit in telecommunication industry and last but not least the upcoming global considerations. The second part includes the empirical

analysis of the thesis and the presentation of the method we followed in order to find out if the states of part A (theoretical background) are apply in Greek telecommunication industry. It is based on a questionnaire that was sent to employees of various telecommunication companies in Greece. The correspondents asked to express their opinion through the questionnaire, in order to examine the relationship between Internal Audit and company performance, the effectiveness of Internal Audit and if they consider that internal audit delivers added value to their Company. Last but not least, in the empirical part there is an interview with an execute member in a telecommunication company with some insights for our subject.

Part A: Theoretical Background

Chapter 1: Internal Audit and Company Performance

1.1 Introduction

This chapter consists of the definitions of Internal Audit as well as the mandatory guidance. Also, it briefly presents the role of Internal Audit. Furthermore, it helps the reader understand the role of Internal Audit in Company Performance and the measurements of Internal Audit effectiveness.

1.2 What is Internal Audit?

The Institute of Internal Auditors (IIA) defines:

"Internal Audit is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes."

Internal Audit is an independent, objective, assurance and consulting activity that adds value to the company and improves an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management control and governance processes. The internal audit activity provides assurance to management and the audit committee that risks to the organization are understood and managed appropriately. And it serves as an in-house consultant on many areas of interest. (IIA, 2016) In other words, Internal Audit is an independent appraisal function established by the management of an organization for the review of the internal control system as a service to the organization. It is the necessary function of modern «management» and the consultant at all hierarchical levels (IIA 2009). Internal Audit is a key pillar of good governance. It provides the board of directors, the audit committee, the chief executive officer, senior executives and stakeholders with an independent view on whether the organization has an appropriate risk and control environment, whilst also acting as a catalyst for a strong risk and compliance culture within an organization (Ljubisavljević & Jovanovich, 2011).

There is a guidance-setting body that provides Internal Audit worldwide mandatory and recommended guidance The International Professional Practices Framework (IPPF) is the conceptual framework that organizes authoritative guidance promulgated by The Institute of Internal Auditors (IIA). The mandatory elements of the IPPF are (Figure 1):

- Definition of Internal Audit
- Core Principles for the Professional Practice of Internal Auditing
- Code of Ethics
- International Standards for the Professional Practice of Internal Auditing (The Standards)



Figure 1: International Professional Practices Framework, Source: IPPF, theIIA, 2017 https://global.theiia.org

1.3 The role of Internal Audit

The nature of internal auditing, its role within the organization and the requirements for professional practice are contained within the International Professional Practices Framework (IPPF). The components and the detailed content of the IPPF are available in the Global professional guidance area of the website. To be effective, the internal audit activity must have qualified, skilled and experienced people who can work in accordance with the Code of Ethics and the International Standards.

According to the IIA, the role of Internal Audit is to perform the following tasks, in an approved integrated audit plan that is completely aligned with organization's strategy:

- Verify the existence of assets and recommend proper safeguards for their protection
- Evaluate the adequacy of the system of internal controls
- Recommend improvements in controls
- Assess compliance with policies and procedures and sound business practices
- Assess compliance with state and federal laws and contractual obligations
- Review operations to ascertain whether the results are consistent with established objectives and whether the operations are being carried out as planned
- Investigate reported occurrences of fraud, embezzlement, theft, waste, etc.

It is crucial that the Internal Audit department of organizations should be independent from administration and should have a clear communication with every department of the company in order to transfer the information in an accurate and direct way throughout the organization. Internal Auditors should have the independence to objectively perform their duties. Furthermore, they should have perfect cooperation with management to achieve the best results according to the organization's strategy. Moreover, Internal Auditors should have very good relationship and communication with external auditors. As a result, a dedicated, independent and effective Internal Audit activity assists both management and the oversight

body (e.g. audit committee) in fulfilling their responsibilities by bringing a systematic, disciplined approach to assessing the effectiveness of the design and execution of the system of Internal controls and risk management processes. The last, provides management, the oversight body and external stakeholders with independent assurance that the organization's risks have been appropriately mitigated. Because Internal Auditors are experts in understanding organizational risks and internal controls available to mitigate these risks, they assist management in understanding these topics and provide recommendations for improvements.

Internal auditors are responsible for issues that are fundamentally important to the survival and prosperity of any organization. Internal auditors help organizations to succeed through a combination of assurance and consulting. The assurance part involves the information to the managers about how well the systems and processes designed to keep the organization out of problem. Then, there is the consulting part in which Internal Audit helps to improve those systems and processes. The internal auditor helps executive management and boards to demonstrate that they are managing the organization effectively on behalf of their stakeholders. This can be achieved by reporting to executive management that important risks have been evaluated and highlighting where improvements are necessary. This is in the mission statement of internal audit which says that internal audit's role is 'to enhance and protect organizational value by providing risk-based and objective assurance, advice and insights.

1.4 Measuring Internal Audit effectiveness and efficiency

The Institute of Internal Auditors, published a practice guide in 2010, in which Internal Audit effectiveness and efficiency as "the degree (including quality) to which established objectives are achieved." Internal auditing should establish performance metrics and related measurement criterion appropriate to its environment/ organization to measure the degree (including quality) of achievement of objectives for which the internal audit activity is established. Internal audit effectiveness and efficiency should be monitored and assessed periodically as part of the Internal Audit process. Internal audit should make use of the appropriate performance metrics and measures to identify if the desired goals and aims have been reached, in order to achieve high standard of operations and practices.

The following process, according to practice guide, provides guidance to Internal Audit activities on measuring their effectiveness and efficiency and the level of customer service they provide to stakeholders. To create effective performance measures, the Chief Audit Executive (CAE) needs to establish the following process:

- Identifying critical performance categories such as stakeholder satisfaction, internal audit processes, and innovation and capabilities
- Identifying performance category strategies and measurements. Strategies should be pursued in compliance with IIA Standards, other applicable professional standards, and applicable laws and regulations and should ensure stakeholder satisfaction.
- Routinely monitoring, analyzing, and reporting performance measures.

According to The Institute of Internal Auditors and the practice guide that published in 2010 with title "Measuring Internal Audit effectiveness and efficiency", the process could follow these types of steps:

Step 1: Define Internal Audit Effectiveness

- Review relevant IPPF guidance including Standards.
- Review the strategic plans of the internal audit activity and organization.
- Review the board, audit committee, and internal audit activity charters.
- Assess basic, expected, and targeted/preferred internal audit activity deliverables.
- Formulate an initial definition of internal audit effectiveness and efficiency.
- Define agreement from key stakeholders of the definition of effectiveness and efficiency.

Step 2: Identify Key Internal and External Stakeholders

- Determine key internal and external stakeholders for the activity and organization
- Determine who directly or indirectly relies upon the internal audit activity's work.
- Determine who benefits, directly or indirectly, from the internal audit activity's work.
- Consider who supports the internal audit activity

Step 3: Develop Measurements of Internal Audit Effectiveness

- Understand key stakeholders' expectations of the internal audit activity.
- Understand what internal audit attributes, deliverables, and capabilities key stakeholder's value and related shortcomings or advancements in these areas.
- Develop measurement tools such as a balanced scorecard to document relevant attributes of effectiveness and efficiency and related performance against these.
- Agree upon effectiveness and efficiency metrics with key stakeholders.

Step 4: Monitoring and Reporting Results

- Establish an agreed upon format and frequency for reporting that considers the organization's size, nature, and governance structure.
- Establish a periodic review of such monitoring and reporting to ensure relevance, efficiency, and effectiveness.
- Use the results of reporting to shape and guide internal audit activities.
- Align internal audit activities to the defined measures of internal audit effectiveness and efficiency.

1.5 Challenges

Nowadays, the business environment has experienced rapid and revolutionary change. The Internal Audit profession became more firmly established and Internal Audit departments must recruit, train and manage staff that can operate across a variety of cultures. They must also deal with multiple regulatory regimes.

According to Warren, Hannan and Youngberg, which published an article with title "Internal Audit Leads the Way to Performance Improvement" in 2011, Internal audit efforts to help organizations improve performance face a number of challenges. First of all, there are narrow audit skills set as finding auditors with the right skills and capacity to broaden the scope of internal audit to address performance under the new internal audit model might be challenging. Furthermore, there is vague value proportion. Return on investment is a common measure used to justify investing in new activities. Quantifying the return on investment that management can expect from increasing improvement audit activities can be problematic. Last

but not least, there is management Skepticism. Performance improvement might be a new area of focus for many auditors, management and business process owners who are more accustomed to audit playing a compliance or financial controls role initially might be skeptical about audit's ability to contribute real value in this area.

Chapter 2: Internal Audit and the Greek Telecommunication Industry

2.1 Introduction

This chapter is about gaining some basic knowledge about the historical review for the Greek telecommunication industry. Furthermore, it briefly presents the companies of telecommunication sector which are now operating in Greece and the today challenges of the industry. Last but not least, it helps the reader understand why Internal Audit is important for the industry.

2.2 Historical review of Telecommunication industry in Greece

The history of telecommunications in Greece is not recent. It started in 19 century, when the first telegraph system was installed and rapidly evolved at the end of 1950. According to law 1049/49, OTE was the only company to provide telecommunication services in the country and its shares did not belong to OTE but to the state. Due to the Second World War, telegraph and telephone network in the country suffered disasters. This event became the reason for the existence of a strategy that was needed in telecom sector at national level.

In 1949 OTE was established as a public and unique player in telecommunications and it was the only fixed telephony provider in Greece until its future release (01.01.2001). In 1974, it was launched a series of major infrastructure projects for the development and modernization of the network, making Greece the key telecommunication hub in the Eastern Mediterranean region. In 1989 the Greek telecommunication network starts the operation of the public network transmission and switched data with the name HELLASPAC. The 1980 - 1990 was the decade of digitization for telecommunications in Greece because OTE connected with European Telecom EULLASAT as well as IMNARSAT. OTE had significant performance such as increasing growth, especially in the years 1969, 1970, 1980, but there were also disadvantages such as delays, or not so good quality in the network.

In 1990, investment programs have begun to have a rising course, and digitization of the network began to evolving rapidly. After two years the Authority was established by virtue of L.2075/1992 and was originally named Hellenic Telecommunications Committee (EET). The Hellenic Telecommunications and Post Commission (EETT) is an Independent Administrative Authority. It acts as the National Regulator that monitors, regulates and supervises:

- the electronic communications market, within which fixed and mobile telephony, wireless communications and Internet access providers operate
- the postal services market, within which postal and courier service providers operate.

In 1993 there was a commercial operation of two mobile telephony companies and the 1998 the company of OTE. In the early stages of mobile telephony services, could only provide

speech service. With the passage of time they were upgraded and they produced other options for users like call recognition, SMS, MMS, and more.

The actual liberalization of the market started in 2007, with alternative operators (non-OTE providers) investing in the loop. By Law 2867/2000 the telecommunication industry in Greece is in a fully competitive environment. In the same year the first direct fixed wireless telephony is issued. By the end of 2004, twelve alternative fixed telephony operators had already been active and between 2001 and 2004 their take place several turbulence in the mergers or acquisitions market. The following are some mergers that took place in the Greek industry:

- Tellas (merged with Wind)
- Q-Telecom (merged with Wind)
- Hellas on-line (merged with Vodafone)
- Algonet (merged with Net One)
- Tellepassport (merged with Lanett)
- Vivodi telecom (merged with On Telecoms)

In 2009 this sector and most sectors in Greece had a downward trend due to the recession of the economy. There was a reduction in prices where they were created due to the great competition, but also of the regulatory interventions. Due to the recession, work has also declined of the sector and sales. From 2008 to 2012, half have been noted sales. By agreement between the Greek Government and Deutsche Telekom, as of November 5, 2008, each held 25% plus one share of OTE's share capital. Following a further sale of shares and voting rights of the Greek State, Deutsche Telekom's stake in OTE is of 40% and of the Greek State as of July 11, 2011, at 10%.

2.3 The Greek Telecommunication industry in 2017

Today, the telecommunication market enters into a new phase with the launch of high-speed Internet connection services based on NGAs implemented by OTE, Vodafone and Wind under the relevant regulation of EETT (National Telecommunications and Post Commission). The choices of Greek consumers are constantly limited. Up to now there are fewer than 10 companies controlled by 4 shareholders: OTE, Vodafone, Wind Hellas and Forth net. Even Cosmote has been substantially absorbed by OTE and if it remains with a separate tax reference, it is solely for the purpose of market regulation. In the next phase of market concentration, companies are expected to stay three, if not fewer.

There are 4 telecom providers and three main products: fixed telephony, mobile telephony and satellite TV. In January 2018, there was the acquisition of Cyta by Vodafone and there is a strong discussion about the possibility of the takeover of Forth net by another company in the industry.

OTE (Hellenic Telecommunications Organization S.A) is the dominant telecommunication provider in Greece. Also, is one of the largest telecom groups in South Eastern Europe and offers broadband services, fixed and mobile telephony, and high-speed data communications and leased lines services. Furthermore, OTE Group of companies, involved in a range of activities, notably satellite communications, real-estate and professional training. Since July 2009 Deutsche Telekom is the largest shareholder of the company. In September 2015, the company announced they are to discontinue the use of the OTE name and will instead adopt Cosmote as a commercial brand. It is important to notice that the company chose not to adopt the Deutsche Telekom brand under which name it operates in its Central and Eastern European operations

Vodafone is one of the most widespread companies in the world. He's got very good promotion, advertisements that are interesting and targeted more to attract youth. It has very good prepaid offers especially for students and very good and fast service, either by the phone or from a store, makes a gallop by contacting the customer to tell him his impressions and experience when he visits someone shop and generally for the company, its performance, its expectations, the service, etc. Vodafone Greece is a member of the Vodafone Group, which is one of them the largest telecommunications groups in the world, with strong presence, mobile, fixed and internet facilities in our country. The Vodafone can provide telecommunication, with vision and know-how, invests in digital infrastructure and can best meet the needs of individuals and businesses business and helps the country to grow economically but also social.

WIND is one of the largest telecommunication companies in our country. At 23 years of operation has been ranked in having the lead in its technology mobile phones, showed innovative products and services they brought communication at another level. It is the first telecom company in Greece, which had Internet fixed and mobile telephony services consumers.

At the end of 2017, Naftemporiki collected data about the alternative providers in Greek Telecommunication Industry. According to this, alternative providers account for about 45% of telephone subscribers, based on data that alternatives at the end of 2017. (Figure 2)

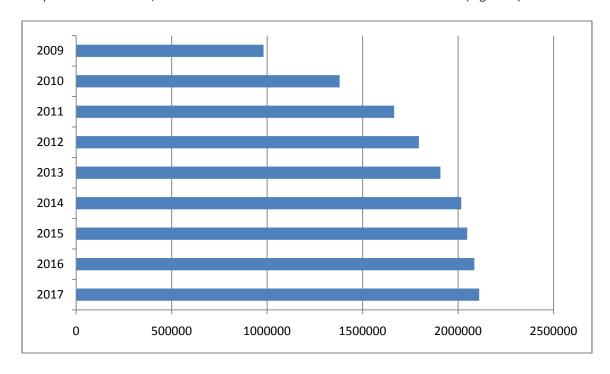


Figure 2: Number of subscribers to alternative operators, Naftemporiki, January 2018

The largest provider after OTE in fixed telephony is Vodafone with 694,000 subscribers and which added 36,000 young people during the previous year. It is obvious that its dynamics will be greatly enhanced by adding Cyta subscribers. Shortly after, based on the number of subscribers, Wind is 592,000, which also did not go badly last year, adding 34,000 new subscribers. With a loss of about 16,000 subscribers closed in 2017 for Forth net, which maintains around 548,000. So is Cyta, which has about 276,000 subscribers, as last year it recorded losses of 28,000 subscribers. (Figure 3)

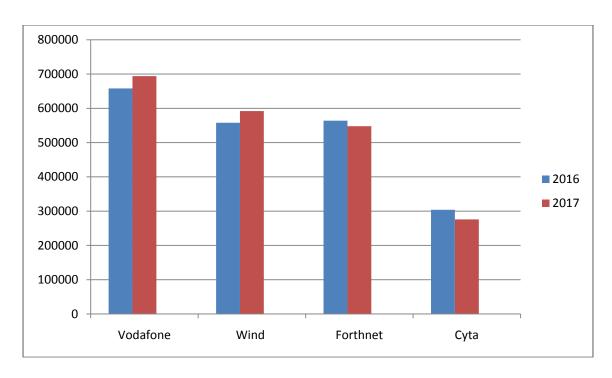


Figure 3: The market share of alternative operators, Naftemporiki, January 2018

2.4 The critical role of Internal Audit in telecommunication industry

Telecommunication Industry has a major role in the demand of technological and regulatory changes. In the same time, this specific industry illustrates transparency, customer innovation and bringing new services to the market. The telecom sector is undergoing huge transformation. Driven by changing consumer behavior and new mobile technology, innovative and sustainable revenue opportunities need to be found quickly. Increasing competition from non-telecoms providers, reduced network investments and the rise of digital media and mobile technology mean that telecoms operators need to radically change their business models and service offerings to survive.

According to KPMG and the article with title "Internal Audit: Unlocking value for telecommunication companies" there are 10 Internal Audit considerations for telecommunication companies which are analyzed below.

Cybersecurity: The telecom networks have become an integral part of our daily life and have changed the way we communicate and interact with other people. Cybersecurity has emerged as a focused area for telecommunication industry nowadays and there are several factors that explain the increased attention to cybersecurity issues but the most important are: rapid shifts in technology, more diverse regulatory environment, social change and change in corporate culture. Well – funded hackers are developed new methods and they can target companies not only directly but also through phishing and connections with key suppliers and technology partners. It is absolutely critical for companies to remain up-to-date on emerging threats. The consequences of lapses in security can be disastrous for an organization

Capital Expenditures: The global demand for telecommunications services continues to drive the need for increased capacity and speed of wireless data networks. In order to capture this demand, telecommunication companies have spent a great amount of money on capital projects. Many companies have implemented a capital expenditure strategy for example new lease accounting standards.

Data governance: The organizations across all industries and especially in telecommunication industry are leveraging the power of big data technologies. Companies capture and analyze internal and external, transactional and historical data to change the way they do their businesses. However, there are some risks that companies should take into notice. For example, data must be secured in certain types of data such as customer proprietary network information (CPNI).

Customer experience: The customer risk has been limited to accuracy of billing, call center cost reduction and customer retention. But today there is a growing need to make a change to more strategic approach. Internal Audit can support and perceived the issue of customer experience as a valued business contributor. Customer experience should take place under Internal Audit not only as a risk, control or compliance perspective but also as a potential process improvement issue.

Network data integrity: An important component of reliably and efficiently operating a telecommunication network is a complete and accurate network. However, there are some risks that companies should take into notice. Telecommunication companies work to ensure that operational processes and controls exists to help ensure network data integrity is maintained because network s=data is complex. In this issue, technology and operations professional can be an invaluable resource when it comes to assessing network data integrity.

Increasing demand: Nowadays, there is an increasing demand for telecommunications services. The industry has been defined by its unique technological innovation. It is a known fact that the contributions to economic growth made possible by access to an advanced, affordable communications infrastructure. Recent technological advances in telecommunications technology are fueling greater demand for faster reliable. This is expected to continue in today's rapidly evolving innovation-focused marketplace.

Data analytics and continuous auditing: Data analytics have helped improve the way Internal Audit department assess and monitor risks especially in terms of enabling expended risk coverage and audit scope improving texting precisions. Continuous auditing can help Internal Audit departments simplify and improve the audit process, resulting in higher quality audits and increased value to the business through the use of repeatable ad sustainable data analytics that can provide for more precise control evaluation. Also, audit committees and stakeholders are asking internal audit to do more controls to be evaluated resulting in greater coverage. While Internal audit departments can realize significant benefits by employing data analytics and continuous auditing techniques, those responsible for operations compliance and financial reporting have also generally increased their use of data analytics and continuous monitoring techniques in executing their responsibilities. Internal Audit departments can often leverage these platforms or assist in a consulting role to help improve processes and controls leveraging these capabilities. Although, Internal Audit must maintain an adequate degree of separation from management responsibilities opportunities exist to work with management to expand the use of data analytics and continuous monitoring and auditing techniques.

Third-party relationships: Telecommunications companies leverage third-parties for a variety of services such as billing, network operations, information technology support, call center and customer service. While third parties provide valuable services they can expose an organization to financial compliance and operational risks. These risks can be extensive, including revenue loss or penalties, data privacy breaches, service disruption, corruption risk any of which may damage the company's reputation. The organizations have the ability to outsource a variety of tasks however they remain accountable for these outsourced activities.

Accounting change: There are two significant account changes in global base: revenue recognition and lease accounting that have broad implications for telecommunications companies. With revenue recognition public companies should apply the new revenue recognition standard to annual reporting periods beginning after December 15.2017. Non public companies should apply the new revenue standard to annual reporting periods beginning after December 15.2018. With lease accounting public companies should apply the new leasing standard for interim and annual periods begging after December 15.2018. Private companies should comply for annual periods beginning a year later. Implementation will be challenging for many telecommunications companies as they collect leasing data across multiple disparate data sources in order to assess impacts to least accounting as well as impacts to IT systems and processes and people.

Regulatory change: There are many drivers of the regulatory changes that impact the telecommunication industry. Changing technology and competition are some important drivers. Furthermore, the ways in which consumers utilize telecommunications services are driving the need for new privacy rules. Specific company activities may require the company to comply with additional regulations. Therefore a company's compliance activities can become complex and costly especially if compliance activities are fragmented. Internal Auditors can assist with evaluating all components of a company's internal control to help ensure compliance objectives are achieved.

Chapter 3: Literature Review

3.1 Introduction

Nowadays, Internal Audit is an integral department of every company and it should supported by innovative ways to help the company withstand in the time. An Internal Audit function can provide a number of important services to company management, such as fraud detection and prevention, internal control evaluation and compliance with company's policies. Every company, despite its size, can benefit from Internal Audit. In order for Internal Auditors to be aligned, the International Professional Practices Framework, published and updated by the Institute of Internal Auditors every year, serves as a guidance tool to Internal Auditors. This guidance provides risk bases and objective assurance, advice and insight in order to enhance and protect the organizational value.

There are many studies through the years which analyze the Internal Audit role, the effects of Internal Audit and other importance issues relative to our subject. We consider that the following studies are at the utmost important and relative to our study.

3.2 Literature review of our study

In 1980, Gareth Morgan published the paper "Internal Audit Role Conflict: a Pluralist way" analyses the internal auditor's role from a perspective which emphasizes the pluralist nature of organizational life. The pluralist nature of organizational life reflects itself in day-to-day strains, tensions and conflicts between internal auditors and auditees, which cannot be eliminated through traditional "Human Relations" approaches to organizational problems. In order to achieve his scope, the research he followed was a questionnaire answered by internal auditors in police departments, educational institutions and social services. The results indicated that the audit function initially emerged as part of a supervision process, with the establishment of the Institute of Internal Auditors and Professional Standards, was emphasized as a service of

the Administration and has recently come to be considered a "service to the organization" which is an integral part of Management.

In 1994, Michael B. Adams published the paper "Agency Theory and the Internal Audit" in Managerial Auditing Journal. The purpose of the paper was the analysis of the Agency theory and explains and predicts the appointment of external auditors. The proposes that agency theory not only helps to explain and predict the existence of internal audit but that it also helps to explain the role and responsibilities assigned to internal auditors by the organization, and that agency theory predicts how the internal audit function is likely to be affected by organizational change. The conclusions of the research contribute to an explanation of the existence and necessity of the Internal Audit service.

In same year (1994), Rocco R. Vanasco published the paper "The Audit Committee: An International Perspective" in Managerial Auditing Journal. Highlights the role played by the Securities and Exchange Commission (SEC), the New York Stock Exchange (NYSE), the American Institute of Certified Public Accountants (AICPA), The Institute of Internal Auditors (IIA), the Tread way Commission, and other professional organizations in furthering the establishment of audit committees in the USA. In the international arena, the UK Cadbury Committee, the Australian Borsch Committee, and the Canadian Macdonald Commission have influenced the widespread use of corporate audit committees in their respective countries. The guidelines on audit committees set by the IIA, AICPA, SEC, and the Tread way Commission have had a tremendous impact worldwide. Cultural differences may, however, limit the formation and effectiveness of audit committees globally even though auditing is a relatively homogeneous profession. The Institute of Internal Auditors, as an international professional association, may wish to consider the cultural dimensions of corporate governance in formulating professional internal auditing standards dealing with the structure and functions of audit committees internationally.

In 1995, Janet L. Colbert and C. Wayne Alderman published the paper "A risk-driven approach to the internal audit" in Managerial Auditing Journal examined whether a different control approach was chosen depending on the effectiveness and efficiency it can have. Internal auditors should consider the risks pertinent to an auditee when planning the work. Internal auditors may select a procedures-driven approach or a risk-driven approach. In a procedures-driven approach, the audit procedures are chosen without full consideration of the risks present. The findings of the research have shown that a process-based approach is easier, and control based on a risk-based approach is more efficient and effective.

One year after (1996), Rocco R. Vanasco published the paper "Auditor independence: an international perspective" in Managerial Auditing Journal. The research examines the role of professional associations, governmental agencies, and international accounting and auditing bodies in promulgating standards to foster auditor independence domestically and abroad. Also, it focuses specifically on the role played by the American Institute of Certified Public Accountants, the Institute of Internal Auditors (IIA), the Securities and Exchange Commission and the US Government Accounting Office. The results have shown that independence is considered the stamp of the audit and accounting profession.

In 2003, William J. Read, D.V. Rama, published the paper "Whistle-blowing to internal auditors" in Managerial Auditing Journal researching the role that malware complaints may play in internal auditors. Thus, data was collected from chiefs of internal auditors using a questionnaire. The findings of the survey showed that over the past two years 71% of the chiefs of internal auditors have received complaints of malfunctions, of which 65% was true. In fact, accepting such complaints is positively linked to the involvement of internal audit in the

compliance audit with the Code of Conduct and the support of internal audit by the Audit Committee.

In 2004, Abdulrahman A.M. Al Twaijry, John A. Brierley and David R. Gwilliam published the paper "An examination of the relationship between internal and external audit in the Saudi Arabian corporate sector" in Managerial Auditing Journal. The paper uses questionnaires from and interviews to examine the level of co-operation and co-ordination between directors of internal audit departments, and partners and managers in external audit firms in Saudi Arabian companies. The results revealed that external auditors expressed concern about the independence, scope of work and small size of many internal audit departments. Internal auditors considered co-operation between internal and external audits to be limited, although external auditors were more positive about the extent of co-operation when the internal audit department was of high quality.

In 2006, James Lloyd Bierstaker and Jay C. Thibodeau published the paper "The effect of format and experience on internal control evaluation" in Managerial Auditing Journal. The purpose of the paper is to investigate whether the use of a questionnaire or a narrative documentation format will impact an auditor's performance in identifying internal control design weaknesses. The methodology followed was the internet communication with a sample of 73 auditors from two South American companies that had a range of different experience each. The results of the research showed that the auditors who filled out questionnaires for finding weaknesses in the internal audit process correctly recognized more weaknesses than those who used the narrative record of events. If the auditor had a lot of experience in internal control, this proved to be even more useful and effective.

A further study was carried out in 2007 by Dessalegn Getie Mihret, Aderajew Wondim Yismaw, with title "Internal audit effectiveness: an Ethiopian public sector case study" in Managerial Auditing Journal. The purpose of the study is to identify factors impacting the effectiveness of internal audit services. The methodology used was a case study in a large educational institution in the Ethiopian public sector, while multiple sources of information were used. The result of the survey has shown that the effectiveness of internal audit is heavily influenced by the quality of internal audit and management support, while the organizational structure and behavior of the auditees does not exert great influence on it.

Part B: Empirical Part

Chapter 4: Methodology

4.1 Introduction

This chapter helps the reader understand the purpose of the study. Also, it presents general information about the survey such as the sample and the population for the research. Last but not least, it include a briefly description of the questioner it used for conducting the research.

4.2 Purpose of the study

The purpose of this research is about examining the relationship between Internal Audit and Company Performance in Greek telecommunication companies according to the upcoming considerations of the telecom industry worldwide.

4.3 About the survey

To conduct this survey, questionnaires were sent to the 4 companies that compose the Greek telecommunication industry. The research took place in January 2018 until March 2018 and the receiving questioners are from the 3 companies of the industry. The way we choose to communicate we Internal Audit departments of the companies was through the Compliance Departments, LinkedIn and Officials Facebook pages of the companies. We manage to achieve 34 answers. It should be emphasized, however, that the larger the sample, the greater the accuracy of the conclusions. During this procedure and after the completion of the questioner, an executive member asked for further information. In order to take part on the empirical part of the research, the executive member answers in 3 more open questions. This interview has allowed us to collect information about the current insights of the telecom industry in Greece today. As far as the data collection is concerned, it was not considered necessary to clarify anything when completing the questionnaire. The questions were easy to be understood by the participants without extensive explanation for their response. The design of the questionnaire made it easier for participants to respond anonymously, easily and quickly.

4.4 Description of the Questioner and Interview

In the questionnaire, there are only 2 General Information in order to be consistent we the Compliance department of the companies. After this general information, the participants should answer in 2 open questions about the relationship of Internal Audit and Company Performance. After the 2 open questions, there are 18 questions divided in 3 categories: independence of Internal Audit, Internal Audit Effectiveness and Internal Audit in the Telecommunication sector. In this part, the participants answered in five scale (five defines to a large extend). The five scales were used for the correspondent to show the degree of agreement or disagreement on the question. Last but not least, after the gathering of the questionnaires, their completeness and validity were checked. Last but not least, the interview with the Executive Member takes place after the gathering of the questioner and the participant answer in 3 questions about the today's effects of Internal Audit in company performance in the telecom industry in Greece.

Chapter 5: Empirical Results

5.1 Introduction

In this section, the results of the questionnaire are presented as well as the interview.

5.2 General Information

The first general information which answered by our participants was the age. For the purpose of the study we categorize the age into 3 categories.

- 5 participants are between the ages of 25 30 (14.70%)
- 25 participants are between the ages of 31 45 (73.54%)
- 4 participants are between the ages of 46 60 (11.76%)

The second general information we asked for, was the Position in the Internal Audit department of their company.

- 4 participants are Senior Managers (11.76%)
- 5 participants are from Compliance departments (14.70%)
- 25 participants state that they are from Internal Audit department generally (73.54%)

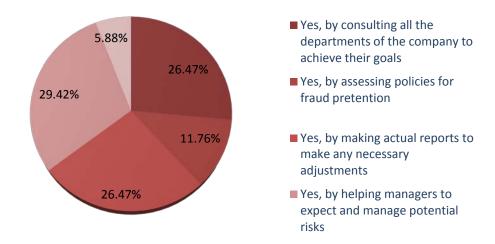
5.3 Open Questions

This part of the questioner consists of 2 open questions about their company. For the purpose of the research we categorized the participant's answer.

Question 1: Do you believe that Internal Audit is able to increase Company's performance? How?

In the first question, the respondents noted down their opinion regarding the importance of Internal Audit on Company Performance. All the participants, answered positive to this question and below are the reasons that Internal Audit increase Company Performance.

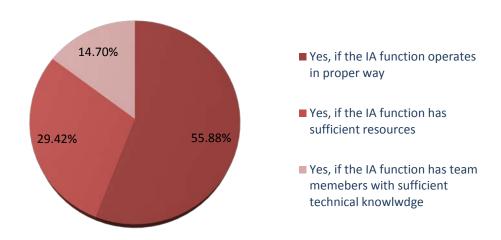
- Yes, by consulting all the departments of the company to achieve their goals (9 participants 26.47%)
- Yes, by assessing policies for fraud pretention (4 participants 11.76%)
- Yes, by making actual reports to make any necessary adjustments (9 participants 26.47%)
- Yes, by providing change management, through various practices and standards (10 participants 29.42%)
- Yes, by helping managers to expect and manage potential risks (2 participants 5.88%)



Question 2: Do you consider that consulting from Internal Audit can improve organizational effectiveness? How?

In the second question, the respondents noted down their opinion regarding

- Yes, if the IA function operates in proper way (19 participants 55.88%)
- Yes, if the IA function has sufficient resources (10 participants 29.42%)
- Yes, if the IA function has team members with sufficient technical knowledge (5 participants 14.70%)



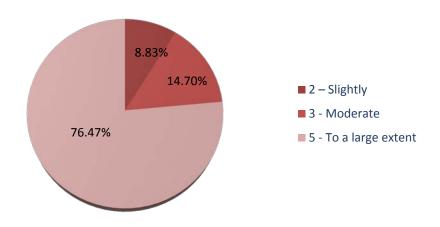
5.4 Questions about Internal Audit Effectiveness

In this part, participants answered in a 5 scale, in 8 questions about Internal Audit Effectiveness. For the purpose of the research we define that:

- 1 Not at all
- 2 Slightly
- 3 Moderate
- 4 Very
- 5 To a large extent

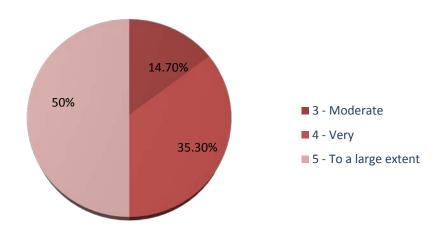
Question 3: To what extent does the Internal Audit department have unrestricted access to all departments and employees?

The pie chart below shows the results in question number 3. Based on this chart, 26 participants – 76% answered that they have unrestricted access to all departments to a large extent. Only 5 participants – 14.70% answered that they have unrestricted access to all departments to some extent and 3 participants – 8.33% responded that they slightly have unrestricted access to all departments.



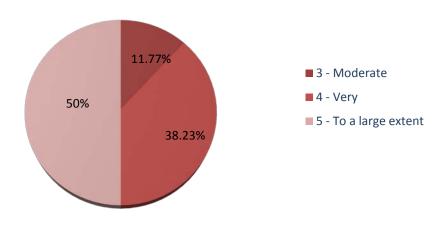
Question 4: To what extent does Internal Audit department produce reports for the Audit Committee including the identification of themes and trends, and their consequences for the organization as a whole?

The results of question 4 show that 17 participants – 50% answered that their Internal Audit department produces reports for the Audit Committee to a large extent, while 12 participants – 35.30% answered that Internal Audit department produce reports for the Audit Committee very often. Only 5 participants – 14.70% responded that their Internal Audit slightly department produces reports for the Audit Committee.



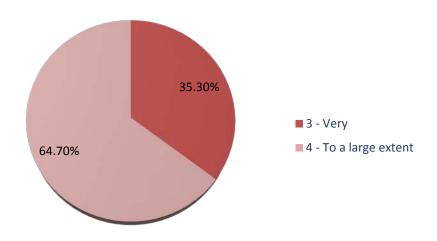
Question 5: To what extent does Internal Audit department have rapid and effective mechanisms in place for the escalation of issues requiring Senior Management or Audit Committee attention?

The pie chart below shows the results in question number 5. Based on this chart, 17 participants – 50% answered that their Internal Audit department have rapid and effective mechanisms in place for the escalation of issues requiring senior management or audit committee attention to a large extent. In the same question 13 participants – 38.23% answered that their Internal Audit department have a great number of rapid and effective mechanisms and only 4 participants – 11.77% responded to moderate.



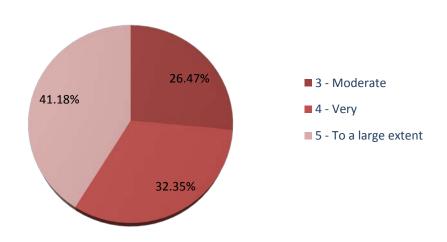
Question 6: To what extent does Internal Audit procedures produce many significant findings which are evaluate by management on a timely basis?

The results of question 6 show that 22 participants – 64.70% answered that their Internal Audit department produce procedures produce many significant findings which are evaluate by management on a timely basis to a large extent, while 12 participants – 35.30% responded to the same question with very.



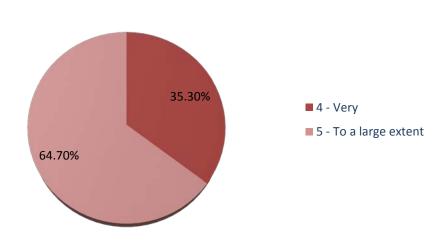
Question 7: To what extent does Internal Audit meet regularly with the external auditors to discuss risk assessments, scope of procedures, or opportunities to achieve greater efficiencies and effectiveness across the company's audit services?

The pie chart below shows the results in question number 7. Based on this chart, 14 participants – 41.18% answered that their Internal Audit department meets with the external auditors to discuss risk assessments, scope of procedures, or opportunities to achieve greater efficiencies and effectiveness across the company's audit services to a large extent. In the same question 11 participants – 32.35% answered their Internal Audit department meets very often with the external auditors to discuss risk assessments and only 9 participants – 26.47% responded to moderate.



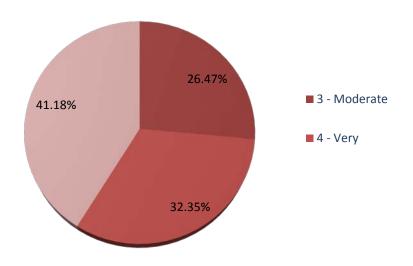
Question 8: To what extent does Internal Audit effectiveness evaluated?

The results of question 8 show that 22 participants – 64.70% answered that to their company, Internal Audit effectiveness evaluated at least once a year to a large extent, while 12 participants – 35.30% responded to the same question with very.



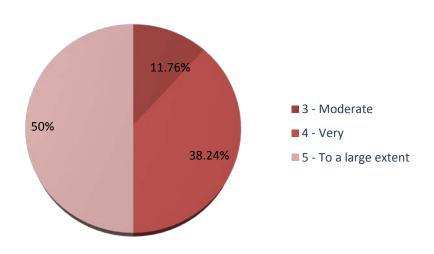
Question 9: To what extent does the Audit Committee review the quality and results of Internal Audit reporting and activities?

The pie chart below shows the results in question number 9. Based on this chart, 14 participants – 41.18% answered that their audit committee review the quality and results of Internal Audit reporting and activities to a large extent. In the same question 11 participants – 32.35% answered that their audit committee review very often the quality and results of Internal Audit reporting and activities and only 9 participants – 26.47% responded to moderate



Question 10: To what extent does Internal Audit reflect on and adapt its methodology to ensure that it remains fresh and relevant?

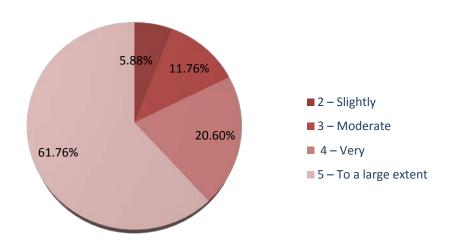
The results of question 10 show that 17 participants -50.00% answered that Internal Audit reflect on and adapt its methodology to ensure that it remains fresh and relevant to a large extent while 13 participants -38.24% answered to the same question with very and only 4 participants -11.76% responded to moderate.



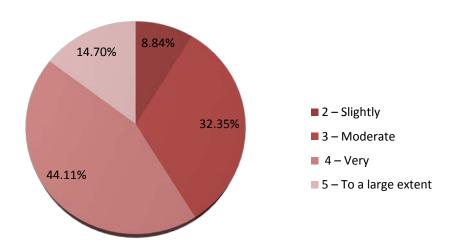
5.5 Questions about Internal Audit in the Telecommunication sector

In the last part of the questioner, there are 10 questions about the top 10 Internal Audit considerations for telecommunication Companies. These considerations explore some of the leading risks telecom companies face today.

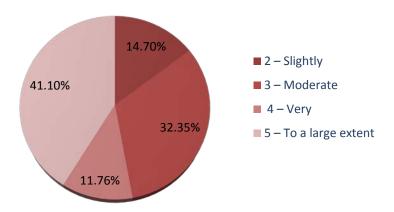
Question 11: On which level does your Internal Audit perform a top-down risk assessment around the company's cybersecurity framework using industry standards as a guide?



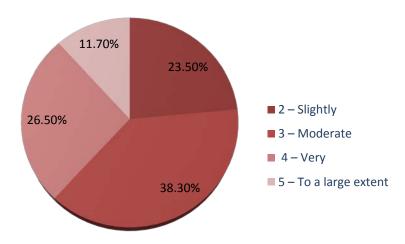
Question 12: On which level does your Internal Audit department perform a review of planned capital projects to access management's consideration of strategic alignment, project planning and authorizations?



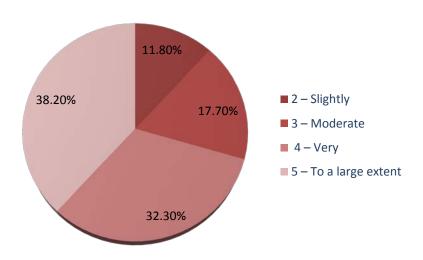
Questions 13: On which level does your Internal Audit department assist in the formation of data governance policies and processes?



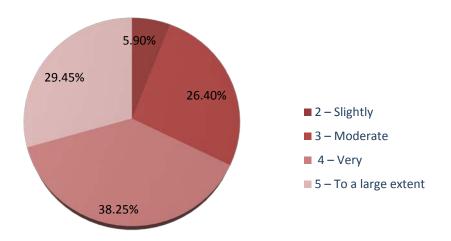
Question 14: On which level does your Internal Audit department evaluate if customer service policies and procedures (e.g. roles, responsibilities, and key performance indicators) are current and constantly applied across the organizations for each customer service channel?



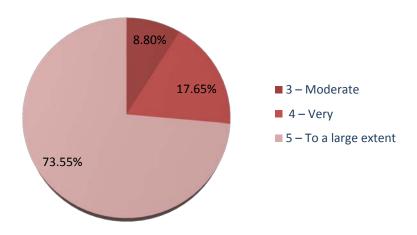
Questions 15: On which level does your Internal Audit department assess the company's ability to meet service delivery dates?



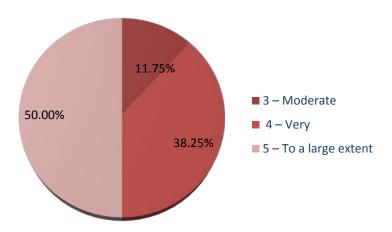
Questions 16: On which level does your Internal Audit department assess network operations risks by evaluating the impact of increased demand on network management practices?



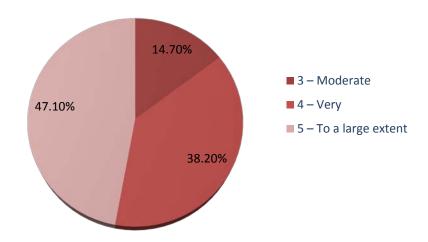
Question 17: On which level does your Internal Audit department develop data analytics in order to verify and report risk at business level?



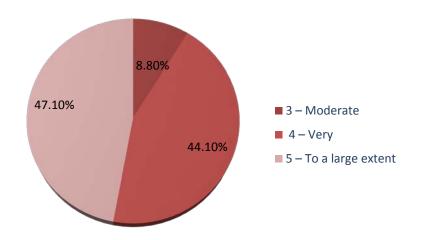
Question 18: On which level does your Internal Audit department evaluate the methodology the organization uses to identify third parties?



Question 19: On which level does your Internal Audit assess capabilities in current accounting and information systems to meet the requirements of the new standards?



Questions 20: On which level does the Internal Audit assess the company's overall compliance framework in order to have more efficiently and effectively compliance across the organization?



5.5 Interview

This section delivers the findings of an interview with a Senior Executive from a Greek telecom company. The interview has allowed us to collect information about the current situation on the industry.

Question 1: In order to achieve greater efficiencies and effectiveness across the company's audit services, how often and in which cases does Internal Audit meet with external auditors?

Answer: Internal Audit has constant collaboration with external auditors, mainly in the context of the statutory audit (i.e. audit of company's Financial Statements). Therefore, the Chief Audit Executive (CAE) and the External Auditors have formal periodical meetings with the Audit Committee at least on a quarterly basis to discuss about the Financial Statements. In addition, the CAE may meet the external auditors on an ad-hoc basis in case that something urgent comes up in the context of the statutory audit. Finally, in listed companies, there are also SOX or SOX-like audits, which are performed either by the Internal Audit Function and reviewed by

the External Auditor or in collaboration between Internal Audit and External Auditor (i.e. they split the controls to be tested).

P.S.: There are also cases that the Internal Audit function collaborates with external audit firms in the context of assurance or consulting audit projects. In this case, the external audit firms are not the same as the statutory External Auditor.

Question 2: Many internal audit functions have increased their profile within their organization by evolving their capabilities to deliver greater strategic value (with the definition of value being defined by key stakeholders, including the board, audit committee, executive line management, and other risk focused functions within the organization). **What new capabilities are leading internal audit functions developing today?**

Answer: Apart from the ordinary assurance audits, many Internal Audit functions have developed consulting services, meaning audit projects that have not the form of "comply/not-comply" audit programs and questionnaires, but rather the form of risk assessment diagnostics. This means that Internal Audit in collaboration with the internal customer (i.e. one or more specific organizational units) try to analyze a business area or a cross-functional business process in order first to identify related risks and secondly to recommend appropriate management actions. The outcome of these consulting audit projects are audit reports that do not include corrective actions agreed with management but recommendations that management has the choice to adopt (fully or partially) or not.

Other capabilities of a modern Internal Audit function are:

- 1. Data Analytics services (through which Internal Audit can implement a continuous monitoring framework for specific controls by analyzing mass data instead of processing only a sample of items in order to identify possible deficiencies or fraud patterns)
- 2. Participation in big projects of the Company in order to proactively ensure (in cooperation with the Management) that the significant risks have been identified and appropriate controls have been put in place.

Question 3: The telecom industry is transforming before our very eyes. In this industry more than any other, embracing a strategic, forward-looking business model is critical to survival and success. What do you see emerging in the industry that Internal Audit Department must be aligned with?

Answer: Significant areas emerging in telecoms are Data Privacy (see relevant GDPR regulation), Cyber Security, Customer Experience, relation with the OTT (Over-the-Top) players (Facebook, Google, etc) and Sustainable Development (including environmental issues).

Chapter 6: Conclusions

6.1 Introduction

This is the final chapter of the research which presents the conclusions of the empirical part in combination with the part A, the theoretical background.

6.2 Conclusions of the research

Everyone would agree that Internal Audit is an essential department for every business in this century, and will be an issue of utmost importance in the following years. Companies are trying to be up to date and to anticipate the new challenges but without losing their traditional identity. Nowadays, Greek telecommunication companies can feel the rapid evolution in technology and they seek to update their services and adapt to the new market trends.

The survey of this thesis is about examining the relationship between Internal Audit and Company Performance for Telecommunication Companies in Greece according to the upcoming considerations of the telecom industry worldwide. Summarizing the results of the research we could draw the following conclusions. The questioner was field by employees of Internal Audit department from 3 out of 4 telecom companies in Greece. The conclusions are based on the 34 filled questionnaires. The sample is considered sufficiently

In the first part of the questioner, participants answer 2 questions by telling their opinion about 2 crucial issues. The results of opinion questions, give a clear view of what employees of Internal Audit departments believe about the relationship of Internal Audit and Company Performance. All of them answered positive in both questions by mentioning some actions that Internal Auditors should do. In the question of Internal Audit being able to increase Company's performance they notice that it is able to increase Company's performance by consulting all the departments of the company to achieve their goals (26.47%), by assessing policies for fraud prevention (11.76%), by making actual reports to make any necessary adjustments (26.47%), by providing change management through various practices and standards (29.42%), by helping managers to expect and manage potential risks (5.88%). Furthermore, in question about the effectiveness of the organization by consulting from Internal Audit they notice that it is able if the IA function operates in proper way (55.88%), if the IA functions has sufficient resources (29.42%), if the IA function has team members with sufficient technical knowledge (5 participants – 14.70%).

In the second part, participants answer 8 questions by telling their opinion about the effectiveness of Internal Audit in company performance. The majority of participants answer that they have to a large extent, unrestricted access to all departments and employees. Furthermore, 50% answered that their Internal Audit department produces reports for the Audit Committee to a large extent, while 12 participants – 35.30% answered that Internal Audit department produce reports for the Audit Committee very often. Also, 50% answered that their Internal Audit department have rapid and effective mechanisms in place for the escalation of issues requiring senior management or audit committee attention to a large extent. In the same question 13 participants – 38.23% answered that their Internal Audit department have a great number of rapid and effective mechanisms. Moreover, 64.70% answered that their Internal Audit department produce procedures produce many significant findings which are evaluate by management on a timely basis to a large extent, while 12 participants – 35.30% responded to the same question with very. Last but not least, – 64.70% answered that to their company, Internal Audit effectiveness evaluated at least once a year to a large extent, while 12 participants – 35.30% responded to the same question with very.

In the last part of the questioner, participants answer 10 questions by telling their opinion about the top 10 Internal Audit considerations for telecommunication Companies. These considerations explore some of the leading risks telecom companies face today. From 34 participants, 21 of them (61.76%) answered that their Internal Audit department perform a top-down risk assessment around the company's cybersecurity framework using industry standards as a guide while only 2 participants (5.88%) responded to slightly. Also, 25

participants (73.55%) answered that their Internal Audit department develop data analytics in order to verify and report risk at business level. Furthermore, 17 participants (50%) answered that Internal Audit department evaluate the methodology the organization uses to identify third parties and 16 participants (47.10%) answered Internal Audit assess capabilities in current accounting and information systems to meet the requirements of the new standards. Last but not list, 16 participants (47.10%) answered Internal Audit assess the company's overall compliance framework in order to have more efficiently and effectively compliance across the organization.

Fundamentally, we could refer to the conclusions that Senior Manager from a telecom company in Greece mention that Apart from the ordinary assurance audits, many Internal Audit functions have developed consulting services, meaning audit projects that have not the form of "comply/not-comply" audit programs and questionnaires, but rather the form of risk assessment diagnostics. This means that Internal Audit in collaboration with the internal customer (i.e. one or more specific organizational units) try to analyze a business area or a cross-functional business process in order first to identify related risks and secondly to recommend appropriate management actions. The outcome of these consulting audit projects are audit reports that do not include corrective actions agreed with management but recommendations that management has the choice to adopt (fully or partially) or not. Lastly, about what he see emerging in the industry that Internal Audit Department must be aligned with he mentioned that Significant areas emerging in telecoms are Data Privacy (see relevant GDPR regulation), Cyber Security, Customer Experience, relation with the OTT (Over-the-Top) players (Facebook, Google, etc) and Sustainable Development (including environmental issues).

According to the literature review Internal Audit is a necessary department that enhances Company Performance. It should composed by qualified individuals and professional according to the international Standards. The results of the survey support the hypothesis and find that Greek telecom companies are aligned with the upcoming considerations of the industry in that extend that they will increase their Company performance. Furthermore, the results show that companies with strong Internal Audit departments tent to have greater market shares and be more successful. To conclude, the survey results are in line with the original hypothesis and fulfill the expectations that were formulated before the questionnaire conduction.

The results of this thesis can benefit Greek organizations by helping them invest more in Internal Audit. Furthermore, this thesis is useful for other interesting parties, like students who need to acquire useful knowledge on Internal Audit. Regarding the small number of participants, a future study could investigate a greater number of them, including people from companies around the country. This could help in generalizing the results.

A proposal for additional survey is the analysis of how the economic crisis and the new regulations affect the way that telecom companies in Greece see the Internal Audit.

References

Abdulrahman, A.M., Al-Twaijry, J. A. and Gwilliam, D. R. (2004). "An examination of the relationship between internal and external audit in the Saudi Arabian corporate sector", *Managerial Auditing Journal*, Vol.19, No. 7, pp. 929-944

Adams, M. B. (1994). "Agency Theory and the Internal Audit", *Managerial Auditing Journal*, Vol. 9, No 8, pp.8-12

Ahmad, A. A. (2008). "Information technology and its implications for internal auditing", *Managerial Auditing Journal*, Vol. 23, No. 5, pp. 438-466

Ahmad, Z. and Taylor, D. (2009). "Commitment to independence by internal auditors: the effects of role ambiguity and role conflict", *Managerial Auditing Journal*, Vol. 24, No. 9, pp. 899-925

Al Matarneh, G.F. (2011). Factors determining the internal audit quality in banks: Empirical Evidence from Jordan. *International Research Journal of Finance and Economics*, 73, 99-108

Alan, R., Gerald, H. L. and Gavin, T. A. (1994). "The external auditor's consideration of the internal audit function", *Managerial Auditing Journal*, Vol. 9, No. 7, pp. 29-36

Ali, N. A. (1994). "Time budget pressure and filtering of time practices in internal auditing: A survey", *Managerial Auditing Journal*, Vol. 9, No.6, pp. 17-25

Allegrini, M. and D' Onza, G., Paape, L., Melville, R. and Sarens, G. (2006). "The European literature review on internal auditing", *Managerial Auditing Journal*, Vol. 21, No. 8, pp.845-853

Al-Matari, E.M., Al-Swidi, A.K., Faudziah, H.B., Al-Matari, Y.A. (2012). The Impact of board characteristics on Firm Performance: Evidence from Nonfinancial Listed Companies in Kuwaiti Stock Exchange. *International Journal of Accounting and Financial Reporting*, 2(2), 310-332.

Al-Shammari, Aid. (2010). *The role of the Audit Committees in Corporate Governance in Saudi Arabia*. Workshop paper. College of Business Administration - King Saud University. 81

Anderson, N. J., B. Rippey & C. E. Gibson (1993). A comparison of sedimentary and diatom-inferred phosphorus profiles: implications for defining pre-disturbance nutrient conditions. *Hydrobiologia* 253:357-366.

Bierstaker, J. L. and Thibodeau, J. C. (2006). "The effect of format and experience on internal control evaluation", *Managerial Auditing Journal*, Vol. 21, No. 9, pp.877-891

Blue ribbon committee on improving the effectiveness of corporate audit committees (Blue Ribbon Committee). (1999). *Report and Recommendations*, Blue Ribbon Committee, New York, NY. charge? Sloan Management Review, 36(1), 27-55.

Burnaby, P. and Hass, S. (2009). "A summary of the global Common Body of Knowledge 2006 (CBOK) study in internal auditing", *Managerial Auditing Journal*, Vol. 24, No. 9, pp. 813-834

Celal, K. (1989). "Internal auditing in the Turkish banking sector", Anadolu University, *Emerald Backfiles 2007*, Izmir, Turkey

Chan, M. M. K. (1995). "Achieving audit uniformity out of diversity: a case study of an international bank", *Managerial Auditing Journal*, Vol. 10, No. 4, pp. 44-48

Chan, M. M. K. (1995). "The moderating effects of cognitive style and recency effects on the auditors' belief revision process", *Managerial Auditing Journal*, Vol. 10, No. 9, pp. 22-28

Clikeman, P.M. (2003). Where auditors fear to tread: internal auditors should be proactive in educating companies on the perils of earnings management and in searching for signs of its use. *Internal Auditor*, 75-80.

Colbert, J. L. and Alderman, C. W. (1995). "A risk-driven approach to the internal audit", *Managerial Auditing Journal*, Vol. 10, No. 2, pp. 38-44

Collier, P., & A. Gregory (1996). Audit committee effectiveness and the audit fee, *The European Accounting Review*, 5, 177-198.

D'Aveni, R.A. (1990). Top managerial prestige and organizational bankruptcy, *Organization Science*, 1(2), 121-42.

Davidson, R., Goodwin-Stewart, J., Kent, P. (2005,). Internal Governance Structures and Earnings Management. *Accounting and Finance*, 45, 241-267. 82

Dessalegn, G. M. and Aderajew, W. Y. (2007). "Internal audit effectiveness: an Ethiopian public sector case study", *Managerial Auditing Journal*, Vol. 22, No. 5, pp. 470-484

Durbin, N. R. (2006-2007). "Building an Antifraud Framework", Bank Accounting & Finance

Eighme, J., Cashell, J. (2002). Internal auditors' roles in overcoming the financial reporting crisis. International Auditing, 17, 3-10.

Faudziah, H. F., Hasnah, H. and Muhamad, J. (2005). "Internal auditing practices and internal control system", *Managerial Auditing Journal*, Vol. 20, No. 8, pp. 844-866

Gareth, M. (1980). "Internal audit role conflict: A pluralist view", *Managerial Finance*, 5, 2, pp.160-170

Goodwin, J., & P. Kent, 2003, Factors affecting the voluntary use of internal audit, Paper presented at the Annual Meeting of the American Accounting Association, Hawaii.

Goodwin, J., Yeo, T.Y. (2001). Two Factors Affecting Internal Audit Independence and Objectivity: Evidence from Singapore. *International Journal of Auditing* 5(2), 107-125.

Hala, N. (2003), Sherron Watkins – If capitalists were angels, Internal Auditor 60(11), 38–43.

Haron, H., Chambers, A., Ramsi, R. and Ismail, I. (2004). "The reliance of external auditors on internal auditors", *Managerial Auditing Journal*, Vol. 19, No. 9, pp. 1148-1159

Hillman, A., Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28(3), 383-396.

Hutchinson, M.R., & Zain, M.M. (2009). Internal audit quality, audit committee independence, growth opportunities and firm performance. *Corporate Ownership and Control*, 7(2), 50-63. 83

Institute of Internal Auditors (IIA). (2003). *Comment letter to SEC on standards relating to listed company audit committees*.

Joe, C., Gerrit, S. and Philomena, L. (2009). "A critical analysis of the independence of the internal audit function: evidence from Australia", *Accounting, Auditing & Accountability Journal*, Vol. 22, No. 2, pp. 200-220

Koutoupis, A. G. and Tsamis, A. (2008). "Risk based internal auditing within Greek banks: a case study approach", *Springer Science + Business Media*, LLC

Ljubisavljević, S., Jovanovi, D. (2011). Empirical research on the internal audit position of companies in Serbia. *Economic Annals*, LVI(191), 123-141.

Loukis, E. and Spinellis, D. (2001). "Information systems security in the Greek public sector", *Information Management and Computer Security*, 9/1, pp. 21-31

Palfi, C. and Murescan, M. (2009). "Survey on weaknesses of banks internal control systems", Journal of International Finance and Economics, Vol. 9, No. 1

Paschas, G. and Triantafyllidis, K. (2006). "Internal Audit - Investing in the Future", Workshop of the Hellenic Institute of Internal Auditors, Athens.

Read, W. J. and Rama, D. V. (2003). "Whistle-blowing to internal auditors", *Managerial Auditing Journal*, 18/5, pp. 354-362

Rocco, R. V. (1994). "The Audit Committee: an international perspective", *Managerial Auditing Journal*, Vol. 9, No. 8, pp. 18-42

Rocco, R. V. (1996). "Auditor independence: an international perspective", *Managerial Auditing Journal*, Vol. 11, No. 9, pp. 4-48

Appendix

Survey: Effectiveness of Internal Audit in Company Performance-the case of Greek Telecommunication sector

The survey below is about examining the effectiveness of Internal Audit in Company performance. It is a part of the research for my thesis entitled "Effectiveness of Internal Audit in Company performance: The case of Greek Telecommunication sector" that is needed to complete my Master in Business Administration-Internal Audit.

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Before proceeding, I ensure you that your company's data will not be published, and your answers will be used for statistical purposes only. The completion of this questionnaire will not take more than 20 minutes. Most of the questions will be answered in a scale 1-5. You will be asked to write down your opinion in only 2 questions.

General Information

Age

Position in the Internal Audit department

Express your opinion

- 1. Do you believe that Internal Audit is able to increase Company's performance? How?
- **2.** Do you consider that consulting from Internal Audit can improve organizational effectiveness? How?

Questions about Internal Audit Effectiveness

- **3.** To what extent does the Internal Audit department have unrestricted access to all departments and employees?
- **4.** To what extent does Internal Audit department produce reports for the Audit Committee including the identification of themes and trends, and their consequences for the organization as a whole?
- **5.** To what extent does Internal Audit department have rapid and effective mechanisms in place for the escalation of issues requiring Senior Management or Audit Committee attention?
- **6.** To what extent does Internal Audit procedures produce many significant findings which are evaluate by management on a timely basis?
- 7. To what extent does Internal Audit meet regularly with the external auditors to discuss risk assessments, scope of procedures, or opportunities to achieve greater efficiencies and effectiveness across the company's audit services?

- 8. To what extent does Internal Audit effectiveness evaluated?
- **9.** To what extent does the Audit Committee review the quality and results of Internal Audit reporting and activities?
- **10.** To what extent does Internal Audit reflect on and adapt its methodology to ensure that it remains fresh and relevant?

Questions about Internal Audit in the Telecommunication sector

- **11.** On which level does your Internal Audit perform a top-down risk assessment around the company's cybersecurity framework using industry standards as a guide?
- **12.** On which level does your Internal Audit department perform a review of planned capital projects to access management's consideration of strategic alignment, project planning and authorizations?
- **13.** On which level does your Internal Audit department assist in the formation of data governance policies and processes?
- **14.** On which level does your Internal Audit department evaluate if customer service policies and procedures (e.g. roles, responsibilities, and key performance indicators) are current and constantly applied across the organizations for each customer service channel?
- **15.** On which level does your Internal Audit department assess the company's ability to meet service delivery dates?
- **16.** On which level does your Internal Audit department assess network operations risks by evaluating the impact of increased demand on network management practices?
- **17.** On which level does your Internal Audit department develop data analytics in order to verify and report risk at business level?
- **18.** On which level does your Internal Audit department evaluate the methodology the organization uses to identify third parties?
- **19.** On which level does your Internal Audit assess capabilities in current accounting and information systems to meet the requirements of the new standards?
- **20.** On which level does the Internal Audit assess the company's overall compliance framework in order to have more efficiently and effectively compliance across the organization?

"I hereby declare that, in accordance with article 8 of Law 1599/1986 and article 2.4.6 par. 3 of Law1256/1982, this thesis/dissertation is solely a product of personal work and does not infringe any intellectual property rights of third parties and is not the product of a partial or total plagiarism, and the sources used are strictly limited to the bibliographic references".