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**«Παράγοντες που επηρεάζουν την  
αποτελεσματικότητα του εσωτερικού ελέγχου»**

ΣΙΝΟΓΛΟΥ ΜΑΡΙΑ

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## **Applied Risk Management - Internal Audit**

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**“Factors Affecting Internal Audit Effectiveness”**

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To my friend Morris who chose this master

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## Abstract

The purpose of this thesis is to examine basic factors affecting internal audit effectiveness in organizations that operate in Greece. The factors that contribute to the effectiveness of internal audit that are examined here is, namely, internal auditor's personal characteristics, management's support and audit environment that could restrict or promote internal audit effectiveness. This survey aims to assess whether those factors are crucial to the internal audit function in order to be effective as well as to provide a basis for further research.

In terms of personal characteristics that affect internal audit (IA) effectiveness that examined are the age, the educational level, the work experience and skills and the gender of the internal auditor. Regarding company's approach as to IA, tone at the top, communication between management and IA department and independency of IA are examined as well. As to the main audit environment, elements that are involved in some way to the effective operation of IA are investigated too. In particular, IA Standards' establishment along with audit approach of the management and business area within which companies operate, are the main studying points that will be examined as to their connection with IA effectiveness. Moreover, equity structure and its effect on IA department as well as resources' adequacy for the same department are mentioned in this research, with aim to cover the literature gap in those fields.

The main data collection methodology that uses this survey is through mailed questionnaires applied in companies that are operating in Greece in various business sectors and from different size and equity levels.

The research shows that the main significant factors that affect IA effectiveness in terms of the auditor's characteristics are the educational level, previous work experience in audit-related business areas and communicational skills along with writing skills. In relation to organizations' approach about audit, the tone-at-the-top is considered the most influencing factor of IA effectiveness, while communicational support has central role in most of the companies. Attention is also given to independence as a critical factor for IA effectiveness. The third group of findings refers to audit environment and highlights the significance of International IA Standards, which are fully utilized by the majority of the companies, as well as the principle-based approach around audit establishment, which is clearly preferred by internal auditors. Finally, equity structure and allocation of resources among company's departments are considered very influencing factors of IA by most of the respondents of the study.

## Introduction

This research aims to provide a better understanding of the factors that influence the effectiveness of IA in different companies in Greece. The investigation is about understanding the importance of those factors for the successful operation of IA and therefore the achievement of organization objectives over the long term. The three general factors that are mentioned before, considered as significant because of their great influence in auditor's ability to conduct effective IA and meanwhile in organization's ability to achieve its specific goals. Auditor's age, gender, skills, education and work experience are crucial for his or her perspective around IA adequacy, completeness and efficiency. Management's approach about tone-at-the-top, communication and independence are features that affect its overall ability to conduct IA. Also, importance should be given to every organization's internal audit environment, due to its central role in shaping the conditions in which company will function and auditors will fulfill their duty. Internal audit Standards, equity structure and allocation of resources are of apparent significance for the ongoing effectiveness of audit.

It is generally accepted that effectiveness is measured from the success in reaching a target or a goal. A company's ability to fulfill its objectives is the main way to evaluate whether it is an effective company or not. Likewise, IA is effective when it reaches its targets. Those targets are strongly tight with internal controls that the company has in place as well as with the risk management that applies. In the last few decades IA considered only as a mechanism to monitor internal controls and achieve financial compliance within an organization. After the outburst of the financial scandals in the start of 21th century, this perspective changed dramatically, revealing the necessity for better internal governance and more effective disclosure of fraud instances. Increased pressure for more transparency and ethical behavior among businesses lead the entities to upgrade the role of IA in a manner that will allow the development of assurance and consulting services.

Previous studies have examined IA effectiveness in different manner, using various approaches. Arena and Azone (2009) in their study of 153 companies in Italy evaluated IA effectiveness as a contribution of three main elements, characteristics of the audit team, audit processes and activities and organizational links. Strong relation between organization features and IA effectiveness is also mentioned by Mihret and Yismaw (2007), pointing that support from top management and qualifications of the staff affect IA function. Management support provides internal auditors with the appropriate convenience to conduct their job and has a positive impact on the effectiveness of the audit (Alzeban and Gwilliam, 2014).

This research attempts to cover some of the gaps that exist in literature by examining the factors that have mentioned before in relation to internal audit. What motivated the selection of this theme is the lack of a comprehensive survey that highlights the main influencing IA factors as well as the interrelation between them. Previous studies are the base for further analysis and are proved valuable for this research. In addition, some elements that have not perceived much attention from other authors, such as equity structure of companies and allocation of resources regarding IA funding, are mentioned in this study, in an effort to add somehow in the general literature gap and to see whether those factors are strongly or slightly affecting internal audit effectiveness.

## *Part A: Literature Review*

## Introduction of Part A

Nowadays organizations tend to be more complex than ever. Their needs become more and more demanding, aiming to better performance in terms of quality as well as more transparent operation with not only finance goals but also strategic, operational and compliance targets. Internal audit role in today's globalized organizations is at the center of attention because of its apparent importance for the optimal operation of the entire firm. Particularly, internal audit focuses on adding value at the company and is a unique tool for the improvement of every unit's operation along with the achievement of its objectives (IIA). Each company can adopt, without being obligatory, an internal audit framework and according to its necessities, form it to adhere to a standardized, international benchmark. International Professional Practices Framework (IPPF) offers the most known framework for effective internal audit operation which includes audit Core Principles, Standards, Code of Ethics and the Definition of IA that can be used despite of the size, the equity structure or the assets a company has. Quality of internal audit, however, can be affected by several factors, even if organizations try to fully adopt IPPF guidelines. In this research it is tried to focus on some factors that may affect audit effectiveness and the implementation of IPPF guidelines in every organization.

Audit effectiveness refers to achieving audit's objective by gathering of sufficient and appropriate audit evidence in order to give a reasonable opinion regarding the financial statements' compliance with generally accepted accounting principles (Shoosmuangpak and Ussahawanitchakit, 2009). In other words, internal audit effectiveness is the degree to which organizations' established objectives are achieved, including qualitative factors (IIA, 2010). There is a difficulty in measuring qualitative factors that influence in some way internal audit implementation due to its nature. It is not easy to put a metric in a decision made either in a non-numerical outcome that may occur, especially when there are people involve in the process. So, internal audit quality is examined as one of the variables associated with internal audit effectiveness in a way that measures internal audit function's capability to provide useful findings and recommendations (Mihret and Yismaw, 2007). Through those recommendations management has a holistic view of the business and misconducts come to surface, allowing their corrective treatment. According to G. Drogalas et al. (2015), the main factors that affect IA effectiveness considered being IA quality, competency of internal auditors, independence of internal audit and management support on internal audit department. In consistency with this study, Arena and Azzone (2009) claimed that internal audit effectiveness is affected, except from the characteristics of the internal audit team, from the audit processes and activities and from existing organizational links among units. Moreover, management support, with resources and commitment to implement the internal audit recommendations, is essential in attaining audit effectiveness (Mihret and Yismaw, 2007) and pays an essential role in implementing internal controls, in terms of determining control's needs, designing appropriate controls and checking correct and updated application (Pickett, 2011). Finally, audit environment should not be underestimated. Successful implementation of international guidelines is considered crucial for companies which strive

for better internal environment and greater competitive advantage. Internal audit approach can point management's operating style and sent a message about the value that gives to internal audit as a process. The factors that are mentioned can be considered essential for a company that wishes to have a strong, useful and value-adding audit department that will assist in achieving the desired optimal scale of operation.

## CHAPTER 1: Internal Audit in General

### 1.1 Definition of Internal Auditing

The Definition of Internal Auditing states the fundamental purpose, nature, and scope of internal auditing. Internal auditing 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 (IIA).

### 1.2 International Professional Practices Framework (IPPF)

The Institute of Internal Auditors is the main global guidance-setting organization that provides internal audit professionals worldwide with authoritative guidance to fulfill their mission. IPPF is the conceptual framework, issued by the IIA, which helps internal auditors enhance and protect organizational value through a risk-based and objective assurance, advice and insight (IIA, 2015). The Framework was introduced in 2015 and suggests mandatory guidance and recommended guidance. The mandatory elements of the IPPF are:

- Core Principles for the Professional Practice of Internal Auditing
- Definition of Internal Auditing
- Code of Ethics
- International Standards for the Professional Practice of Internal Auditing

Recommended guidance describes practices for effective implementation of Core Principles, Definition of Internal Auditing, Code of Ethics, and Standards and its elements according to IPPF are:

- Implementation Guidance
- Supplemental Guidance

#### 1.2.1 Core Principles for the Professional Practice of Internal Auditing

The Core Principles articulate internal audit effectiveness within the organization. In order to achieve its mission, internal audit should effectively apply all Core Principles according to

organization's characteristics and specific features (IIA, 2015). Incomplete or inadequate application may affect the optimal operation of internal audit function. Internal Audit:

- ❖ Demonstrates integrity
- ❖ Demonstrates competence and due professional care
- ❖ Is objective and free from undue influence
- ❖ Aligns with the strategies, objectives and risks of the organization
- ❖ Is appropriately positioned and adequately resourced
- ❖ Demonstrates quality and continuous improvement
- ❖ Communicates effectively
- ❖ Provides risk-based assurance
- ❖ Is insightful, proactive and future-focused
- ❖ Promotes organizational improvement

### 1.2.2 Code of Ethics

The Code of Ethics states the principles and expectations governing the behavior of individuals and organizations in the conduct of internal auditing. It is not a list of specific activities that auditors should apply, but includes requirements of conduct and behavioral expectations that auditors can follow as best practice (IIA, 2015). The Code of Ethics cultivates ethical culture within the organization and helps auditors build a broad relationship of trust with the organization to provide their professional services.

Code essential components:

- Principles that are relevant to the profession and practice of internal auditing
- Rules of Conduct that describe behavior norms expected of internal auditors. These rules are an aid to interpreting the Principles into practical applications and are intended to guide the ethical conduct of internal auditors

#### Principles

Internal auditors are expected to apply and uphold the following principles:

##### **A) Integrity**

The integrity of internal auditors establishes trust and thus provides the basis for reliance on their judgment.

##### **B) Objectivity**

Internal auditors exhibit the highest level of professional objectivity in gathering, evaluating, and communicating information about the activity or process being examined. Internal auditors make a balanced assessment of all the relevant circumstances and are not unduly influenced by their own interests or by others in forming judgments.

##### **C) Confidentiality**

Internal auditors respect the value and ownership of information they receive and do not disclose information without appropriate authority unless there is a legal or professional obligation to do so.

#### **D) Competency**

Internal auditors apply the knowledge, skills, and experience needed in the performance of internal audit services.

### Rules of Conduct

#### **1. Integrity**

Internal auditors:

- Shall perform their work with honesty, diligence, and responsibility.
  - Shall observe the law and make disclosures expected by the law and the profession.
  - Shall not knowingly be a party to any illegal activity, or engage in acts that are discreditable to the profession of internal auditing or to the organization.
  - Shall respect and contribute to the legitimate and ethical objectives of the organization.

#### **2. Objectivity**

Internal auditors:

- Shall not participate in any activity or relationship that may impair or be presumed to impair their unbiased assessment. This participation includes those activities or relationships that may be in conflict with the interests of the organization.
- Shall not accept anything that may impair or be presumed to impair their professional judgment.
- Shall disclose all material facts known to them that, if not disclosed, may distort the reporting of activities under review.

#### **3. Confidentiality**

Internal auditors:

- Shall be prudent in the use and protection of information acquired in the course of their duties.
- Shall not use information for any personal gain or in any manner that would be contrary to the law or detrimental to the legitimate and ethical objectives of the organization.

#### **4. Competency**

Internal auditors:

- Shall engage only in those services for which they have the necessary knowledge, skills, and experience.

- Shall perform internal audit services in accordance with the International Standards for the Professional Practice of Internal Auditing.
- Shall continually improve their proficiency and the effectiveness and quality of their services.

### 1.2.3 International Standards for the Professional Practice of Internal Auditing (Standards)

Standards are principle-focused and provide a framework for performing and promoting internal auditing. The Standards are mandatory requirements consisting of statements of basic requirements for the professional practice of internal auditing and for evaluating the effectiveness of its performance (IIA, 2015). The requirements are internationally applicable at organizational and individual levels, according to each organization's features. In particular, IA is conducted in different legal and cultural environments and by individuals within or outside the organization. Those differences may affect the effective application of IA in each environment, thus a broad conformance with IIA's Standards is essential in meeting the responsibilities of internal auditors and the internal audit activity. The Standards provide a framework for performing and promoting a broad range of value-added internal auditing services and meanwhile establish the basis for the evaluation of internal audit performance (IIA, 2015).

Standards' categories:

- Attribute Standards, which address the attributes of organizations and individuals performing internal auditing.
- Performance Standards, which describe the nature of internal auditing and provide quality criteria against which the performance of these services can be measured.
- Implementation Standards, which expand upon the Attribute and Performance Standards by providing the requirements applicable to assurance (A) or consulting (C) services. Assurance services involve the internal auditor's objective assessment of evidence to provide opinions or conclusions regarding an entity, operation, function, process, system, or other subject matters. Consulting services are advisory in nature and are generally performed at the specific request of an engagement client.

Particularly, examples of Attribute Standards of the IPPF are:

#### 1000 – Purpose, Authority, and Responsibility

The purpose, authority, and responsibility of the internal audit activity must be formally defined in an internal audit charter, consistent with the Mission of Internal Audit and the mandatory elements of the IPPF. The chief audit executive must periodically review the internal audit charter and present it to senior management and the board for approval.

### 1100 – Independence and Objectivity

The internal audit activity must be independent, and internal auditors must be objective in performing their work. By independence it is meant the freedom from conditions that threaten the ability of the internal audit activity to carry out internal audit responsibilities in an unbiased manner. Objectivity is an unbiased mental attitude that allows internal auditors to perform engagements in such a manner that they believe in their work product and that no quality compromises are made.

### 1200 – Proficiency and Due Professional Care

Engagements must be performed with proficiency and due professional care. Proficiency refers to the knowledge, skills, and other competencies required of internal auditors to effectively carry out their professional responsibilities, while due professional care refers to care and skill expected of a reasonably prudent and competent internal auditor.

### 1300 – Quality Assurance and Improvement Program

The chief audit executive must develop and maintain a quality assurance and improvement program that covers all aspects of the internal audit activity.

A quality assurance and improvement program is designed to enable an evaluation of the internal audit activity's conformance with the Standards and an evaluation of whether internal auditors apply the Code of Ethics.

### 1322 – Disclosure of Nonconformance

When nonconformance with the Code of Ethics or the Standards impacts the overall scope or operation of the internal audit activity, the chief audit executive must disclose the nonconformance and the impact to senior management and the board.

Examples of Performance Standards of the IPPF are:

### 2000 – Managing the Internal Audit Activity

The chief audit executive must effectively manage the internal audit activity to ensure it adds value to the organization. The internal audit activity adds value when it considers strategies, objectives and risks, strives to offer ways to enhance governance, risk management, and control processes and objectively provides relevant assurance.

### 2120 – Risk Management

The internal audit activity must evaluate the effectiveness and contribute to the improvement of risk management processes. Internal Auditor should assess whether organizational objectives support and align with the organization's mission, significant risks are identified and assessed, appropriate risk responses are selected that align risks with the organization's risk appetite and relevant risk information is captured and communicated in a timely manner across the organization.

### 2130 – Control

The internal audit activity must assist the organization in maintaining effective controls by evaluating their effectiveness and efficiency and by promoting continuous improvement.

### 2200 – Engagement Planning

Internal auditors must develop and document a plan for each engagement, including the engagement’s objectives, scope, timing, and resource allocations. The plan must consider the organization’s strategies, objectives, and risks relevant to the engagement.

### 2400 – Communicating Results

Internal auditors must communicate the results of engagements. Communications must include the engagement’s objectives, scope, and results.

### 2500 – Monitoring Progress

The chief audit executive must establish and maintain a system to monitor the disposition of results communicated to management. A follow-up process considered essential in monitoring and ensures that management actions have been effectively implemented or that senior management has accepted the risk of not taking action.

## 1.3 The COSO Framework

The Committee of Sponsoring Organizations of the Treadway Commission is a joint initiative of five private sector organizations and is dedicated to providing thought leadership through the development of frameworks and guidance on enterprise risk management, internal control and fraud deterrence (COSO). Those organizations are:

- American Accounting Association (AAA)
- American Institute of Certified Public Accountants (AICPA)
- Financial Executives International (FEI)
- Institute of Management Accountants (IMA)
- The Institute of Internal Auditors (IIA)

The first release of the COSO Framework happened in 1992 and was oriented more in the design and the effectiveness of internal controls. Internal Control is a process, affected by an entity’s board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations (COSO)

This Framework was illustrated by COSO “cube” and its five components were:

- ❖ Monitoring
- ❖ Information and Communication
- ❖ Control Environment
- ❖ Risk Assessment
- ❖ Control Activities

The design and the operation of those components as a whole define the effectiveness of internal controls within an organization. In more details, monitoring concerns the assessment of the quality of the system's performance over time and includes ongoing monitoring activities or separate evaluations of operations. It occurs through regular management and supervisory activities and other actions personnel take in performing their duties (COSO, 2012). Information and communication component contains identification, capture and communication of internal and external information among the entity in timely and understandable way that will allow all individuals to perform their duties. Information should flow down, across and up the entity, transferring the message from management to all individuals, inside and outside the entity (COSO, 2012). Regarding control environment, it provides discipline and structure as it is the foundation for all other components of internal control, setting the tone of the organization. This component includes integrity, ethical values and competence of entity's upper management, board of directors and other personnel (COSO, 2012).

Additionally, identification and analysis of relevant risks are part of risk assessment process, used to achieve organizations objectives. This process is forming a basis for determining how the risks should be managed and keep risk controls updated in order to faces possible new difficulties (COSO, 2012). Control Activities are the policies and procedures that assist management ensure directives are carried out. Such activities occur through all entity's level and assess the appropriateness of controls that mitigate entity's risks (COSO, 2012).

However, companies have changed dramatically since then. More complex international entities with more technology driven characteristics and increased requirements were established worldwide, seeking their special place in the global market. In addition, stakeholders became more demanding in terms of transparency, accountability and integrity from organizations, establishing a new control environment. COSO, following those changes, has developed its Framework in 2013. The new Integrated Framework kept the fundamentals from the first release, adapting in the new reality.

The new Integrated Framework assists management, boards of directors, external stakeholders, and others interacting with the entity in their respective duties regarding internal control, without being overly prescriptive. It does so by providing both understanding of what constitutes a system of internal control and insight into when internal control is being applied effectively (COSO, 2013).

The main components were changed considered their old structure, as shown below (Figure 1.3.1), as well as the categories of objectives.

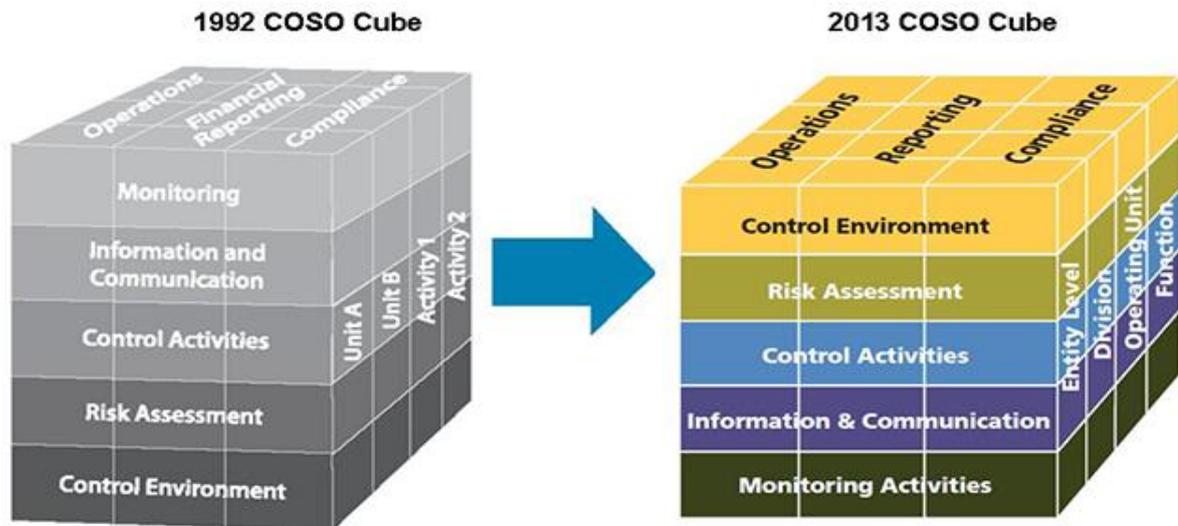


Figure 1.3.1: COSO Cube 1992 and 2013

Particularly, financial reporting objective is expanded considering other external reporting beyond financial reporting, such as internal reporting, both financial and non-financial. At the same time, the new Framework is following a principle-based approach, which explicitly states seventeen broad principles that represent the fundamental concepts associated with the components of internal control. Each component is underlined by its relevant principles, assisting management in evaluating the adequacy of controls. The updated Framework, also, considers nowadays changes in operating management, technology and law evolution, business models and organization structures, assimilating all market developments into its components.

With regard to the new principle-based approach, each component is analyzed into principles as follows (COSO, 2013):

Control Environment Principles:

1. The organization demonstrates a commitment to integrity and ethical values
2. The board of directors demonstrates independence from management and exercises oversight of the development and performance of internal control
3. Management establishes, with board oversight, structures, reporting lines and appropriate authorities and responsibilities in the pursuit of objectives
4. The organization demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives
5. The organization holds individuals accountable for their internal control responsibilities in the pursuit of objectives

Risk Assessment Principles:

6. The organization specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives

7. The organization identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed
8. The organization considers the potential for fraud in assessing risks to the achievement of objectives
9. The organization identifies and assesses changes that could significantly affect the system of internal control

#### Control Activities Principles:

10. The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels
11. The organization selects and develops general control activities over technology to support the achievement of objective
12. The organization deploys control activities through policies that establish what is expected and procedures that put policies into action

#### Information and Communication Principles:

13. The organization obtains or generates and uses relevant, quality information to support the functioning of internal control
14. The organization internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control
15. The organization communicates with external parties regarding matters affecting the functioning of internal control

#### Monitoring Activities Principles:

16. The organization selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning
17. The organization evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate

Every component and its relevant principles should be present and functioning in order to provide an effective internal control operation. Components and principles exist in the design and implementation and continue to exist in the operations and conduct of the system of internal control to achieve specific objectives (COSO, 2013). Also, components of the Framework operate together in an integrated and interdependent manner, reducing to an acceptable level the risk of not achieving an objective (COSO, 2013).

## 1.4 The Enterprise Risk Management Framework

Nowadays, enterprises and individuals face a wide variety of risks and need some help and tools to help sort through all of these in order to make some more rational cost and risk-related decisions. This is the process of risk management (Mackay, 2007). In response to that need for principles-based guidance to help entities design and implement effective enterprise-wide approaches to risk management, COSO issued the Enterprise Risk Management - Integrated Framework in 2004. This framework defines essential enterprise risk management components, discusses key ERM principles and concepts, suggests a common ERM language, and provides clear direction and guidance for enterprise risk management (COSO, 2004). The guidance introduces an enterprise-wide approach to risk management as well as concepts such as risk appetite, risk tolerance and portfolio view. Expands, also, on internal control issues without replacing the previous framework and provides a broader focus of the risk management process, incorporating internal control components within it (COSO, 2004).

According to COSO, enterprise risk management is a process, affected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives (COSO, 2004). Those objectives are comprehended in four categories:

- Strategic - high-level goals, aligned with and supporting its mission
- Operations - effective and efficient use of its resources
- Reporting - reliability of reporting
- Compliance - compliance with applicable laws and regulations

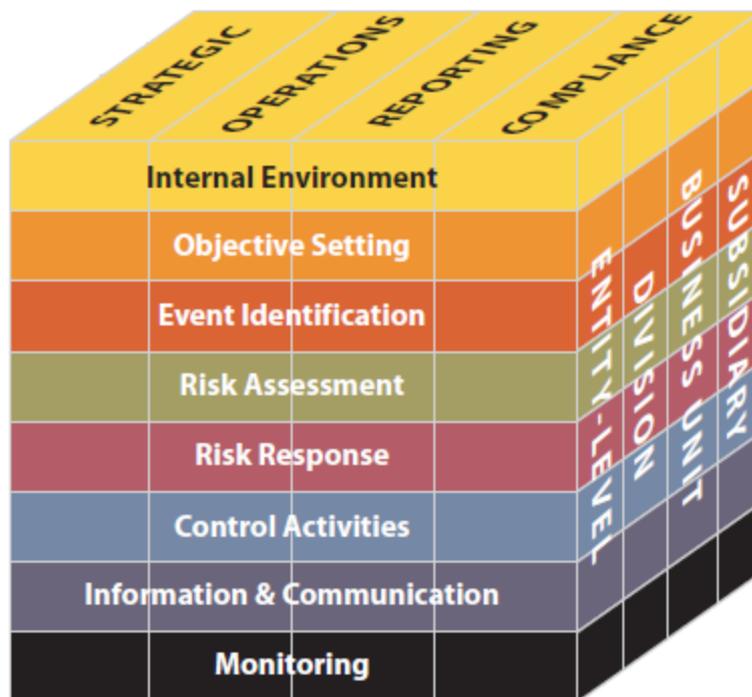
In addition, ERM composed of eight interrelated components which are integrated with the management process and are affected by the entity's management governance approach (COSO, 2004). The components of ERM are:

- ❖ Internal Environment
- ❖ Objective Setting
- ❖ Event Identification
- ❖ Risk Assessment
- ❖ Risk Response
- ❖ Control Activities
- ❖ Information and Communication
- ❖ Monitoring

More detailed, internal environment depicts the tone of the organization, including risk management philosophy and risk appetite, integrity and ethical values, as well as environment in which they operate (COSO, 2004). Objectives should be identified and set before the confrontation of any risk events. So, ERM ensures that process for setting

objectives are in place and that the chosen objectives support and align with the entity's mission and risk appetite. Event identification refers to the detection of events that are possible to affect the achievement of company's objectives both in positive and negative way. In regard to risk assessment and risk response, organizations analyze risk considering impact and likelihood in order to effectively manage it and select the appropriate response to it. Avoiding, accepting, reducing and sharing risk through a set of actions should align risks with risk tolerances and risk appetite (COSO, 2004). Also, policies and procedures that are established and implemented to help ensure the risk responses are effectively managed constitute the basic control activities within the organization. Relevant information is identified and effectively communicated down, across and up the entity, enabling people to perform their duties. The final component refers to all management processes that are responsible for monitoring and modifying ERM practice through ongoing or separate evaluations (COSO, 2004).

There is a direct relationship between objectives, which are what an entity strives to achieve, and enterprise risk management components, which represent what is needed to achieve them. Indeed, organizations have special needs, views and capabilities, thus the implementation of such processes may differ from one to another (COSO, 2004). ERM Cube (Figure 1.4.1) portrays the way objectives and components are interrelated.



*Figure 1.4.1: ERM Cube*

An effective ERM process, no matter how well designed and operated, provides only reasonable - but not positive - assurance that the organization will achieve its risk-related objectives within management's established philosophy and appetite for risk (Mackay, 2007).

The adequate design of an ERM process could be underestimated by the human factor due to errors or failures caused by entity's people, which cannot be predicted easily.

After 13 years from the publication of ERM - Integrated Framework, COSO releases in 2017 a report that enhances in strategy and performance aspect. Choosing a strategy calls for structured decision-making that analyzes risk and aligns resources with the mission and vision of the organization (COSO, 2017). Enterprise Risk Management - Integrating with Strategy and Performance clarifies the importance of enterprise risk management in strategic planning and embedding it throughout an organization - because risk influences and aligns strategy and performance across all departments and functions (COSO, 2017).

The Framework is composed of five interrelated components that are supported by a set of principles, as it is shown below (Figure 1.4.2). Those components are:

- ❖ Governance and Culture
- ❖ Strategy and Objective-Setting
- ❖ Performance
- ❖ Review and Revision
- ❖ Information, Communication and Reporting



Figure 1.4.2: COSO ERM 2017

Those components are not new, as they were also in the previous release of 2004. Differences exist in the way they are grouped together, without however losing their initial content. Governance and culture are related to the context of internal environment, with emphasis on organization's tone, ethical values and oversight responsibilities. Strategy and objective-setting, corresponding to objective setting, refers to the alignment of strategy with business objectives and risk appetite of the entity. Performance component include the context of event identification, risk assessment and risk response, introducing the reporting phase to key risk stakeholders. Additionally, review of the entity's performance examines how ERM components are functioning over time and what revisions are needed to be done for the effectiveness of the process. Information, communication and reporting final component relating to the relevant '04 component that focuses on the obtainment and flow of information.

## **CHAPTER 2: Internal Audit Effectiveness**

### **2.1 Internal Audit quality**

#### **2.1.1 Age**

On their study, Mihret and Yismaw (2007) point the main influence factors of audit effectiveness. Those are internal audit quality, management support and organization environment and its special characteristics. Internal audit (IA) quality is determined by the IA department's capability to provide useful findings and recommendations (Mihret and Yismaw, 2007). One of the basic factors of audit quality that will be analyzed in this study is age of internal auditors and how it affects the effectiveness of audit success.

Undoubtedly, age is an important factor that can, and probably will, affect internal audit function within a company. As the audit quality leans heavily on people who practice internal audit, human characteristics of the auditor will affect its proper application. Many researches and studies point the significance of auditor's age on the effectiveness of the whole audit and focus the attention to the analysis of how the years of life of an auditor will provide a reliable metric to the effectiveness of internal audit. A younger auditor could be a valuable asset in company's force as an older auditor could provide the credibility that the company traces. According to Baharud-din et al, 39.3% of the auditors that took part in their research were auditors by the age of 30 to 39, followed by young auditors between the ages of 20 to 29 with percentage of 25.7%. Also, about 19 out of 100 auditors that participated in the research were found to be from 40 to 49 years old, in accordance with another paper that results in around 20% of the sample to be between the ages of 41 and 50 (G. Drogalas et al, 2015). This result may be due to the complexity and difficulty of IA profession or to the middle time an auditor needs to obtain the necessary knowledge on the field in order to practice internal audit successfully. Attention should be given also to the percentage of auditors over 50 years old, given their attendance to audit teams which reaches 25% (G. Drogalas et al, 2015) or even higher, 42.4% (Lan Huong, 2018). Following that trend, a case study in Nairobi University shows that the majority of auditors that had been questioned (48.5%) for the purpose of the study were from 31 to 40 years old, followed by a percentage of 27.3% of auditors 41 to 50 years old (Ndirangu, 2012).

Age is a factor that can potentially influence auditor's work in terms of quality and thus the overall audit effectiveness in final. Younger auditors might bring the new and innovative ideas and have more modern way of thinking, while older in age auditors might evaluate better a decision due to their experience. Based on the questionnaire this study analyzes, it will be examined how strongly or slightly the age of an internal auditor is measured in relation to the effectiveness of internal audit in general.

### 2.1.2 Education

Another factor that should be analyzed for the purpose of this study is education. Educational level of internal auditors affects their ability and competence to practice internal audit and be effective. In this vein, Standard 1210 of IPPF concerns Proficiency. Proficiency is a collective term that refers to the knowledge, skills, and other competencies required of internal auditors to effectively carry out their professional responsibilities (IIA). It encompasses consideration of current activities, trends, and emerging issues, to enable relevant advice and recommendations (IIA). General audit knowledge and company's educational environment help in detecting and preventing errors or misconducts and leads to more effective and efficient internal audit function. For the purpose of this study, education will be measured mostly by the school or university degrees a person has, as well as through his or her attendance at various seminars, conferences, publishes, researches, certifications etc.

An audit department requires educated staff that possesses necessary knowledge ready to perform their duties sufficiently. Generally, an audit department should possess the necessary education, training, experience and professional qualifications necessary to successfully conduct audit work required by its mandate (Ndirangu, 2012). On average, internal auditors in Tunisia have in average 4 years of undergraduate education and 19 hours of training per year (Dellai et al, 2016). The majority of internal auditors in University of Nairobi in Kenya (48.5%) seem to attain the university level of education (undergraduate), followed by those who have certificates in relevant specializations, a percentage of 18.2% (Ndirangu, 2012). This phenomenon is confirmed also by the study of Baharud-din , Shokiyah and Ibrahim at the Malaysian public sector who have found most of their respondents (46.6%) having at minimum a bachelor degree or a Diploma (44%). In addition, a great part of auditors possesses a master degree (postgraduate), fact that contributes to the continuous development and evolution prospect of the auditors. Lan Huong identified in 2018 that 97 out of 210 auditors had a master degree and that internal auditors are considered as professionals and proactive. Level of education has its importance especially when companies are listed in Exchange Stocks, with their higher percentage of auditors (45%) having a postgraduate degree (G. Drogalas et al, 2015). Certificated auditors can also assist firms in various levels especially when there is a universal establishment of an internal audit framework. According to Samuel Ndirangu's study, 97% of the respondents in the research had attained CPA (Certifies Public Accountant) certification, followed by auditors who attained CISA (Certified Information Systems Auditor) certification with 21.2%. The significance of audit certifications which are more widespread and cover multiple areas of audit, concerns firms that wish to establish a strong internal audit department with specific structure and authority. Indeed, education alone, as it is understood by the academic point of view, cannot provide the only substructure of an effective internal audit application, but can support further development of audit performance and results. Continuous education of the auditors, likewise, should be of great importance for companies, especially due to the fact that through education the person becomes more qualified and acquires a frame of mind of the ongoing development at every level. As the IPPF Standard 1230 states, internal auditors must enhance their knowledge, skills and other competencies through continuing professional development (IIA), in order to be able to fulfill their duties better and be up-to-date for every change.

### 2.1.3 Work Experience

Internal audit effectiveness is a dynamic process and a matter of considerable debate (G. Drogalas, 2015), thus its elements are affected by a person's previous work experience and other personal skills necessary for the job. Institute of Internal Auditors (IIA) states that auditors' competencies are a key element in effective internal audit activities, thus auditors in order to be engaged in their duties have to obtain various skills, knowledge and abilities to fulfill those duties (IIA,2010). Work experience refers mainly to the time, usually years, of previous work an auditor had and shapes his or her ability to accomplish job duties. As Badara and Saidin (2013) state in their study, audit experience is connected to different kind of knowledge and skills which the auditor obtains from his or her tenure at the job and practice of the auditing profession in general, that will enhance his or her effectiveness (Badara and Saidin, 2013). However, experience can be considered as the act practice and feedback that can lead to knowledge acquisition and does not necessary need to be a total of years on the job, rather than a proper training environment that provides practice with feedback (Carpenter et al, 2002). In this study will be considered as the years of audit work or practice of internal auditing.

Previous research in the field has shown various levels of experience among auditors. The majority of auditors (33.3%) tend to have 5 to 10 years of work experience in the field, according to Mustika (2015), while the research of Baharud-din et al. (2014) in Malaysian Public sector shows different outcomes, with the highest percentage of auditors (36.1%) to have less than 5 years audit work experience. Nairobi University's auditors in Kenya, have in average 6 to 10 years of audit experience, a percentage of 27.3%, while auditors with more than 11 years and above 15 years were found to be 21.2 out of 100 (Ndirangu, 2012). Also, work experience seems to have a connection with the effective and efficient way internal audit can be designed and implemented according to each company's objectives. Particularly, higher internal audit effectiveness is associated with greater competence of the internal auditors (Mustika, 2015), whereas lack of qualified, skilled and experienced auditors, may cause delays in audit work (Baharud-din et al., 2014). Already from the first years of audit advisement, experience seems to have a central role in forming audit effectiveness. According to Bonner in 1990, auditors with more working experience generally perform more effectively than auditors with less experience. On average, more experienced auditors seem to manage better the tasks examined by the research and have more knowledge and ability to perform their duties (Bonner and Lewis, 1990). Through work experience the detection and in large percentage the correction of misleading or omissions becomes more easy and obvious, saving time and resources valuable for the company and the audit department as well. When auditors gain experience, they know more about errors in the sense of gaining more accurate knowledge on errors and are aware of various occasional errors may occur along with the reasons lead to them (Gaballa and Ning, 2011). Inexperienced auditors may fail to totally perform their duties at the time and the way experienced auditors will, influencing the overall effectiveness of the audit. Auditors with different levels of experience can be assigned to perform various tasks within an organization because they can perform tasks that inexperienced auditors cannot (Badara and Saidin , 2013). In addition, experienced and inexperienced auditors are entirely different, because experienced auditors have more sophisticated ways of using their knowledge than inexperienced auditors (Choo and Trotman, 1991). Overall, the crucial role of work experience among internal auditors is apparent and the attention given to this factor of IA effectiveness is consciously rising over the years.

#### 2.1.4 Gender

Another element of IA effectiveness that will be studied in this research is the gender's influence on the operation of internal audit. The fact of being a woman or a man still seems to have a meaning for organizations' audit departments and tend to achieve higher importance over the years. A Fortune 500 survey revealed that only 12% of Chief Financial Officers (CFOs) at Fortune 500 companies were women in 2016, percentage that is increased in comparison to 2006 percentage of 6.8% (Spencer Stuart, 2017). Especially in the audit profession, where women are fewer than men in all regions except North America (IIA, 2015), the "gender gap" looks like is influencing somehow the effectiveness of internal audit. "Gender gap" refers to the difference between males and females presence in internal audit profession. For the purpose of this study, gender, as a contributor of audit effectiveness, will be measured in relation to the different importance auditors give to the presence of men or women in IA departments of their companies.

Institute of Internal Auditors tried to quantify the gender factor by its study of Global Internal Audit Common Body of Knowledge (CBOK). CBOK Practitioner Survey pointed the portion of women internal auditors globally and concluded that gender barrier is still a challenge that women should face in their career (IIA, 2015). The major reveal of the Survey is that top management positions are mostly held by men and especially when it comes to Chief Audit Executives (CAEs), that the portion of women becomes even lower. Specifically, in all regions, there are far more male CAEs than female, with percentage 31% for women instead of 69% for men (IIA, 2015). As Christ (2016) indicates, there is a distinct "gender gap" in internal auditing which however seems to be narrowing, followed by an age difference between auditors of different gender. Particularly, women auditors are younger than men auditors, while they held lower positions within the company than men do, suggesting a potential position upgrade for women at senior level as years goes by (Christ, 2016). A percentage of 53% of female internal auditors were under 40 years old, compared to only 45% of male internal auditors at the same age (IIA, 2015). Other studies, also, illustrate lower participation of women auditors. Mustika (2015) had 60.6% male respondents and only 39.4% female respondents, in contrast with G. Drogalas et al. study (2015), which had been questioned 67.5% women and 30% men. The majority of the auditors' responses in Nairobi University survey were male (66.7%), while the remaining lower portion (33.3%) were female (Ndirangu, 2012), similar to the Tunisian organizations' research that found percentage of 77.2% males and 22.97% females (Dellai and Omri, 2016). However, in some cases female number is increased. For instance in Baharud-din et al. (2014) and Lan Huong (2018) studies, presence of women is strongly highlighted.

To conclude, following the general equality challenge that women face worldwide and therefore can affect audit profession as well, gender still plays a significant role in nowadays professional status. Women auditors could bring many different perspectives, skillsets, and personality traits that are especially important for internal auditing (Christ, 2016), thus their value should be highlighted. Effectiveness of internal audit may be influenced by the presence or the absence of women, question that will be tried to be answered through this survey.

## 2.2 Management support

### 2.2.1 Tone-at-the-top

Every company has its own established principles, ethical culture, rules and objectives. The most appropriate way to set and enhance those elements of corporate governance is through the company's management team. General corporate governance sets the "tone" for the organization and points its overall philosophy that is expected from management to follow. Management team is responsible for the correct implementation of all the policies and procedures that are necessary to ensure that all principles are understood by every department within the company and are fully respected. Therefore, management's philosophy and operating style affects every unit level from the lower one to the highest one in hierarchy. Tone-at-the-top refers to the message it is sent by the management to all levels of the organization about the general culture it has, as well as how strict this culture will be established. Audit department is not an exception, as it is influenced from the tone-at-the-top. Particularly, the way management runs the business and its administration culture affects internal auditors' job and sets the limits to its effectiveness. Previous studies (Baharud-din et al., 2014, Cohen and Sayag, 2010) show that management support can be considered the most influencing factor of audit work quality and thus as a main contributor of the effectiveness of IA function and the success of internal audit in general. Whether management will support auditors' work and will enhance their role inside the company, indicates the perception management has about the value internal audit adds to the organization. For that reason, this study will examine management support as to its effect on IA effectiveness.

According to Cohen and Sayag (2010), management support considered crucial to the operation and success of IA due to the fact that all decisions made by top management can influence determinants such as proficient audit staff, developing career and organizational independence of audit work. Those determinants will thereafter impact the optimal operation of audit and its general effectiveness. Also, the view that management has about audit and its way of operation assists the organization in shaping the overall perception about audit within the company. The effect that auditors' work has on the achievement of corporate objectives is influenced by the extent to which managers consider auditors' work valuable (Arena and Azzone, 2009). For example, recommendations made by the audit department may be implemented on a larger scale if the management team supports the audit team (Ahmad et al., 2009), whereas audit reports that are not sufficiently utilized by the management may not encourage internal auditors to exert the maximum effort in their engagements (Mihret and Yismaw, 2007). The job of auditors with the support from the management becomes more crucial and it is not trapped only in superficial tasks, but it is used as a valuable tool in favor of the company. Additionally, IA could assist management via its consulting role which supports the organization to better evaluate, identify and implement risk management, aiming to address necessary risks (Badara and Saidin, 2013). Audit role is multiple as it reaches all different levels and has a general picture of the company, thus provides an altogether point of view to the management.

To conclude, the relationship between the internal audit staff and the company's management is clearly important in determining the independence, objectivity and therefore the effectiveness of the IA function (Ndirangu, 2012). Active support from management could seriously assist audit in the achievement of its objectives, while in parallel provides a more stable basis for the company to go after its goals. Without management approval, support and

encouragement, IA process is likely to face failure and resource waste (Baharud-din et al., 2014), leading to low performance or unqualified services.

### 2.2.2 Communication

Institute of Internal Auditors issues Standard 2420 which relates to the Quality of Communications within the organization. Communication between the audit department and the rest of the company must be accurate, objective, clear, concise, constructive, complete and timely (IIA), helping non-internal auditors to better understand the full point of the audit work. A systematic communication approach enhances the credibility of the audit department and keeps company's personnel informed and up-to-date. Also, communication within the audit department is crucial in order to be able to build a common path in designing the audit plan and its implementation and has a positive impact on the outcome of audit (Turley and Zaman, 2007). IA to be effective should periodically communicate with auditee, senior management and board of directors regarding audit's activity, purpose, authority, responsibility and performance relating to its plan (Azzali and Mazza, 2018). Reporting and recommending in a systematic way will assist management in having a constant updated picture of the firm and will promote the sense of engagement in company's values and culture. Also, monitoring the corrective actions that had been made so far as well as future plans against misleading, should allow a better control of the whole business environment in terms of strategy, compliance, operation and finance. For instance, follow-up process, as part of the bidirectional communication, is critical to bring about audit outcomes, otherwise audit recommendations are wasted and audit credibility suffers (Mihret and Yismaw, 2007). Lenz et al. (2014) in their study, state that relationships, reports and open dialogue are expected to aid internal audit in pursuit of effectiveness. Communication, as the degree of adherence of audit recommendations and guidelines, will be studied through the research, in order to be evaluated the importance this factor has at the IA effectiveness.

Moreover, communication channel is important to go downwards and upwards as well, because any information may reveal probable occasion or error, should be easily detected and corrected. Through a good established communication policy, auditor's work becomes more affordable and the results of audit can be fully used in business development. Azzali and Mazza (2018) found that communication to the statutory board has a mean value for a group of Italian listed companies of 3.9 out of 5 points, indicating the significance that communication among departments has. Regular and direct working with management provides better control and monitoring process for the entire business operation and in addition promotes the sense of cooperation between audit and management team. Management has updated information and auditors' guidelines are adhered more, thus the benefits are apparent for both sides. Exit meetings, also, can be used as a tool for better communication, as they offer a comprehensive view of audit outcomes. Those meetings provide an opportunity to resolve questions or concerns of the auditee on audit findings before the final audit report is released (Mihret and Yismaw, 2007), allowing better understanding of the audit results. Communication can be proved a valuable tool in hands of management and internal audit if it is used effectively, especially when issues or findings are pinpoint, all personnel should be informed in order to avoid further business exposure to mistakes.

### 2.2.3 Independence

Audit's independency, as it is defined from the IPPF Standard 1100, refers to the audit function which is free from any conditions that can threaten internal auditors' ability to implement their responsibilities in an unbiased way and being free from any interference within setting the scope, performing necessary work and communicating the results on the internal audit function (IIA, 2010). In consistency with IIA, Mihret and Yismaw (2007) highlight the importance of independence due to its role in promoting objective reporting of findings without the influence of the auditees. Lack of independence undermines the whole role of internal audit and provokes serious objectivity issues for the auditor. Without independence audit becomes obsolete and non-objective, losing its proper mission as assurance and consulting provider. Mahzan et al. highlight the significance of auditors' independency through their study, by stating that auditors can effectively perform their roles if they act independently and not as a managerial tool (2012). Internal auditors are expected to aid managers in doing their jobs and at the same time to independently evaluate management's effectiveness. Are charged with upholding the best interests of their employer, but sometimes may be reluctant to counter management, regardless of the consequences (Ndirangu, 2012). Evaluation of management's administration policy and operation strategy could be very difficult task, given that auditors have to be accountable to management in every step of the audit progress and concurrently provide an unbiased opinion for its overall decisions. So, independency of auditors prove to be of paramount value in providing effective IA services to management, especially when the subject of the audit is the evaluation of management's work.

Results in Mustika's study at Indonesia (2015), indicate a positive and significant association between IA effectiveness and independency, a point that is also supported by Alzeban's and Gwilliam's research at the Saudi Arabia Public sector (2014), which connects higher independency with greater effectiveness of IA. In the model produced by G. Drogalas et al. (2015), independence of IA is the foundation of IA effectiveness, as it is the most crucial factor for Greek organizations listed on the Athens Stock Exchange. Additionally, objectivity cannot occur if the auditor is not free from the influence of management or confront conflicts of interest inside the company. Coupled with objectivity, organizational independence contributes to the accuracy of the auditors' work and gives employers confidence that they can rely on their results and reports (Ndirangu, 2012). Internal auditors can conduct better their duties and be more reliable if the audit outcomes are based on clear evidence that are in full sight and cannot be contested. A percentage of 60.6% of auditors that were examined in the context of Ndirangu (2012) research stated that they could download and examine the organization data pools, fact that allowed them to provide an independent report. Another 60.6% of respondents in the same survey, agreed that their IA department operates totally independent and can audit any issue may occur in need of auditing, accessing every necessary information needed even if it is classified (Ndirangu, 2012). Therefore, freedom of research along with accessing every data needed, enhance independence and objectivity of IA. As the audit profession progresses over the years, independency issues start to reveal in many companies, ordering a clear and stable address of potential fraudulent activities. Independency of the auditors promotes objectivity of reports produced as well as reliable professional judgment on every issue, aiming to accomplish the mandate they have (Baharudin et al., 2014) and achieve the credibility audit should have.

## 2.3 Audit environment

### 2.3.1 Standards

At a research that took place in Italy (Azzali and Mazza, 2018), results showed that a percentage of 84% of the responded companies have in place an internal audit charter that discloses objectives, competencies and responsibilities internal audit function should follow. The same companies have established at a large scale policies and procedures regarding internal audit activities, in a score of 3.7 out of 5 points, and have also an audit plan in place that has a risk-based approach. According to IIA, risk-based, reviewed and guidelines-based processes are an index of better IA effectiveness, so IA benefits from the establishment of a risk-based audit plan that determines the priorities of the audit activity and is consistent with organization's goals (IIA, 2016). Otherwise, resources may be wasted on issues of low importance, according always to management's wishes; as well precious time may be spent unwisely. All the policies and procedures a company has or seeks in order to adopt international accepted principles and enhance internal audit function are described by the Standards that IPPF had issue. Particularly, Standards provide a framework of mandatory requirements consisting of statements of basic requirements for the professional practice of internal auditing and for evaluating the effectiveness of its performance (IIA, 2015). This framework is international and generally accepted by internal auditors working at different business fields all over the world, Indeed, organizational setting in which internal audit operates, such as organizational profile, internal structure and policies and procedures applied to each auditee, should enable systematic audits which lead to useful audit findings (Mihret and Yismaw, 2007) and are welcomed within the company. Exactly those guidelines are imprint by the Standards in order to make audit work more useful and well understood. The scale to which IPPF's Standards are applied within private companies in Greece will be one of the questions of this survey, in order to achieve an understanding of the view point of Greek companies.

Internal audit effectiveness seems to be influenced from the establishment of the Standards, as they provide a measure of audit's principle application. In more details, companies can tailor to their needs every framework provided and enhance its usefulness beyond the limits of its scope, attaining to focus on their special goals. This framework should be well established and communicated effectively to every level of operation, and should be accessible from people outside the organization. IA departments that do not have a written IA charter will likely warrant an unsatisfactory rating in quality assessment from outside stakeholders, because a written charter considered as a minimum requirement to evidence their audit function (Lenz et al., 2014). As Standards provide a general measure of IA effectiveness, companies that pay more attention to their use can achieve higher credibility. Clear policies and procedures, against which organizational practices are to be gauged, will make the audit function more effective (Mihret and Yismaw, 2007). In general, Standards offer a comprehensive solution for different kind of companies that wish to develop their IA activity and implement a charter for better audit outcomes. Each business level benefits from the existence of an official guideline driver that it is accurate, appropriate and clear as to the overall objective accomplishment. Therefore, it is considered critical to study the effect of Standards' establishment in IA departments through this survey.

### 2.3.2 Equity Structure

Nowadays business tend to base more on private initiative and less to public finance. The majority of enterprises function in the free market without big support from the public sector, expanding their activities across the borders of one country or a region. Equity structure of a company, thus, influences its operation, especially on financial level, while can affect its relationships with other outside stakeholders. In G. Drogalas et al. (2015) study, the vast majority of the companies operate in the private sector (70%), while public companies constitute only the 12.5% of the sample. It becomes obvious that, except the difficulty in accessing public information, private companies are more outgoing with their information about internal operation, allowing external and internal auditors to evaluate more easily their financial, strategic, compliance and operation status. Also, given that the main shareholder of an organization can be a private or a public contributor, internal audit duty could be influenced accordingly. This study will analyze the way a public or private financed firm can affect the role of the internal auditor or not, based on the auditors' sample it has.

Prior studies report that the type of the sector (private or public) makes a difference on the goals and activities of IA (Goodwin 2004). In the private sector, organizations operate in a competitive environment which is characterized by a high-risk level, so they are forced in some way to a continuous improvement chasing. Indeed, private organizations are more interested in monitoring their internal control system and consequently improving their internal audit function, because they anticipate optimizing their operation in general. Dellai and Omri (2016) study concludes that internal audit will be more effective in private organizations than in public organizations, perspective that is exactly consistent also with Cohen's and Sayag's survey in 2010. This might occur due to the more updated state of audit at private companies, given that the first issuer and leader of IA charter is Institute of Internal Auditors, which is a private alliance of audit organizations. Equity structure is of major importance and can provoke problems or offer opportunities to auditors who wish to improve company's performance and provide a support to its development. Public and private companies, after all, can both establish an effective IA function and ensure the value added from its role is sufficient.

### 2.3.3 Allocation of resources

Resources are the main fuel if a company viewed as a machine. That is because without resources, financial and non-financial, activities and obligations that a company has cannot be completed. Even its existence is at risk. Effective allocation of resources, therefore, is a critical contributor in the efficient operation on strategic and financial level. Administration of resources sometimes may be inadequate or ineffective, driving the company to wasteful decisions that put in danger its welfare. Of course, audit cannot escape from resource distress, as it is bound to management to fulfill its duty. As IIA states in its Standards for Professional Practice, the Chief Audit Executive, which is the head of audit department, should ensure that internal audit resources are appropriate, sufficient, and effectively deployed to achieve the approved audit plan (Standard 2030, IIA). In particular, available resources that auditors get should be of specific quality competency, adequate quantity and deployed effectively in order to optimize their usage and be essential part of the audit process. Standard 2230, also, highlights the necessity for a balanced recourse distribution in order to engage auditors to achieve their mission. Engagement Resource Allocation refers to the determination of adequate resources to assist internal auditors in the achievement of various engagement objectives with due professional care, based always on the nature, the complexity and the

time and resource barrier every engagement has. Allocation of resources in this survey is examined as a factor that may affect the effectiveness of IA within a company, so its importance is analyzed further.

Ndirangu (2012) in his research found that a percentage of 60.6% of the respondents stated that the number of employees in IA was not sufficient given the amount of auditing work planned and expected to be done. The 48.5% of those auditors indicated that management was totally aware of the needs of internal audit department, fact showed by the budget assigned to this department. Adequacy of resources is also an indicator of management's devotion to IA work and can show its support to the work of auditors by offering an effective mix of resources, valuable for the achievement of audit objectives. IA departments must acquire the resources needed to hire the right number of high quality staff, to keep up-to-date in training or development, to acquire and maintain physical equipment and so on (Ndirangu, 2012). Financial and non-financial support is essential for the optimal operation of the whole business generally and for the audit department specifically not only because the short term needs have to be covered, but also because the availability of funds may signal management's and accordingly organization's appreciation to IA (Lenz et al, 2014).

## *Part B: Research*

## **Introduction of Part B**

This section attempts to fill in the gap of literature and provide a valuable basis for future research in IA. Effectiveness, as the degree of objective achievement, can be thought as the optimal scale of audit function. If an IA department succeed to operate effectively means that it accomplished its mission at a large degree. However, effectiveness is a qualitative factor and cannot occur without specific plan and correct implementation. Some factors that can affect audit effectiveness are presented in this section, as an effort for better understanding of audit function.

This survey extracts its findings through a questionnaire that is web-distributed and is divided into three groups in order to examine better audit effectiveness and its related elements. Questionnaire structure is easy understood by the auditors that are asked to answer it, while the questions are close-ended, multiple choice or have Likert scale preference. The first group of questions examines the personal characteristics of the auditor as to their relation with IA effectiveness. Age, education, experience and gender are the main contents of this group and participants express their opinion in certain questions. The second group of questions is with regard to organization's point of view about the IA in general. In this section is analyzed the support of every company's management to IA, its communication strategy and the limits of independence of IA department. The third and final group of questions of the research is concerning the audit environment. Application of International Standards, equity structure and resource distribution are formed into questions in order to be convenient for auditors to express their opinion in each subject. All factors are investigated as to their relationship with IA effectiveness and the degree to which influence its success.

This section also presents some conclusions based on the results of the questionnaire, offering an opportunity for future discussion around audit effectiveness.

## Chapter 3: Survey Results

### 3.1 Theoretical Framework

This study tries to answer to calls for further examination of the factors that affect, positively or negatively, the effectiveness of internal audit nowadays. Effective and efficient IA function provides the stability an organization desires and assists in the implementation of objectives, providing in parallel a continuous evaluation of company's procedures. IA has a double effect on organization's overall operation. Tries to ensure that applied processes are working appropriately, while adds value to every business level, through its recommendations and findings. The challenge for organizations is to acquire an effective IA department that will lead to better outcomes in general. This survey is motivated by the desire to enrich and extend the understanding around the specific factors that qualify an IA process as effective or non-effective. The relative lack of integrated research in this area indicates that this study approach can though to be noteworthy and even indispensable in investigating the topic.

The factors which are considered remarkable in IA operation are organized in three groups. The first associating group to be examined is the personal characteristics of the auditor, given the importance of cognitive skills in a job like audit, in which personal judgment is highly involved. The second pillar of investigation reflects the perception of the organization around IA and its benefits. The way an organization supports and provokes IA work and the freedom it provides to the auditors, influence at a large scale the effectiveness that the audit has in the end. This research also indicates the significance of the audit environment, within which auditors operate, considering the ongoing evolution of the profession and the company's audit requirements. Those three main axes are analyzed further in order to offer a comprehended view of the factors that cause IA to be effective and offer a basis, along with previous literature, for future research.

In addition, internal audit has a central position in a company's strategic, financial, compliance and operational policy, as it provides a general and definitive guideline for different kind of enterprises. The three pillars of effectiveness mentioned before, are divided into more specific sub-factors in order to study their impact on IA in more details. Specifically, characteristics of the auditor are considered as a sum of personal skills that form the general perception of the auditor in relation with its duty. Age, education, experience and gender are the elements that this survey observes as to their attendance in the auditor professional level and so to the audit as a process. Regarding organizational support to IA, management tone is indicated as a factor that will critically form the audit process in correlation with management's communication approach as to the value and the results of IA. Also, independence is related to the objectivity that auditors should possess in order to exert

their duty and be effective and thus is part of the research as well. Finally, audit environment consists of the general applicable audit principles that IA should follow and the degree to which organizations apply them effectively. Also, equity structure of the firm is investigated in relation to IA function along with the prevalent allocation of resources that is established.

### 3.2 Sample

Surveys are the most common and appropriate method to collect primary data in order to study the behavior of the participants or to extract conclusions regarding the opinion of a group on an issue. Researches constitute the basic pillar of origin knowledge because offer an opportunity for proper analysis of a question or a concept. Also, surveys can serve as a first step to future analysis and development of an issue, as well as to contribute to the general knowledge through adding more information at the already known.

Given that, this study uses a survey in the form of a questionnaire in order to examine possible factors that affect internal audit effectiveness. Those influencing elements are partially studied from previous authors and considered central in IA analysis. The three categories that are mentioned, i.e. auditor characteristics, organizational support and audit environment, are presented in a multifaceted questionnaire that is referred to auditors of all position levels. In more details, the target population is internal auditors mainly from the private sector of Greece that practice the job as their main profession. The majority of the companies targeted are big size organizations and multinational enterprises that operate in Greece and have an IA department in their organizational infrastructure. The questionnaire was distributed via e-mail package that contained the questionnaire and a covering letter explaining the purpose of this study in order for the participants to know where will be used their answers. Also, confidentiality of the respondents is preserved through unanimity and personal information is protected, therefore the results are presented in aggregate form. Personal data is not revealed in the study neither is required from the participants in the questionnaire, except demographic characteristics that are valuable in the research. Questionnaires were distributed to 125 organizations operating in Greece and the received valid and usable answers were 31, a rate of 24.8% of complete and accurate responses.

The sample selection is based to criteria that had been formed from previous researches in order to avoid misunderstanding and extract correct conclusions. It was tried to be targeted only companies that have an IA department in place in order for the auditors to be able to comprehend the required elements and express their opinion based on the audit wisdom they have. In this way, limitations this study faces and difficulties in the collection of reliable data are tried to be eliminated, aiming in reaching the intended outcomes.

### 3.3 Questionnaire Details

The questionnaire was structured in regard with the research purpose and the relevant literature review from previous studies in internal audit. It was influenced by the general guidelines that a questionnaire should follow, i.e. closed-ended questions, multiple choice questions and linear scale questions, in order to be easy in reading and understood in its requests. Specifically, was designed in a way that facilitates its completion and contained:

- ✚ 8 closed-ended questions
- ✚ 9 multiple choice questions
- ✚ 13 questions with 5-scale preference

It included two main sections, the first referring to the demographic characteristics of the sample and the second connected with the expression of opinion of the participants, regarding IA effectiveness. The questions finally included in the questionnaire are considered as more relevant with the present study as well as more important with regard to their content.

Moreover, the present paper comprise of questions considered best in describing the factors that have an effect on internal audit effectiveness. The questionnaire is formed by thirty (30) questions, which are divided in three groups, in accordance with the three main categories that affect IA effectiveness. In particular, the first group, which includes elements of the auditor personal characteristics, concerned with questions about age, educational level, work experience, skills and gender. Through the first eleven (11) questions it is tried to conceive the perception auditors have about those sub-factors and how those sub-factors influence their job. The second group consists of seven (7) questions about company's perception about the auditors' role and is concerned with management's tone-at-the-top, the communication approach within the company and the independence that auditors have or do not have within company's framework. The third group analyzes audit environment and has ten (10) questions. Specifically, the final category attempts to find whether or not applied Standards of IA, equity structure and allocation of resources that an organization has affect IA function in general. Additionally, there are two (2) general questions about every auditor's particular opinion about his or her company. The full questionnaire is presented at the Appendix A.

Questionnaires are at the center of attention in most surveys due to their significant role in the extraction of conclusions and findings. Constitute a more direct and cost-economy method to gather information relating a specific theme, as it is accessible from everyone no matter the place since they are web-distributed. A questionnaire focuses on the quantification of the answers, assisting in the timely evaluation and analysis of the findings and offers a more comprehensive presentation that can be deployed appropriately.

### 3.4 Findings

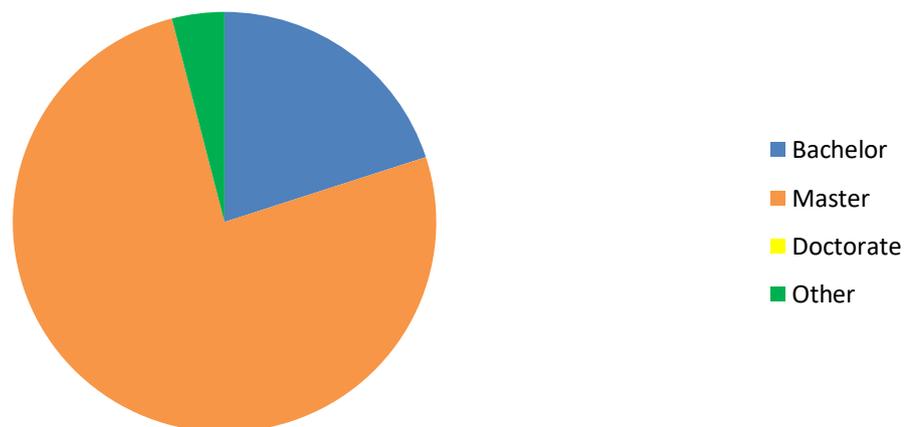
Results of the survey are depicted in this section as they were formed from the responds at the questionnaire distributed to the 125 organizations in Greece. First of all, the demographic characteristics of the population tested are illustrated at the Figure 3.4.1. As it is showed below, there are more women attained at the questionnaire than men. The percentage of females who answered the form was 60%, while men respondents were 40% of the sample. Also, the vast majority (55%) of auditors that applied to this survey were from 25 to 35 years old, followed by auditors that have an age of 36 to 46 years old (25%) and 47 to 60 years (21%). The bigger portion of the population has a master degree (postgraduate) as an educational level, standing at 71%, whereas the rest 29% has a bachelor degree (undergraduate). With regards to the business area that auditors work, there are many different fields in which they are exercising their duty, highlighting the fact that IA can be adopted and tailored to every organization. Some of them are working in the constructing industry, while others work at the banking sector. Other examples of different business areas spotted in the research are tourism, finance, consulting, transportation, energy, medicine industry, hospitality.

<b>Characteristic</b>	<b>Criteria</b>	<b>Percentage</b>
<b>Gender</b>	Female	60%
	Male	40%
<b>Age (in years)</b>	25-35	55%
	36-46	25%
	47-60	21%
<b>Education Level</b>	Bachelor	29%
	Master	71%
	Other	-
<b>Sector</b>	Construction	12.6%
	Banking	12.5%
	Finance	16.8%
	Consulting	20.9%
	Transportation	4.2%
	Tourism	8.4%
	Energy	8.4%
	Other	16.2%

*Figure 3.4.1: Demographic Features*

Subsequently, the first group of questions refers to the personal characteristics of the auditor as they are shaped from his or her approach. Auditors are asked to answer according to their beliefs and the environment in which they are working currently. The first question is about the age of the auditors and how it affects the IA effectiveness. The majority of the answers were neutral about age as an impact factor of IA. Specifically, 56% believe that age does not affect neither positively nor negatively the effectiveness of IA, while the 20% view the age as a contributor that affect a little IA function. IA departments of the organizations that the auditors work within are largely constituted by auditors over 35 years old and young auditors, from 25 to 35 years old, are present in lower rates. Most companies (60%) have in their IA departments less than 5 members between the ages of 25 and 35, when a portion of 24% of IA departments has more than 10 members within the same age limits. This fact may be due to the time a person needs in order to accomplish his or her academic studies and go for a job or due to the judgmental part of IA job description. Companies may choose older auditors because the experience and the maturity are gained after certain years of work, while younger auditors have not obtained the necessary skills yet. Concerning educational level and the degree to which it influences IA effectiveness is investigated afterwards. Particularly, the 48% of the respondents believe that educational level of the auditor plays a very significant role in forming IA effectiveness and the 28% is oriented to that direction, rating education at significant level. As it is shown by the Figure 3.4.2, the mean educational level of the internal auditors in the IA departments of the respondents stands at master level of education at a rate of 76%, followed by undergraduate level, at 20%. As it is showed from previous researches (G. Drogalas et al. (2015), Ndirangu (2012), Lun Huong (2018), Baharud-din et al.(2014)), education plays a major role in IA effectiveness as offers to auditors the necessary academic knowledge and at the same time cultivate their skills in order to develop a fully-featured auditor. Without education, one cannot be part of the current work stage or flounders more to hold a job.

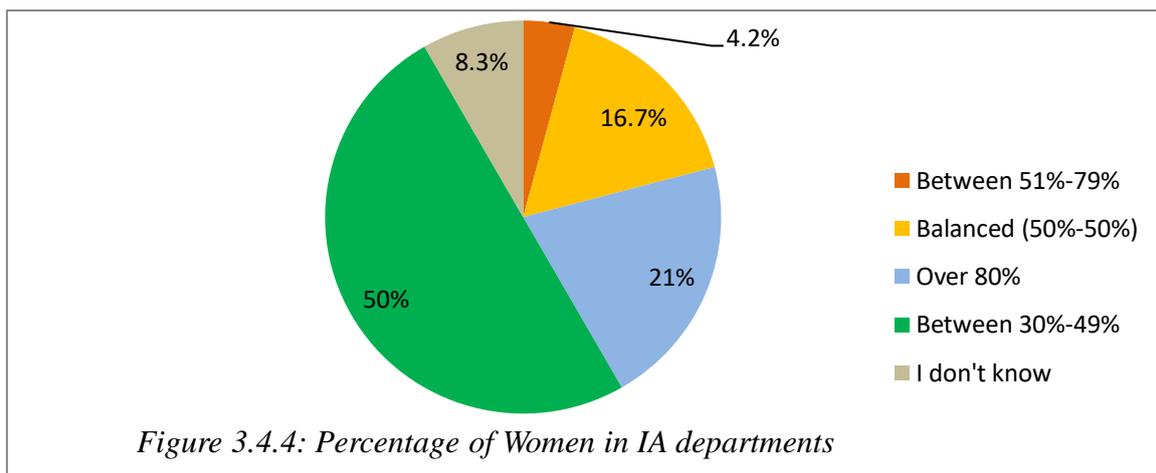
*Figure 3.4.2: Mean Educational Level of Internal Auditors*



Work experience and its relation to IA effectiveness are studied forward. It is asked from the participants to evaluate the degree work experience in relevant and non-relevant audit fields affects audit effectiveness. Results revealed that work experience in sectors that are unrelated

to audit in general can affect audit effectiveness to some extent, whereas work experience in audit-relevant sectors affects a lot audit operation. A percentage of 68% states that business areas close to audit are pivotal to the experience of the auditor and thus to the effectiveness of the audit, when another percentage of 84% of the auditors consider non-relevant work experience of affecting to some extent the internal audit effectiveness. Therefore, experience in audit-related business areas are essential in shaping the auditor's perception, maybe because offers a more comprehensive view of multiple business sectors, strengthening auditor's judgment skills. Also, communicational and writing skills an auditor attains during his or her life are connected with increased effectiveness on IA. About 64 out of 100 auditors in this research stand up by the fact that communicational skills support greatly auditor's work, along with writing skills (52%). Although writing skills are lower in the importance scale for auditors in comparison with communication skills, they still are essential for the audit role in a rate of 36%. The way findings, recommendations or misleading will be communicated to auditees can define IA effectiveness. IA guidance may be thought as criticism to company's processes if is not communicated appropriately. Thus, those skills of the auditor are connected with better results and more beneficial cooperation.

Moreover, the next three questions are about gender related factor. The vast majority of internal auditors in the study believe that gender has no impact on the effectiveness of IA. In more details, 56% of the participants support that gender has no influence in any way in IA, while a 24% believes that has a little impact on audit process. The presence of women in IA departments is mentioned also. Half of the IA departments who attested to the survey contains from 30% to 49% women auditors, whereas the 21% of the IA departments have a strong presence of females of over 80% of their members. A balanced picture of 50-50 relationship between men and women auditors have the 16.7% of the IA departments, while a 4.2% of the responses indicated an attendance of women from 51% to 79%. Gender rates are illustrated at Figure 3.4.4 below.



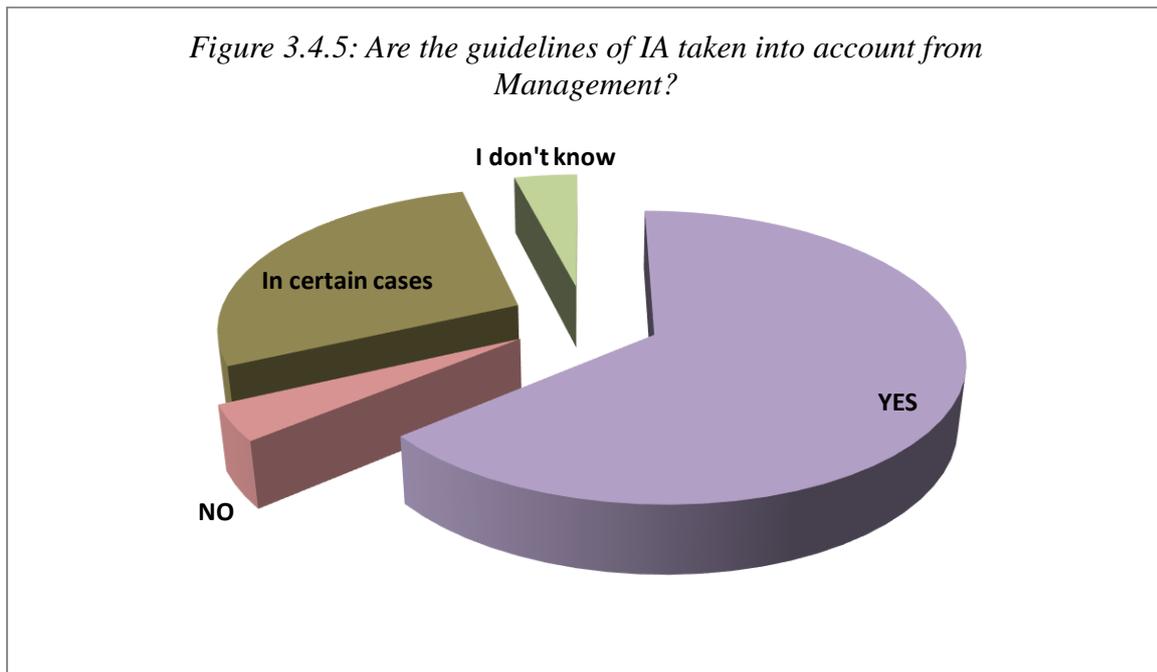
Furthermore, internal auditors seem to consider the presence of women as unrelated factor to the effectiveness of IA function. In accordance to the previous question, most of the auditors (70.8%) do not believe that female element will positively or negatively affect IA operation, with only a 21% of the auditors supporting that women presence is somehow significant for

the audit effectiveness. Lack of females in IA departments is underlined in this study, in accordance to the CBOOK survey of the IIA in 2015. Women still are minority in high level positions, as IA positions, while their presence there is considered as irrelevant to the effectiveness of IA. A balanced picture among male and female auditors can be proved more beneficial for IA welfare, enhancing women presence at high level offices and avoiding gender discrimination.

As the questionnaire proceeds, the second group of questions is presented. Particularly, this section examines company's internal audit point of view and how it influences IA effectiveness. Firstly, tone-at-the-top is mentioned as the management's philosophy and operating style around internal audit procedure in general. The great majority of respondents (68%) answered that IA is definitely affected by an organization's tone-at-the-top, while a small percentage (24%) considers tone-at-the-top affecting only in certain cases. In a question of ethical values provided, most of internal auditors (80%) answered that the board of directors of their company provides ethical values within the company, while only a small portion (8%) stated that there is lack of ethical values from the side of the board. This is consistent with other studies (Baharud-din et al. (2014), Cohen and Sayag (2010), Arena and Azzone (2009), Mihret and Yismaw (2007), Ahmad et al. (2009)) that highlight the importance of a company's management support to IA in order to achieve better and qualitative outcomes related to strategic, operational, compliance or financial objectives. Support from the top of the organization enhance auditors' engagement to company's culture while cultivates an environment of cooperation between the departments. The values provided by the head of the company are significant and sent a message of how strict or sparing instances of deviation will be addressed. In addition, communication of management's tone-at-the-top has a central role in IA function. The 56 out of 100 internal auditors that had been asked state that their management's tone-at-the-top is well communicated downwards, when 28 out of 100 believe that is partially communicated downwards. However, a 16% of the auditors do not consider the communication of their ton-at-the-top effective, pointing the further actions companies should take to that direction in order to strengthen their communication strategy. Management's awareness about IA process should not only exist, but should be adequately communicated to every corner of the company. Another issue connected with internal communication within the firm is the down-to-top channel of communication. The 56% of the auditors answer that their company adheres to possible recommendations, complaints, fraudulent activities that reaches the top level of the organization and so has established a strong down-to-top communication channel. The 32% considers its organization's ability to listen possible issues may occur from every business level is partially established, while a portion of 12% supports that Upper management does not listen at all the company's problems. Communication issues reveals an internal difficulty to deliver the overall ambiance of the company on the one hand and to get a positive or negative feedback on the other hand.

Based on the findings of the IA department, organization should proceed to multiple actions in order to improve its procedures or correct misconducts; otherwise the work of IA is wasted. The following question refers to the degree to which IA guidelines are taken into

account from management. Most of the auditors (64%) state that IA guidance is fully utilized by management, while the other 28% of the population state that guidelines are followed in certain cases. This is a hopeful fact especially for IA profession that had been recently established in global economy in an official manner and given the market barriers each country or region has. The figure 3.4.5 below is illustrating the degree to which management considers IA guidelines.



With respect to independence of IA department, this survey shows that IA is fully independent from top management in a percentage of 64 out of 100, indicating the significance independency has for organizations. The rest of the auditors believe that there is no independency at all in IA department in a 24% or they prefer not to say in a 12%. As it had been supported from previous studies (Mihret and Yismaw (2007), Mustika (2015), Mahzan et al. (2012), G. Drogalas et al. (2015), Ndirangu (2012)) independency plays a major role in IA operation because IA acts as assurance provider, evaluating every process from low business levels to higher echelons within the company. Without independence, objectivity of auditor opinion becomes obsolete and biased, blocking organization's welfare. As Ndirangu (2012) pointing in his research, IA sometimes may be reluctant to counter management due to its double role in protecting employer's interests and in parallel evaluate its decisions. To the same vain, this study asked the participants to disclose the degree of board of directors' evaluation by IA. The results show that 56% of the auditors consider IA evaluation to the board neutral, neither appropriate nor inappropriate. One quarter of participants thinks that evaluation by IA to the board is appropriate, while only a 12% of the responses indicate absolutely appropriate evaluation. Unfortunately, the degree to which IA carries out its assessment duty usually stops to tiers of organization that reach the maximum

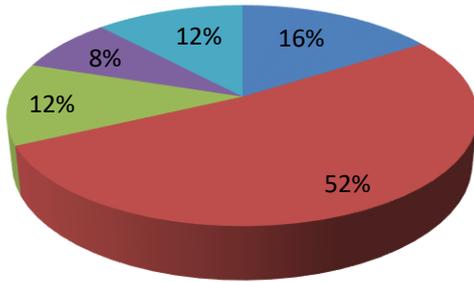
hierarchy level. Companies that wish to develop their overall operation should allow IA to blend in every process, even if it is high-up.

Regarding audit environment is the final group of questions in this study. In particular, the way IA is implemented within the company can influence the audit effectiveness and can allow IA to develop further. International Standards related to IA are greatly utilized by companies in Greece. Fully establishment reaches the percentage of 80% in addition to a percentage of 8% of partial establishment of Standards. Most common Standards for this study purpose considered COSO, COBIT, IPPF and ISO. In their major number (47.8%), the participants of the survey pointed COSO framework as the best to practice according to each company's business sector, followed by IPPF framework (30.4%) and ISO (21.7%). COSO provides a very valuable guidance for internal auditors that can be tailored by various different organizations no matter size, equity structure, financial situation or business field. Given that, it is a consequence the auditors would prefer to practice that among others. Additionally, the choice of the correct Standard framework for IA is not the only thing that matters. Organizations should also be in position to apply the framework effectively. The research underlines the appropriate implementation of the relevant framework, given that in general auditors state that chosen Standard framework is applied effectively to a significant degree within their companies. 60% of the respondents believe in the effective establishment of company's framework to a significant degree, whereas the 16% believes is absolutely applied in their cases. Only a 8% of respondents states that there is not at all effective application of the chosen Standards. All Standard frameworks offer a comprehensive solution to IA departments that wish to apply them, but provided that company itself will ensure their adequate use. Without right employment of frameworks, job of internal auditors faces difficulties and its efficiency decreasing.

Except Standards frameworks, companies follow also different approaches related to the establishment of Standards. More detailed, an organization can adopt a principle-based approach, which allows it to tailor programs and guidance according to its necessities, or a more prescriptive approach, that is stricter to the implementation of the guidelines as a rule. The direction to which a company will proceed and the approach will apply is connected with the effectiveness of IA. Principle-based approach is demonstrated as more effective by internal auditors to an 84%, in comparison with prescriptive approach, which is considered greatly effective only from a 32% of the auditors. A portion of 20% of the population that stands by the principle-based approach points the last as absolutely beneficial for the effective operation of IA, while a 44% remains neutral in considering prescriptive approach as beneficial or not. Also, half of the respondents believe that their company follows a principle-based approach to a degree from 50% to 79%, while 32% believe that their company follows a prescriptive approach to the same degree. Below 19% application has the 8% of auditors that their company follows a principle-based approach, while the 24% of the auditors that their company follows a prescriptive approach has below 19% application. Figure 3.4.6 and 3.4.7 show the two features as there are demonstrated by the survey.

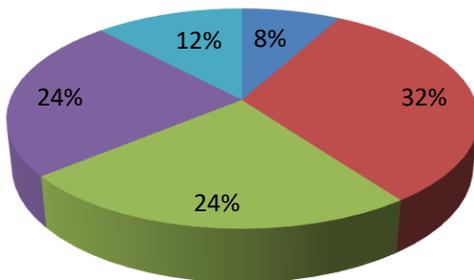
*Figure 3.4.6: Application extent of principle-based approach*

■ Over 80%      ■ From 50% to 79%  
■ From 20% to 49%   ■ Below 19%  
■ I don't know



*Figure 3.4.7: Application extent of prescriptive approach*

■ Over 80%      ■ From 50% to 79%  
■ From 20% to 49%   ■ Below 19%  
■ I don't know

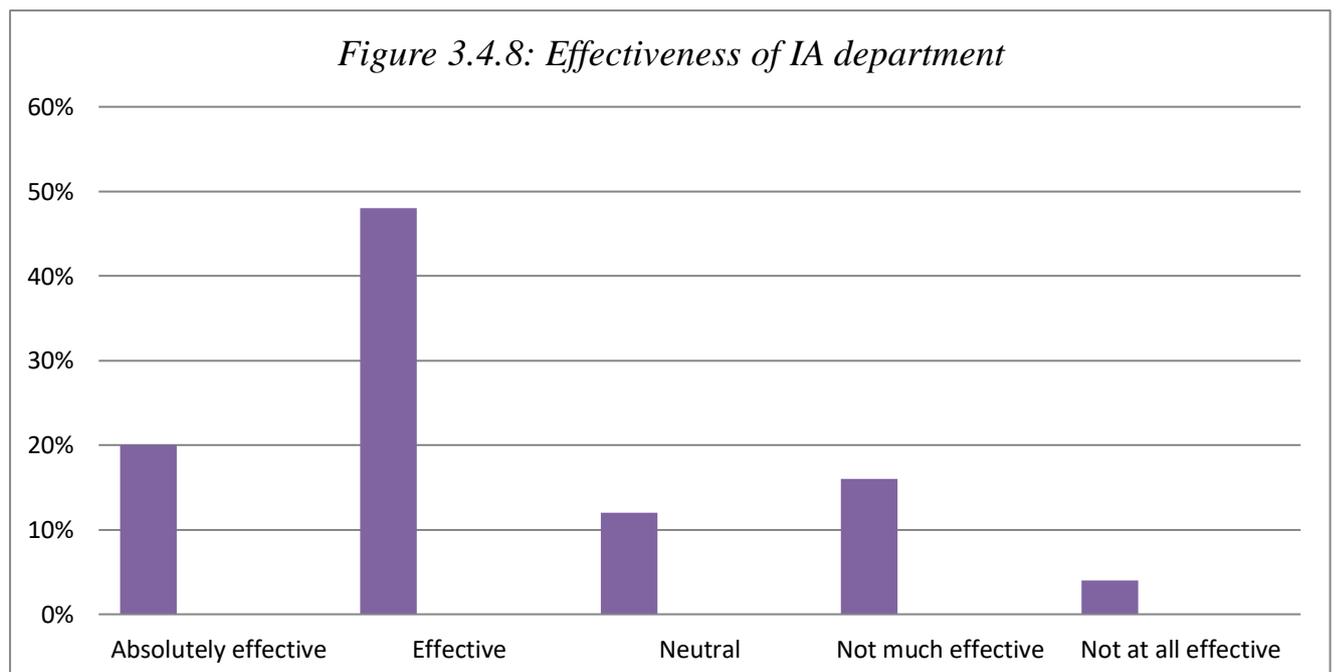


Auditors clearly prefer a freer concept of Standards to work within, probably because audit is a highly judgmental profession and most of the times one have to adopt in new circumstances. A more robust application of Standards cannot offer opportunities to overcome certain issues may arise and thus makes audit more complicated and difficult in its universal establishment. Principle-based perspective can be proved more valuable than a strict prescriptive approach in all organization processes including internal audit.

In addition, equity structure is analyzed as to its effect on IA effectiveness. Equity structure refers to the main fund contributor for the organization, i.e. public or private shareholder. A fully or partially public financed company has different structure in comparison with a private financed enterprise and this also affects up to a point IA function. The majority of the

auditors respondents (52%) stated that equity structure affects somehow the effectiveness of the audit, when around one quarter (20%) considers equity structure non relevant to the effectiveness of the audit. It is worth mentioned that a 16% of internal auditors believe that IA is completely affected by the equity structure of a company. Those findings can highlight the importance public or private sector has for internal auditors in Greece. At the public sector the audit in general may have various difficulties in designing and implementing an audit plan, while private enterprises may offer a more modern context for auditors to work effectively. In the same vain, allocation of resources also had been examined in this study. Particularly, the way company administrates its resources, financial or non-financial, can limit or facilitate IA and may result in strengthen or weaken its effectiveness. About half of the auditors (56%) answering this question, indicates that their company’s budget that is disposed to IA department is lower than the appropriate amount. Another 24% is answering that it is the perfect amount, while the rest 20% does not know what the budget of their department is. However, overall allocation of resources is considered adequate for the effective operation of IA for the 48% of the auditors, while a 28% has a neutral opinion regarding the appropriate distribution of resources within their organizations. It can be concluded that the financial budget of IA departments in Greek firms is not covering their needs. Many companies view IA as a necessary evil and so their financial support is not as good as it should be in order to enhance audit work. Although there is a small change in this point of view, there are more things need to be done further for the IA improvement.

The last two questions are general in regard to the internal audit effectiveness. Auditors asked to evaluate in a 1 to 5 point scale their perception about their IA department and how effective operates. A percentage of 48% of the auditors considers their IA department functions very effectively and a 20% believes that operates absolutely effective. Same portion of the population (28%) believes that their IA department does not function effectively enough. Figure 3.4.8 illustrates this image.



State law and regulation context is also questioned as to the degree to which IA follows legal framework of the country. Almost all participants say that their company's IA department is in compliance with State rules and regulations of IA. Indeed, law can be very complex in its application, but every organization has to be compliant in order to achieve its official function and have legal activity.

### 3.5 Conclusions

This study tries to fill the literature gap around the factors that affects IA effectiveness in nowadays global economy. Although is small in extent, focuses at the main points of IA and provides a structured research in order to understand to some point the way IA can fulfill its mission. The findings are grouped according to the organization of the factors that are analyzed here. Auditor attributes and behavior is the first pillar of IA effectiveness to be analyzed. In particular, this essay discloses that in relation to the auditor characteristics, the main significant factors are the educational level, previous work experience in audit-related business areas and communicational skills. Those three sub-factors considered essential for the effectiveness of the audit and can promote its welfare, according to this study. The fact is supported from the 48% of the respondents who believe that educational level of the auditor plays a very significant role in forming IA effectiveness, while the other 28% is oriented to that direction, rating education at significant level in relation to IA effectiveness. Work experience in business areas close to audit indicated as very crucial from the 68% of the participants in addition with work experience in non-relevant business areas that were highlighted as significant to some extent from the 84% of the respondents. Regarding communicational skills, a percentage of 64% points out the importance of skills related to communication, due to the role communication has in the audit process. Writing skills are also mentioned as significant from the 36% of the auditors, although in lower scale in comparison to communication skills. In contrast with those factors, age and gender are not considered as pivotal for the IA process. The 56% of the auditors believes that age and gender are not a contributor factor of IA effectiveness and the 70.8% do not believe that female presence will somehow affect IA. Only a small part of the population (20%) view age as a factor that can influence somehow audit, whereas a 24% indicates gender as a contributor to IA. In contrast with those results, the 60% of the companies have less than 5 young members (25-30 years old) in their IA team, while the mean percentage of female auditors in half of the companies fluctuates between 30% and 49%. So, the findings highlights also decreased representation of young and female internal auditors in the audit teams of Greek organizations.

Moreover, the second group of findings is related to organization approach about audit. The main sub-factors that are examined are management's support, communication aspect and independence of the audit team. Independency along with management support considered essential for IA operation within the organization. More detailed, tone-at-the-top is considered the most influencing factor of IA effectiveness as is indicated from the 65% of the auditors, while communicational support of the companies reaches the desirable level in the 56% of the cases. Down-to-top communication is also achieved in the 56% of the sample, indicating the attention is given to the correct feedback policy. Small percentage of participants states that tone-at-the-top is affecting partially IA function, around the same as the percentage of auditors that point the partially downward communication. Additionally,

internal auditors consider independence as a crucial influencing factor to IA effectiveness. Whereas the 64% of IA departments are independent from management, the 56% of the auditors consider board of directors' evaluation inadequate as to its extent. Achieved independency may be offended by instances of non-appliance. Another finding of the essay is that most of the management team takes into account the guidance of IA. Almost 65% of the cases utilize audit assistance and give space to the IA department to achieve its mission.

The final factor that is examined from the survey is the general audit environment within the company. This group of findings analyzes the effects of Standards establishment, equity structure and resource allocations in IA function. All three sub-factors have great importance for the accomplishment of IA effectiveness as it is defined in this study. International Standards are fully utilized by the majority of the companies and COSO framework has the central role in IA operation, as it is used by almost 50% of the audit departments. COSO and IPPF frameworks show their practicality as they are most commonly used by most of the auditors and offer a more complete solution for different types of organization. Also, principle-based approach around audit establishment is clearly preferred by internal auditors in comparison with prescriptive approach. As numbers show, the 84% of cases stands by a more free-tailoring principle-based approach and companies apply it at high degree (from 50%-79%), while the more strict prescriptive approach is preferred only from the 32% of the cases and has the same apply degree. Equity structure has much significance for more than a half of internal auditors, revealing the financial aspect of the main shareholder and how it affects IA. With regards to the allocation of resources among company's departments, half of the auditors state that there is no adequate budget disposal at IA department, while the general resource allocation is considered appropriate. Financial priorities may rate other departments of the company higher than IA, but non-financial resources may be considered more beneficial for the IA department. Finally, the last point of this study is that the 48% of the auditors consider their IA department as very effectively operating. So, it can be concluded that the general picture of those enterprises is clear and benefits the organizations within which IA functions.

Although important, this survey needs further exploration as to other factors that influence IA effectiveness due to its limited number of responses to the questionnaire. Larger sample will surely provide a holistic picture of the issue and more reliable conclusions will be drawn. Future studies are called to extend this study by examining the influence of other factors on the IA function and are encouraged to employ larger sample size to investigate whether various elements of IA may have somehow influence on the internal audit effectiveness. Also, further research can examine those factors in different countries or regions and compare it to Greek economy findings in order to extract international conclusions. This may provide new insights as to the general audit effectiveness and how it can be achieved through IA. More analysis on the field will be proved useful for better understanding the nature and scope of IA and its special role in the corporate governance.

## REFERENCES

- ✚ Ahmad N., Othman R., Othman R., Jusoff K.(2009), “The effectiveness of internal audit in Malaysian public sector”, *Journal of Modern Accounting and Auditing*
- ✚ Alzeban A., Gwilliam D. (2014), “Factors affecting the internal audit effectiveness: A survey of the Saudi public sector”, *Journal of International Accounting, Auditing and Taxation*
- ✚ Arena M., Azzone G. (2009), “Internal Audit Effectiveness: Relevant drivers of Auditees Satisfaction”, *International Journal of Auditing*
- ✚ Azzali S., Mazza T. (2018), “The Internal Audit Effectiveness Evaluated with an Organizational, Process and Relationship Perspective”, *International Journal of Business and Management*
- ✚ Badara M., Saidin S. (2013), “The Relationship between Audit Experience and Internal Audit Effectiveness in the Public Sector Organizations”, *International Journal of Academic Research in Accounting*
- ✚ Baharud-din Z., Shokiyah A., Serjana Ibrahim M. (2014), “Factors that Contribute to the Effectiveness of Internal Audit in Public Sector”, Baharud-din Z., Shokiyah A., Serjana Ibrahim M.
- ✚ Bonner S, Lewis B. (1990), “Determinants of Auditor Expertise”, Blackwell Publishing
- ✚ Carpenter T., Durtschi C., Milici Gaynor L. (2002), “The Role of Experience in Professional Skepticism, Knowledge Acquisition, and Fraud Detection”, Carpenter T., Durtschi C., Milici Gaynor L.
- ✚ Christ M. (2016)“Women in Internal Auditing”, The IIA-CBOK
- ✚ Cohen A., Sayag G. (2010), “The Effectiveness of Internal Auditing: An Empirical Examination of its Determinants in Israeli Organizations”, *Australian Accounting Review*
- ✚ COSO (2004), “Enterprise Risk Management -Integrated Framework-Executive Summary”, COSO
- ✚ COSO (2012), “Internal Control-Integrated Framework-Framework and Appendices”, COSO
- ✚ COSO (2013), “Internal Control-Integrated Framework-Executive Summary”, COSO
- ✚ COSO, (2017), “Enterprise Risk Management-Integrating with Strategy and Performance-Executive Summary”, COSO
- ✚ Dellai H, Ali Brahim Omri M. (2016), “Factors Affecting the Internal Audit Effectiveness in Tunisian Organizations”, *Research Journal of Finance and Accounting*
- ✚ Drogalas G., KaragiorgosT., Arampatzis K. (2015), “Factors associated with Internal Audit Effectiveness:Evidence from Greece”, *Journal of Accounting and Taxation*
- ✚ Gaballa A., Ning Z. (2011), “An Analytical Study of the Effects of Experience on the Performance of the External Auditor”, IACSIT Press

- ✚ Huong L. (2018), “Factors Affecting the Effectiveness of Internal Audit in the Companies: Case Study in Vietnam”, Proceedings of the International Conference on Business Management
- ✚ Lenz R., Sarens G., D’Silva K. (2014), “Probing the Discriminatory Power of Characteristics of Internal Audit Functions: Sorting the Wheat from the Chaff”, International Journal of Auditing
- ✚ Mackay P., Moeller S. (2007), “The Value of Corporate Risk Management”, The Journal of the American Finance Association
- ✚ MacRae E., Gils D. (2014), “Nine Elements Required for Internal Audit Effectiveness in the Public Sector”, The Institute of Internal Auditors Research Foundation-CBOK
- ✚ Mahzan N., Zulkifli N., Umor S. (2012), “Role and Authority: An Empirical Study on Internal Auditors in Malaysia”, Asian Journal of Business and Accounting
- ✚ Mihret D., Yismaw A. (2007), “Internal Audit Effectiveness: an Ethiopian Public Sector Case Study”, Managerial Auditing Journal
- ✚ Milonas N. (2017), “Introduction to Internal Audit-Risk Management”, Milonas Nikolaos
- ✚ Mustika A. (2015), “Factors Affecting Internal Audit Effectiveness”, Mustika Adhista Cahya
- ✚ Ndirangu S. (2012), “Factors that Contribute to the Effectiveness of the Internal Audit Function as a Corporate Governance Mechanism in Public Universities in Kenya: A Case Study of the University of Nairobi”, Ndirangu Samwel
- ✚ Petrodaskalakis M. (2014), “Internal Control System”, Petrodaskalakis Michalis
- ✚ Pickett K. (2011), “The Essential Guide to Internal Auditing”, 2<sup>nd</sup> edition, John Wiley and Sons
- ✚ Shamki D., Amur Alhajri T. (2017), “Factors Influence Internal Audit Effectiveness”, International Journal of Business and Management
- ✚ Shoommuangpak P., Ussahawanitchakit P. (2009), “Audit Strategy of CPAs in Thailand: How Does it Affect Audit Effectiveness and Stakeholder Acceptance?”, International Journal of Business Strategy
- ✚ Spenser Stuart (2017), “Profile of the Fortune 500 CFO-Today and in the future”, Spenser Stuart
- ✚ The IIA (2010), “Measuring Internal Audit effectiveness and Efficiency-IPPF Practice Guide”, The IIA
- ✚ The IIA (2015), “The Framework for Internal Audit Effectiveness: The New IPPF”, The IIA
- ✚ The IIA (2016), “International Standard for the Professional Practice of Internal Auditing”, The IIA
- ✚ The IIA (2016), “Measuring the Effectiveness of the Internal Audit Function Practical tools for internal auditors”, The IIA
- ✚ The IIA (2017), “IPPF Oversight Council-2017 Annual Report”, The IIA
- ✚ Turley S., Zaman M. (2007), “Audit committee effectiveness: informal processes and behavioral effects”, Emerald Group Publishing

## APPENDIX A: QUESTIONNAIRE

### Factors Affecting Internal Audit Effectiveness

#### Section 1: Personal Information

Gender:

- Female
- Male
- Prefer not to say

Age:

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Educational Level:

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In what sector (business area) is your organization operating?

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#### Section 2: Express your Opinion

1. Do you believe the age of an Internal Auditor affects the Internal Audit effectiveness?

Absolutely    1     2     3     4     5     Not at all

2. How many young members (25-35) has your IA department?

- <5 members
- 5-10 members
- >10 members

3. Do you believe Internal Auditor's level of education (bachelor, master, PhD) plays a role in Internal Audit's effective operation?

Significant role    1     2     3     4     5     No role

4. What is the mean educational level in your IA department?

- Bachelor
- Master
- Doctorate
- Other

5. Do you consider previous work experience in a non-relevant business area to IA affects Internal Audit effectiveness?

- Affects a lot
- Affects to some extent
- Does not affects
- I don't know

6. Do you consider previous work experience in a relevant business area to IA influences Internal Audit function?

- Affects a lot
- Affects to some extent
- Does not affects
- I don't know

7. To which level do communicational skills of an Internal Auditor support IA department in optimizing its operation?

Support greatly    1     2     3     4     5     Do not support at all

8. To which level do writing skills of an Internal Auditor support IA department in optimizing its operation?

Support greatly    1     2     3     4     5     Do not support at all

9. Do you believe gender has an impact in Internal Audit effective function?

High impact    1     2     3     4     5     No impact

10. What is the percentage of women in your company's Internal Audit department?

- over 80%
- between 51%-79%
- balanced 50%-50%
- between 30%-49%
- below 29%
- I don't know

11. Is the presence of women significant for the effectiveness of Internal Audit?

Very significant    1     2     3     4     5     Not at all significant

12. Is Internal Audit influenced by an organization's tone-at-the-top?

- Definitely is
- Is influenced only in certain cases
- Does not influenced at all
- I don't know

13. Do you believe your company's tone-at-the-top is well communicated downwards?

- Yes
- No
- Partially
- I don't know

14. Do you believe your company's Upper Management has a down-to-top communication approach (recommendations, complaints, uncover fraudulent)?

- Yes
- No
- Partially
- I don't know

15. Are the guidelines of Internal Audit taken into account from the Upper Management?

- Yes
- No
- In certain cases

- I don't know

16. Your company's Board of Directors provides ethical values?

- Yes
- No
- Some instances
- I don't know

17. To what extent Board of Directors' evaluation by Internal Audit is appropriate in your organization?

Absolutely appropriate 1  2  3  4  5  fully inappropriate

18. Is the IA department of your organization independent from Management?

- Yes
- No
- Prefer not to answer

19. Is your company following worldwide established IA Standards (COSO, COBIT, IPPF, ISO)?

- Yes
- No
- To some extent
- I don't know

20. Based on your organization's business area, what is considered the most adequate framework?

- COSO
- COBIT
- ISO
- IPPF
- Other

21. Based on your organization's business area, to what extent are the relevant Standards effectively applied?

Absolutely applied 1  2  3  4  5  Not at all

22. To what extent is your organization's equity structure (private or public) affecting the effectiveness of IA?

Completely affects 1  2  3  4  5  Does not affect at all

23. Do you believe a principle-based approach, which allows organizations to tailor programs to suite their necessities, is beneficial for IA?

Very beneficial 1  2  3  4  5  Not at all

24. To what extent your organization follows a principle-based approach?

- over 80%
- from 50% to 79%
- from 20% to 49%
- below 19%
- I don't know

25. Does a prescriptive approach enable IA effective operation?

Greatly 1  2  3  4  5  Does not enable at all

26. To what extent your organization follows a prescriptive approach?

- over 80%
- from 50% to 79%
- from 20% to 49%
- below 19%
- I don't know

27. The budget that your company disposes to IA department is:

- Lower than the appropriate amount
- Perfect amount
- Higher than the appropriate amount
- I don't know

28. Is your company's allocation of resources adequate for the effective operation of IA?

Perfectly adequate 1  2  3  4  5  Not adequate at all

29. Do you consider your company's Internal Audit department functions effectively?

Absolutely   1    2    3    4    5    Not at all

30. Is your company's IA department in compliance with State's laws and regulations?

- Yes
- No
- To some extent
- I don't know

Thank you for your time!

*I hereby declare that, in accordance with article 8 of Law 1599/1986 and article 2.4.6 par. 3 of Law 1256/1982, 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 partial or total plagiarism, and the sources used are strictly limited to the bibliographic references.*

*Sinoglou Maria*

**THE END**