CORPORATE GOVERNANCE AND INTERNAL CONTROLS: A CASE STUDY FROM GREECE

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Abstract

The objective of this paper is twofold. Firstly, it portrays and evaluates the existing corporate governance structure and secondly, highlights its connection with internal audit function and management practices. It is adopted a descriptive research analysis using the quantitative approach on a sample of listed companies in Athens Stock Exchange for the year 2016. Our methodological research instrument is based on COSO (2013) Internal Control - Integrated Framework. The paper concludes that corporate governance is driven to managerial excellence and effective governance because of internal audit processes, risk assessment, control activities, information and communication, and monitoring activities. The research contributes to the corporate governance literature by providing valuable insights into the major aspects of a well-functioning internal control system and its relevance to management performance. Proposed areas for future research directions should be discussed.

Keywords: Corporate Governance, Internal Controls, Management, COSO Model, Greek Listed Enterprises

1. INTRODUCTION

In a constantly changing economic landscape, the paramount importance of corporate governance is highly debated among academics, executives, investors, and policymakers. Although the term "Corporate Governance" was first evolved in the 1980s (Earl, 1983), the field of corporate governance dates back to the dominant paradigm of Principal-Agent (Agency) theory. Jensen and Meckling (1976:308), in their seminal work on agency theory, defined agency relationship as "a contract under which one or more (principals) engage another person (the agent) to perform some service on their behalf which involves delegating some decision – making authority to the agent".

A contract relationship may result in conflicting interests between principals (shareholders) and agent (top management) due to asymmetric information, adverse selection, and moral hazard. Such conflict of interest creates agency costs (Zain, et. al., 2010). In other words, shareholders may encounter problems of the hidden pursuit of private interests and opportunistic behavior by directors and management. Moreover, information and collective action problems not only prevent close monitoring of management performance but also enable directors and managers to develop a variety of techniques to tunnel assets and extract private gain at the expense of the company (McCahery and Vermeulen, 2010).

Although Agency theory is the dominant theoretical scheme in corporate governance studies, Stewardship theory is proposed as challenge that managers are "self-interested rational maximizers" (Chamber, et. al. 2013:18), having its roots in organizational psychology and sociology (Donaldson, 1990; Davis et. al. 1997; Cornforth 2003). Managers are good stewards of the corporate and work closely with the principal to achieve a "goal alignment" (Fan, 2004:3).

Under these perspectives, the OECD in *Principles of Corporate Governance* qualified the definition cited below: "Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined" (OECD, 2015:9). As such, corporate governance is a cornerstone of trust, transparency, ethics, accountability and risk management supporting long-term investment, financial stability and integrity to both listed and state-owned companies (Nerantzidis and Filos, 2014).

In Greece, the corporate governance framework has mainly developed through the adaptation of binding rules. For instance, the most important Law 3016/2002 for listed companies, which stipulates, inter alia, particular duties of the management about the composition of Board of Directors, non-executive directors' remuneration, the operation of internal audit units and the adoption of internal audit procedures (Koutoupis, 2012; Spanos, 2003).

In addition, the incorporation of legislative acts into the Greek legal framework creates a new set of corporate governance rules. This includes Law 3693/2008, which requires the creation of audit committees as well as important disclosure obligations regarding ownership and governance of a company. Meanwhile, Law 3884/2010, which incorporates Shareholder Rights Directive 2007/36/EC, brought about changes in the preparation of the General Meeting of shareholders and the information, which is posted on company's website. With regard to the provisions of Law 3873/2010, which transfer the European Directive 2006/46/EC on the annual and consolidates accounts of companies of certain legal type.

The Athens Stock Exchange and the Hellenic Capital Market Commission have further supplemented the corporate governance framework by introducing Rulebooks, Decisions and Directives concerning the requirements for the listing of securities, the operation of securities exchanges, the insider trading, the take-over offers, the requirements for the publication of a prospectus for the purposes of initial public offering and listing.

Our analysis is focused on particular traits of corporate governance and management control system in the context of the current situation in the Greek capital market. In this way, it aims to capture via the COSO Framework, the fundamental premise that the implementation of these traits contributes to improving organizational performance and governance.

The remaining of this paper is organized as follows: Section two briefly presents an overview of COSO 2013 Internal Control – Integrated Framework. Section three is dedicated to the literature review, whilst section four describes the research methodology. The empirical results are presented in section five and the last Section summarizes the paper's conclusion and further research.

2. BACKGROUND OF INTERNAL CONTROLS' STRUCTURE

The structure of corporate governance is comprised of distinctively interrelated components designed to safeguard the interests of shareholders and eliminate the agency costs. In order to fulfill these objectives, there is an imperative need for implementing an effective internal control system. The most widespread and recognized framework within corporate governance committees (Corporate Governance Committee, 2008), regulators (PCAOB, 2004) and professional bodies (Institute of Internal Auditors) that applied the internal audit dimension is the Committee of Sponsoring Organizations (COSO) Internal Control-Integrated Framework (referred to as "the COSO Framework") (Swinkels, 2009).

The COSO Framework was initially published in 1992 and in accordance with the evolution of the organization's operating environment updated in 2013. It was developed in order to "enable organizations to effectively and efficiently develop systems of internal control that adapt to changing business and operating environments, mitigate risks and acceptable levels, and support sound decision making and governance of the organization" (COSO, 2013:1). The COSO framework provides guidance for management on how to implement and evaluate internal control processes leading to the improvement of governance processes. Thus, it sets out a standard leadership umbrella for governing and managing a successful organization (COSO, 2014).

The COSO Framework sets forth three distinct but overlapping categories of objectives, which allow organizations to focus on separate aspects of internal control. Firstly, *Operations Objectives* refer to effectiveness and efficiency of the entity's operations and include operations and financial performance goals and safeguarding assets against loss. Secondly, *Reporting Objectives* pertain to the reliability of reporting and include internal and external financial and non-financial reporting. Thirdly, *Compliance Objectives* relate to adherence to laws and regulations to which the entity must follow (COSO, 2013).

In this sense, internal audit is not limited to a traditional view of financial and related administrative control but included the broader concept of management control and the importance of non-financial information. So, it is unequivocally defined as "a process, effected 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: i) effectiveness and efficiency of operations, ii) reliability of financial reporting and ii) compliance with applicable laws and regulations." (COSO, 1994:13).

Consequently, the aforementioned definition emphasizes fundamental concepts of internal control including that is a) a process consisting of ongoing tasks and activities, b) effected by people, not merely by policy manuals, systems, and forms, c) able to provide reasonable assurance, not absolute assurance, to an entity's senior management and board, d) geared to the achievement of objectives in one or more separate but overlapping categories and e) adaptable to the entity structure (Babkin, et. al., 2017; COSO 2014).

The internal control system consists of five essential components which are subdivided into seventeen principles. According to COSO's executive summary "These principles representing the fundamental concepts associated with each component. Because these principles are drawn directly from the components, an entity can achieve effective internal control by applying all principles. All principles apply to operations, reporting and compliance objectives" (COSO, 2014:2).

Component 1: Control environment

"Control environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization (COSO, 2013:31)". It influences the quality of a sound internal control system by ensuring that internal control is embedded into the structure and thinking of the company on both the management and staff level. It can be characterized as the "*control consciousness*" of the organization (Herz, et. al.

2017:21). The board of directors and senior management establish the tone from the top regarding the importance of internal control and expected standards of conduct. The control environment consists of principles such as established ethical values, management philosophy, assignment of responsibility and the leadership and guidance provided by senior management on internal control. There are five principles relating to control environment:

- Commitment to integrity and ethics.
- Oversight for internal control by the board of directors, independent of management.
- Structures, reporting lines and appropriate responsibilities in the pursuit of objectives established by management and overseen by the board.
- A commitment to attract, develop and retain competent individuals in alignment with objectives.
- Holding individuals accountable for their internal control responsibilities in pursuit of objectives.

Component 2: Risk assessment

"Risk assessment involves a dynamic and iterative process for identifying and analyzing risks to achieving the entity's objectives, forming a basis for determining how risks should be managed. Management considers possible changes in the external environment and within its own business model that may impede its ability to achieve its objectives" (COSO, 2013:59). The risk is defined as "the possibility that an event will occur and adversely affect the achievement of objectives" (COSO, 2013:59). There are four principles of risk assessment:

- Specifying objectives clearly enough for risks to be identified and assessed.
- Identifying and analyzing risks in order to determine how they should be managed.
- Considering the potential of fraud.
- Identifying and assessing changes that could significantly impact the system of internal control

Component 3: Control activities

"Control activities are the actions established by the policies and procedures to help ensure that management directives to mitigate risks to the achievement of objectives are carried out. Control activities are the "things a company does" to reduce the effect of risk from both an operational and functional reporting (COSO, 2013:87). They may be preventive or detective in nature and includes authorizations and approvals, verifications, reconciliations, and business performance reviews (INTOSAI, 2014). The three principles for establishing effective control activities are:

- Selecting and developing controls that help mitigate risks to an acceptable level.
- Selecting and developing general control activities over technology.
- Deploying control activities as specified in policies and relevant procedures.

Component 4: Information and communication

The decision-making-driven organization relies on internal and external sources of information. Information is necessary for the entity to carry out internal control responsibilities in support of the achievement of its objectives (INTOSAI, 2014). Communication is defined as "the continual, iterative process of providing, sharing and obtaining necessary information (COSO, 2014:105). The three principles relating to Information and communication are:

- Obtaining or generating relevant, high-quality information to support internal control.
- Internally communicating information, including objectives and responsibilities, necessary to support the other components of internal control.
- Communicating relevant internal control matters to external parties.

Component 5: Monitoring

Monitoring is defined as "management's activities that assess whether each of the five components of internal control and the relevant principles are present and functioning" (COSO, 2014:124). It is an imperative need to monitor the internal control system because of the changing technology that influences the potential existence of risks. Thus, monitoring should be part of the operational business as well as a supervisory activity performed by management on behalf of the board. An effective monitoring foundation is dependent on:

- Selecting, developing and performing ongoing or separate evaluations of the components of internal control.
- Evaluating and communicating deficiencies to those responsible for corrective action, including senior management and the board of directors, where appropriate.

3. RECENT LITERATURE REVIEW

Following a well-constructed search strategy previously applied by Neratzidis and Tsamis (2017), we conducted a literature review based on various well-known scholarly databases such as Google Scholar, Research Gate, Scopus, Social Science Research Network (SSRN) and Web of Science. We limited our focus extensively to articles published between 2014 and 2018, as the updated COSO Framework emerged in 2013. The search criteria are restricted to the following fields: "Internal audit", "COSO 2013 Framework". Relevant papers were selected in a systematic manner by title, abstract and Keywords. Thus, a total of 07 highly relevant publications were identified and analyzed in descending chronological order according to the published year.

Lawson, et. al (2017) gather evidence from 155 U.S. accounting professionals to examine views concerning the framework and its impact on key areas related to internal controls. The study finds that respondents perceive the 2013 Framework as an overall improvement to the 1992 Framework and view the explicit inclusion of the 17 principles as a beneficial addition. However, respondents indicate significant time and resources devoted by their internal audit department to the implementation process, with some firms also engaging outside consultants. Respondents also view the 17 principles as a set of rules for achieving effective internal controls but indicate these principles still allow for sufficient management judgment over internal control systems. In addition, most respondents report some type of change to at least one of the five components of internal control, with the Risk Assessment component receiving the greatest number of changes. Furthermore, a majority of respondents indicated improvements to controls across several IT-related areas.

Rae, et. al. (2017) examines the associations among COSO components and how they affect the monitoring function of organizations. Structural equation modeling was used to run confirmatory factor analysis to determine the measurement models for the five COSO components. The results show that control environment is associated with three dimensions of information and communication (information accuracy, information openness, communication, and learning). Additionally, two dimensions of information and communication (communication and learning and information feedback flow) were found to be associated with risk assessment. An indirect association is supported by the results between control environment and risk assessment through the associations among three dimensions of information and communication (information accuracy, information openness and information feedback flow. Risk assessment is associated with control activities, which is subsequently associated with monitoring.

Bruwer et. al. (2017) determines the empirical relationships between internal control activities and managerial conduct, and the perceived sustainability of South African small, medium and micro enterprises. Data were obtained from 120 members of management and 120 employees and 240 stakeholders of SMEs operating in the Fast Moving Consumer Goods industry. From the results, it is obvious that managerial conduct and internal control activities have a weak influence on the perceived sustainability. The latter is strengthened when management is skilled and knowledgeable, have strong values regarding self-control and humanitarian philosophies, and do not allow employees to authorize transactions without their consent.

The research of Lai, et. al. (2017) investigates the relationship between internal control weaknesses and firm performance based on the COSO five-component framework. They use secondary data from the Audit Analytics database and Compustat database for firms that are traded in the U.S. stock markets during the period 2004 to 2007. The results indicate that the control environment, information technology, accounting policies, procedures and documentation, and control design have a significant negative impact on firm performance. Lastly, the study reveals that delays in remedying internal control weaknesses negatively impact firm performance.

Agyei-Mensah, (2016) examined the impact of corporate governance factors on the disclosure of internal control information by firms in Ghana. A data set from 110 firms for the year ending of 2013 was used. The main finding is that most of the sampled firms did not disclose sufficient internal control information in their annual reports. Also, the regression analysis shows that board independence explains the internal control disclosure. Specifically, independent directors help to improve the quality of disclosure and increase the transparency of information.

The study of Adetula, et. al. (2016) assesses the internal control system of tertiary institutions in Nigeria using four tertiary institutions in South-West, Nigeria. Primary data was collected through questionnaire. Findings revealed that the universities adhered to internal controls established by management such as segregation of duties, performance of supervisors' role, internal audit functions and the management review function. Furthermore, many components of the internal control system are properly situated except that the internal audit unit of those universities is not independent. So, the study recommends that internal audit unit should be independent department and the head of that department should report directly to the highest level of management within the institution.

Yudianti and Suryandari (2015) evaluate the implementation of internal control and risk management in private universities and colleges located at Special Province of Yogyakarta. Primary data was collected by the use of a questionnaire that was addressed to the head of higher education institutions. The research found that the majority of the Higher Education Institutions have implemented internal control system which is related to internal control environment, risk assessment, control activities, information and communication, and monitoring. Other result showed that internal Control and risk management positively influenced the implementation of Good University Governance.

4. RESEARCH METHODOLOGY

4.1 Sample

For the accomplishment of the research only listed companies were selected, as they are obliged by the law to set up an Internal Audit department. Specifically, our pool of participants was drawn from the Index FTSE/ATHEX Large Cap that consists of 25 of the largest and most liquidated companies that trade in the Athens Stock Exchange in 2016. These companies, considering their market capitalization and high reputation, have the largest composite value, growth, and profitability score[3].

[3] Until October 2016 the Index consisted of the following 25 companies: Alpha bank (ALPHA), Aegean Airlines S.A. (AEGN), Viohalco S.A. (VIO), Gekterna (GEKTERNA), Grivalia Properties (GRIV), Power Public Corporation S.A. (PPC), Coca- Cola Tria Epsilon (EEE), Ellaktor (ELLAKTOR), Hellenic Petroleum (ELPE), National Bank of Greece (ETE), EYDAP S.A. (EYDAP), Eurobank (EUROB), Athens Exchange Group (EXAE), METKA (METKK), Motor Oil (MOH), Jumbo (BELA), Holdings Mytilineos (MYTIL), Piraeus Port Authority S.A. (PPA), OPAP (OPAP), Hellenic Telecom Organization S.A. (HTO), Piraeus Bank (TPEIR), Terna Energy (TENERGY), TITAN Cement (TITK), Folli Follie (FFGRP), Lamda Development (LAMDA).

4.2 Data collection method

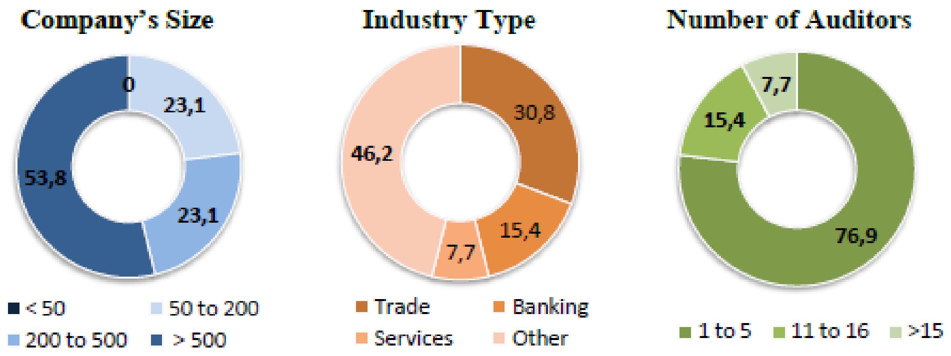
Primary data were collected using the quantitative technique of questionnaire. The questionnaire-based survey is considered the most appropriate research method as to seek information that is not publicly available, collect data quickly and anonymity feedback encourage openness and honesty (Drogalas and Siopi, 2017; van der Nest, 2017; Karagiorgos, et. al. 2011; Agbejule and Jokipii, 2009).

The structured questionnaire was parted from two sections. The first one includes three questions, the completion of which is mandatory, ensuring the anonymity and confidentiality. It intends to gather specific information in respect to the type of Industry Sector, the relative size of the company and also the number of auditors that a company employs. The second part consists of 17 close-ended statements about Control Environment, Risk Assessment, Control Activities, Information and Communication and Monitoring Activities. Respondents were asked to indicate how much the statements are true in terms of a five-point Likert scale that ranged from "Very Much" (scored as 1) to "Not at all" (scored as 5). A vast majority of researchers use this measurement as it is reliable, accurate and easy to use (Karagiorgos, et. al., 2011). The questionnaire was created in a Google Form format to facilitate the rapid supplementing and to be assessed and processed in real-time.

4.3 Data analysis

A total of 25 companies were invited to participate in the survey, yielding a response rate of 52%. Concerning the descriptive data for participants' companies, it is obvious from the Figure 1 that there is an unbalanced distribution among industry sectors. A substantial majority of companies (46.2%) belong to the segment "others" that includes Gaming, Manufacturing, Metal Construction and Real Estate, followed by Trade industry (30.8%). According to the number of employees as a proxy of company's size, the majority of companies can be classified as large-sized employing more than 500 employees (53.85). Lastly, the 76.9% of the companies have 1 to 5 auditors, when only 15.4% have more than 15 auditors.

Figure 1. Descriptive statistics for companies participated in the research



Source: Field survey 2016

5. EMPIRICAL RESULTS

Regarding the perspective of "Control Environment" it can be stated that most respondents (76.1%) strongly believe that the organization demonstrates a commitment to integrity and ethical values. To a lesser extent (53.8%), the Board of Directors demonstrates independence from management and exercises oversight of the development and performance of internal control. Moreover, participants verify that a job description at all levels has been done and the separation of duties and responsibilities of workers is clear (61.5% and 58.3%, respectively). Lastly, respondents (69.2%) support the view that management establishes structures, reporting lines, authorities, responsibilities in the pursuit of organizations' objectives (Table 1). So, strong controls exist in the (operating) control environment incorporating the principles of integrity and ethical values, attention, and oversight provided by the Board of Directors, management philosophy and operating style, organizational structure, manner of assigning authority and responsibility, and human resources policies and procedures.

Table 1. Perceptions of the Control Environment

Statements	Percentage				
	1	2	3	4	5
Q1. The organization demonstrates a commitment to integrity and ethical values.	76.1	23.1	0	0	0
Q2. The Board of Directors demonstrates independence from management and exercises oversight of the development and performance of internal control.	38.5	53.8	7.7	0	0
Q3. A job description at all levels has been done.	61.5	15.4	15.4	7.7	0
Q4. The separation of duties and responsibilities of workers is clear.	58.3	23.1	23.1	0	0
Q5. Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives.	69.2	23.1	7.7	0	0

Source: Field survey 2016

The results about the perspective of "Risk Assessment" indicate that the organization specified clear objectives for identification and assessment of risks (58.3%) and determined risk management processes (61.5%). In addition, respondents strongly agree (61.5%) that the organization considers the potential for fraud and significant changes identified and assessed (53.8%) (Table 2). Thus, it is generally accepted that strong controls exist in the risk assessment process incorporating the principles of specifying organization-wide objectives, analyzing process-level objectives, assessing the potential of fraud.

Table 2. Perceptions of the Risk Assessment

Statements	Percentage				
	1	2	3	4	5
Q6. The organization specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.	33.3	53.8	8.3	0	0
Q7. 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.	23.1	61.5	15.4	0	0
Q8. The organization considers the potential for fraud in assessing risks to the achievement of objectives.	61.5	30.8	7.7	0	0
Q9. The organization identifies and assesses changes that could significantly impact the system of internal control.	38.5	53.8	7.7	0	0

Source: Field survey 2016

Next, the research examines views concerning "Control Activities". The vast majority of respondents (approximately 92%) agree to a great extent that the organization selects and develops control activities to mitigate the risks and achieve its objectives. Additionally, more than half of the respondents (53.8%) agree that general Information and Technology activities are selected and developed. Similarly, the respondents (53.8%) agree that controls deployed policies and procedures (Table 3). Hence, it is widely accepted that organization develops strong control activities including policies and procedures that mitigate risks and also technology control activities.

Table 3. Perceptions of the Control Activities

Statements	Percentage				
	1	2	3	4	5
Q10. The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.	46.2	46.2	7.7	0	0
Q11. The organization selects and develops general activities over technology to support the achievement of objectives.	38.5	53.8	7.7	0	0
Q12. The organization develops control activities through policies that establish what is expected and procedures that put policies in action.	38.5	53.8	7.7	0	0

Source: Field survey 2016

Respondents' notion about "Information and Communication" is that management obtains, generates and uses quality information to support the internal control system (53.8%). In addition, effective information and communication are vital for an entity to achieve its objectives. Particularly, the organization management needs access to relevant and reliable communication related to internal as well as external sources (53.8% and 61.5%, correspondingly) (Table 4). As a result, the guiding principle of strong information and communication-related controls include the use of relevant information and the communication with internal and external parties.

Table 4. Perceptions of the Information and Communication

Statements	Percentage				
	1	2	3	4	5
Q13. The organization obtains or generates and uses relevant, qualified information to support the functioning of internal control.	53.8	38.5	7.7	0	0
Q14. The organization internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control.	53.8	30.8	15.4	0	0
Q15. The organization communicates with external parties regarding matters affecting the functioning of internal control.	15.4	61.5	7.7	15.4	0

Source: Field survey 2016

Finally, concerning the perceptions about "Monitoring Activities" the vast majority of respondents (92.4%) support that monitoring activities are performed through application of both ongoing evaluations and separate evaluations. In the same line, it is believed (92.4%) that these evaluations facilitate identification of internal control deficiencies and communicate them to higher levels of management and the board of directors responsible for taking a corrective action (Table 5). Inevitably, monitoring activities are accomplished through the ongoing monitor, separate evaluations, and reporting deficiencies.

Table 5. Perceptions of the Monitoring Activities

Statements	Percentage				
	1	2	3	4	5
Q16. The organization selects, develops and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.	46.2	46.2	7.7	0	0
Q17. 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.	46.2	46.2	7.7	0	0

Source: Field survey 2016

The overall results highlight the importance of achieving alignment with all the above components in order to ensure "*organizational governance maturity*" in the meaning of establishing adequate governance structures, systems and processes, and the degree to which the board, management, and employees implemented and adhered to these governance structures, systems and processes (Wilkinson and Coetzee, 2015). Namely, the significance of Control Environment to a sound internal control system is established by management, providing discipline and structure, human resources practices and assignment of responsibility. Risk Assessment determines the linkage between organization's objectives (broad and narrow) and possible risks to which organization are exposed. The vitally important role of Control Activities ensures an effective governance structure. Certain policies and procedures are planned and implemented in order to ensure correct responses to risks. Information and Communication emphasize the importance of information and internal communication flows in controlling entity's activities and last but not least, Monitoring Activities ensure that the effective operation of internal controls.

6. CONCLUSIVE REMARKS

The application of COSO internal control framework contributes to the improvement of governance, risk management, and internal control processes as it offers a systematic and disciple approach. Corporate should be benefited from a better understanding of the interrelated connection among the components of internal control systems, which are integrated into the management process resulting in the maximizing shareholders' value.

While all components of an internal control system are vital, a combination between them can lead to managerial excellence and effective governance. The component of Control Environment is the foundation of internal control function as it sets the tone at the top of the organization and provides policies and procedures and features discipline, structure, and integrity. Moreover, the organization inevitably faces different levels of risks. Organization's stewards performing an effective risk assessment mechanism focuses on identifying specific risk-based factors (internal and external), setting and following solid preventive actions. Furthermore, the flow of adequate information, at all levels of management when it comes to internal controls, facilitate the communication and ensure effective decision-making.

Overall, the internal control system is designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting and compliance. Therefore, internal audit is effective in each of those categories of objectives when Board of Directors and Management take the assurance that the company's objectives are managed and the published financial statements are reliable. In addition, assurance should be provided for the compliance with the provisions of the legislation in force.

The analysis should be viewed taking into account its limitations and raising topics for future research. First, the limited research sample delineates several avenues for expanding the empirical evidence. Secondly, it is recommended to apply the COSO 2013 Framework to more industries and sectors to gain in-depth knowledge of the components of internal audit in many areas and make the appropriate comparisons. Finally yet importantly, it would be useful to use more rigorous methodological techniques. Namely, the partial least square estimation method is found appropriate as it is able to handle errors of measurement in exogenous variables and accommodate both explanatory and confirmatory analysis.

REFERENCES

1. Adetula, D. T., Balogun, O. S., Uwajeh, Paul and Owolabi, F. (2016). Internal Control System in the Nigerian Tertiary Institutions. In: Proceedings of the 28th International Business Information Management Association Conference, 9-10 November 2016, Seville, Spain
2. Agbejule, A., and Jokipii, A., (2009). Strategy, control activities, monitoring and effectiveness. *Managerial Auditing Journal*, 24(6), 500-522, https://doi.org/10.1108/02686900910966503
3. Babkin E., Malyzhenkov, P., and Rossi F., (2017). The perspectives of DEMO Application to COSO Internal Audit Framework. *Advances in Enterprise Engineering XI*: 7th Enterprise Engineering Working Conference, EEWC 2017, Antwerp, Belgium, May 8-12, 2017, Proceedings Vol. 284
4. Bruwer J.P., Coetzee, Ph. & Meiring J. (2017). Can internal control activities and managerial conduct influence business sustainability? A South African SMME perspective. *Journal of Small Business and Enterprise Developmen*t, https://doi.org/10.1108/JSBED-11-2016-0188
5. Chambers N, Harvey G, Mannion R, Bond J, and Marshall J. (2013). Towards a framework for enhancing the performance of NHS boards: a synthesis of the evidence about board governance, board effectiveness and board development, Health Serv Deliv Res, 1(6).
6. Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2014). Improving Organizational Performance and Governance: How the COSO Frameworks Can Help, Jersey City: Committee of Sponsoring Organizations of the Treadway Commission
7. Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013) Internal Control – Integrated Framework, Executive Summary, Framework and Appendices, Illustrative Tools for Assessing Effectiveness of a System of Internal Control, Jersey City: Committee of Sponsoring Organizations of the Treadway Commission
8. Committee of Sponsoring Organizations of the Treadway Commission (COSO) (1994), Internal Control – Integrated Framework, Jersey City: Committee of Sponsoring Organizations of the Treadway Commission
9. Cornforth C. (2003). The governance of public and non-profit organizations: what do boards do? London: Routledge.
10. Davis JH, Schoorman FD and Donaldson L. (1997). Toward a stewardship theory of management. *Acad Manag Rev*. 22, 20–47. https://doi.org/10.2307/259223
11. Donaldson L. (1990). The ethereal hand: organizational economics and management theory. Acad Manag Rev, 15, 369–81. https://doi.org/10.2307/258013
12. Drogalas, G., Siopi, S. (2017). Risk management and internal audit: Evidence from Greece. Risk Governance & Control: Financial Markets & Institutions, 7(3), 104-110. https://doi.org/10.22495/rgcv7i3p10
13. Earl, M. (ed.) (1983) Perspectives on Management: A Multidisciplinary Analysis, Oxford University Press, Oxford
14. Fan, P.S. (2004). Review of Literature & Empirical Research on Corporate Governance. Financial Services Group Training Unit Monetary Authority Of Singapore, Monetary Authority of Singapore (MAS)
15. Herz, R., Monterio, J. B., & Thomson, C. J., (2017). Leveraging the COSO Internal Control—Integrated Framework to Improve Confidence in Sustainability Performance Data https://doi.org/10.1108/19348831211268634
16. INTOSAI, (2014) Internal Control System (IDI).
17. Jensen, M. C. and Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics*, 3(4), 305–60. https://doi.org/10.1016/0304-405X(76)90026-X
18. Karagiorgos, Th., Drogalas, G. and Giovanis, N. (2011). Evaluation of the effectiveness of internal audit in Greek hotel business, International Journal of Economic Sciences and Applied Research, ISSN 1791-3373, Kavala Institute of Technology, Kavala, 4(1), 19-34.
19. Koutoupis, A.G. (2012) Importing international corporate governance codes in Greek publicly listed enterprises: A case study analysis. *International Journal of Organizational Analysis*, 20(4), 447-463. https://doi.org/10.1108/19348831211268634
20. Lai, S.Ch., Li, H., Lin, H., & Wu. F., (2017). The Influence of Internal Control Weaknesses on Firm Performance. *Journal of Accounting and Finance*, 17(6), 82-95.

21. Lawson, B.P., Muriel, L., and Sanders S.P. (2017). A survey on firms' implementation of COSO's 2013 Internal Control–Integrated Framework. *Research in Accounting Regulation*, 29(1), 30-43.
22. McCahery J.A. and Vermeulen, E.P.M. (2010). Corporate Governance of Non- listed Companies, Oxford: Oxford University Press.
23. Nerantzidis, M. and Filos, J., (2014). Recent Corporate Governance Developments in Greece' Corporate Governance: The International Journal of Business in Society, 14(3). Available at SSRN: https://ssrn.com/abstract=2449971
24. Nerantzidis, M., and Tsamis A. (2017). Going back to go forward: on studying the determinants of corporate governance disclosure. *Corporate Governance: The International Journal of Business in Society*, 17(3), 365-402, https://doi.org/10.1108/CG-07-2016-0145
25. OECD (2015), G20/OECD Principles of Corporate Governance, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264236882-en
26. PCAOB (2004). An audit of internal control over financial reporting performed in conjunction with an audit of financial statements, Release No. 2004-001
27. Rae, K., Sands, J., & Subramaniam, N., (2017). Associations among the Five Components within COSO Internal Control-Integrated Framework as the Underpinning of Quality Corporate Governance. *Australasian Accounting, Business and Finance Journal*, 11(1), 28-54. doi:10.14453/aabfj.v11i1.4
28. Spanos, L. (2013). The evolution of Corporate Governance in Greece, Hellenic Observatory London.
29. Swinkels, W., (2009). Contributions and limits of Internal Auditing to the internal control of the firm. Paper Presented at the 7th European IACG Conference, 14 March 2009
30. van der Nest, D.P., Smidt, L., & Lubbe, D. (2017). The use of generalised audit software by internal audit functions in a developing country: A maturity level assessment. *Risk Governance and Control: Financial Markets & Institutions*, 7(4-2), 189-202. http://doi.org/10.22495/rgc7i4c2art2
31. Wilkinson, N., & Coetzee, P. (2015). Internal audit assurance or consulting services rendered on governance: How does one decide? *Journal of Governance and Regulation*, 4(1-2), 186-200. http://doi.org/10.22495/jgr_v4_i1_c2_p3
32. Yudianti, N. F., & Suryandari, H. I. (2015). Internal Control and Risk Management in Ensuring Good University Governance. *Journal of Education and Vocational Research*, 6(2), 6-12.
33. Zain, M. M., Abdul Wahab, E. A., & Foo, Y. B. (2010). Audit quality: Do the audit committee and internal audit arrangements matters? *Corporate Ownership & Control*, 8(1-3), 333-345. http://dx.doi.org/10.22495/cocv8i1c3p1