

# Compliance of Food and Beverage Companies as to the Requirements of Internal Audit

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**Abstract.** This study assesses factors influencing Internal Audit Quality (IAQ) in Greece. Hand-collected data were obtained from 2013 and 2014 annual financial reports from companies such as food industries, beverage –and their subcategories- industries as well as fishing and distillation, listed in Athens Stock Exchange (ASE). Previous literature was chosen in order to highlight significant independent variables. Linear regression analysis examines the association between Internal Audit Compliance (IAC) and seven principal factors. In order to define IAC we consider the compliance of an internal audit function analyzing in operational aspects such as the Segmentation of Duties and the Professional Competence and Knowledge Adequacy. The results found indicate Internal Audit Compliance, on a sample of Greek listed firms; have significant associations between the degrees of compliance to some external audit variables.

**Keywords:** Internal Audit Compliance, External Audit, Corporate Governance, Food and Beverage Industry, Greece

**Data Availability:** All data are publicly available.

## 1 Introduction

Internal audit regulations have been the subject of an ongoing debate among academics, regulations, and practitioners, all over the world, and its effectiveness remains controversial in the aftermath of the recent financial crisis (Altamuro and Beatty 2010). One of the objectives of an internal control system is to provide reasonable assurance regarding the reliability of financial reporting (COSO 1992). The OECD (Organization for Economic Cooperation and Development) published the “Corporate Governance Principles” in 1999. The term “corporate governance” is used to define the way companies are governed and audited. Corporate governance as

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a concept and as a method of verification of transparency, the effective financial reporting and the way companies function, is considered as top priority for the investors in the money market from 1990s until today (Xanthakis, Tsipouri, Spanos, 2003). The high profile financial reporting scandals that marked the first decade of this century like: Enron, Worldcom, Parmalat, have highlighted the weaknesses management and control in business and especially in listed companies, provided evidence that the auditing practices may be enriched and improved (Kirkos et al, 2007a, Kirkos et al, 2007b) and led to revisions in internal control regulations globally. Different countries make different choices regarding the reporting of internal control in annual reports. Anglo-Saxon countries, along with the U.S.A have pioneered in this issue by legislating laws such as Cadbury, Sarbaness-Oxley (SOX). The European Commission (2006) has chosen the “comply-or-explain principle” with regard to corporate governance regulation, meaning the management either has to comply with the applicable internal control regulations of the member state or explain and report why they do not comply. The Greek Code of Corporate Governance (EKED) has been drawn up with the initiative of the Association of Corporations and Industries (SEB) and was modified afterwards in the framework of its first review by the Greek Council of Corporate Governance (ESED) on 28<sup>th</sup> June 2013. The Code aims at constant improvement of the Greek corporate institutional framework and the wider corporate environment, as well as to increase the investors’ trust, not only to the total of the listed firms but also to each one of them separately, broadening at the same time the horizons of attracting entrepreneurial capitals. The Code is followed of the approach “comply-or explain” and demands from the listed firms that choose to implement it: to make known what specific intention of theirs and either to comply with the total of the special practices of the code or to explain the reasons for their non-compliance with the specific special practices (EKED, SEB 2013).

The purpose of this paper is to enhance the compliance of the companies, in the food and beverage sector, listed in ASE with the requirements of the Internal Audit, as defined by the Corporate Governance Code (CGC).

The rest of the paper is structured as follows:

- In Sect.2 the literature on IAQ is examined and specifically the literature on IAC.
- In Sect.3 a methodological notes describes the related indicators, the techniques and the regression model adopted in this study and the sample being considered.
- In Sect.4 results, in order to assess whether a relationship between the IA Compliance and the seven factors exists, in Food and Beverage companies and also presented directions for future research.

## 2 Literature Review

Law imposes the formation of an auditing committee on the listed firms. According to the optimum European practice, the Code recommends the formation of an auditing committee, which consists –in the majority- of independent non-executive members of the board. This recommendation improves the established order of corporate auditing of the listed firms in Greece, in which the dominance of big stockholders is obvious, as it enhances the feeling of safety of minority stockholders, imposing the independent supervision of the system and the internal auditing unit, including the auditing of financial informing. The listed companies are required –by law- to examine regularly their internal auditing system. What is defined as a system of internal auditing are all the procedures that are put in force by the Board, the Administration and the rest of the staff of a company, targeting at the ensuring of the effectiveness and the efficiency of the company tasks, the credibility of financial informing and the compliance with the applied laws and regulations (Kontogeorgis, 2013)

According to the model of Corporate Governance of Institute of Internal Audit (2005), the effective function of internal audit constitutes one of the basic pillars of corporate governance along with three others. Those three pillars are the control committee, the external auditor and company’s administration. The significance of the internal audit can also be stressed by the fact that in many stock markets it is compulsory for the listed companies to run internal audit procedures. Especially now, following the latest corporate scandals that shocked U.S.A. it is compulsory for the companies not only to enact the function of internal audit but also to enact control committees within the company aiming at the most efficient function of the company (IIA, 2015). The Internal Audit Department (IAD) must adopt the following definition coming from the Institute of Internal Auditors and is accepted worldwide: “Internal audit is an independent, objective, ensuring and consulting activity, designed to add value and improve an organization’s functions. It also assists the organization to achieve its professional goals by adopting a systematic, professional approach towards the evaluation and improvement of the efficiency of procedures of risk handling, of internal audit systems and corporate governance.

In 1992 the COSO committee sites a definition about internal audit that emphasizes the role of the administration during the control procedure. More specifically, according to COSO, “internal audit is a procedure which can be affected by the Company’s Board, the Administration and the rest of the staff and is designed to provide sufficient reassurance” regarding the achievement of the following objectives:

- The effectiveness and efficiency of the functions
- The credibility of financial status
- The compliance with the applied laws and regulations (COSO, 1992)

One of the objectives of an Internal Audit (IA) system is to provide reasonable assurance regarding the reliability of financial reporting. IA quality is an issue of great significance to both internal and external audit professions. Additionally, the quality of the Internal Audit Function (IAF) will probably affect the assessment,

carried out by management and the external auditors, of the effectiveness of internal control over financial reporting that is now required by Auditing Standard No 2 (Gramling et al, 2006, Boskou and Spathis 2014). The public trust in an auditor's judgment is highly important in the process of accepting audit functions as valued-added services, that drive credibility to published financial statements (Rezaee 2004; Arena and Azzone, 2009). As a result it is important to examine which monitoring mechanism corporations can use in order to ensure the effectiveness of their internal control (Krishnan, 2005). Typical of the quality changes that the concept of internal audit has undergone, is the existence of a current trend that compels the internal auditor to comprehend and probe a number of issues of the company before he completes his briefing towards the Board. The new extended responsibilities of the internal auditor can be abbreviated with the letters GRC, which mean Governance, Risk and Compliance (GRC). An accepted and reliable definition of the GRC is that of "Open Compliance and Ethics Group" that was drawn up by a group of professionals relevant to internal audit. A summary of this definition refers to how an organization perceives the expectations of those interested in it, how activities are managed and run so as to maximize the performance of these expectations, handling risks, being at the same time in compliance with the applied laws, regulations and duties (Marks, 2010). In an attempt to study the relationship between internal control reporting and accruals quality in an alternative internal control regime based on the "comply-or-explain principle" in the Netherlands. They found that the noncompliance rate of providing a statement of effective internal controls is relatively high, and that companies give generic explanations for noncompliance or no explanation at all. In addition, they found that the noncompliance rate of providing a statement of effective internal controls is relatively high (Van de Poel and Vanstrelen, 2011).

A survey in Italian listed firms tried to find if there is an association between the compliances to codes and internal control effectiveness through IAF operational aspects. They conclude that there are significant associations between the degree of compliance to some corporate governance regulation and the Internal Audit Department (IAD) index for the sample being considered (Regoliosi and D'Eri, 2014). Mahdy and Park (2014) examine the association between disclosure of internal control deficiencies and information asymmetry in the US secondary loan market. Motivation for their research was the fact that legislation SOX 2002 requires firms to disclose the effectiveness of their Internal Control weaknesses as well as management evaluation of the effectiveness of controls and procedures (section 302) and external auditor's opinion (section 404). This research on Saudi Arabia public sector employs several measures of Internal Audit Effectiveness (IAE), implement internal audit recommendations. The findings depict an association between management support and more effective internal audits and the necessity for implementation and compliance internal audit recommendations (Alzeban and Gwilliam, 2014).

Food and Drink Industry –even in financial crisis times- retains its fundamental role in Greek Economy and in Greek processing industry and has the potential to remain the basic force of the country's development. These industries constitute an important factor of Greek Economy, because they are supplied with raw materials from the agricultural sector and because they provide consumers with basic daily

goods (Mattas and Tsakiridou, 2010, Chatzipetrou and Moschidis, 2015). Issues that come up regarding the role of domestic food and drink industry as a vaulting bar for growth and development have to do with the extroversion and exporting, the equality of Greek products, the identity of the products and the organized promotion of Greek food products. The effective coordination and the close cooperation of the representatives of this sector can contribute to the improvement of the efficiency and effectiveness of the promotion of the Greek products, to the ensuring of choosing the proper strategy and to the stability of the realization of this long-term planning. The creation of additional value and the enhancing of the extroversion of the profession are up to –a great extent- to the promotion of the Greek product, to its relation with the third primary sector of tourism but also to the perspective that the profession presents on the financial elements revealed at the annual reports, adding value to it (Antoniadis, 2004, Report, IOBE 2013).

Against this background, the following hypothesis is formulated:

H1. *In a comply-or-explain regime, there is an association between Internal Audit Compliance (IAC) and external auditors report.*

### **3 Methodology**

#### **3.1 Sample size and selection**

Studies of internal audit quality are few in number compared to studies of external audits. This research investigates factors that may influence IAQ within food and beverage companies listed in ASE during the crisis period and especially years 2013 and 2014.

Specifically the sample consists of Food and Beverage industries and their subcategories as well, fisheries and distillation. This gives us 23 firms on an annual basis observation. Further we exclude 2 firms, one that its data was not available as it was on suspension (Dias SA) and the other because its twelve-month use does not coincide with the calendar year (1/1-31/12) but with the taxable year (1/7-30/6) (Hellenic Sugar Industry SA). This yields a final sample of 44 firms examined over a period of two years (Appendix A). We retrieve financial data and data relevant to the function of Internal Audit taken from the annual reports. Data on the internal audit requirements and ratios were hand collected and manually coded from the annual reports of the companies.

#### **3.2 Research models**

We use multiple linear regression analysis to examine the association between IAC and external auditors report. The *dependent* variable in this study is Internal Audit Compliance (IAC) which is a complex variable resulting from the i) Segmentation of Duties and the Professional Competence and knowledge Adequacy

ii) Regulation Levels of Approval iii) Authorization of Access to files on the financial statements.

The factors were identified from a review of previous academic literature studying the internal audit function. Guidance from International Professional Practices Framework (IPPF) and other related documentation is also considered. These choices identified seven factors as relevant to IAC: Opinion with paragraph, number of paragraphs, audit company code, return of assets (ROA), return of equity (ROE), leverage, company size.

We use external auditors' opinion, as *independent* variables, to evaluate IAC on:

1. Whether the external auditors' report contains remarks (with paragraph) in the external auditor's evaluation report. (An indicator variable equals 1 if the auditor's report contains remarks, otherwise it equals 0).
2. The number of issues external auditors' reports refers to. (An indicator equals to the total of the remarks).
3. Whether the auditing company belongs to Big.4 or not. (An indicator variable equals 1 if the audit company belongs to Big 4, otherwise it equals 0).

In order to ensure that we could isolate the factors that are associated only with high degree of compliance and that they do not belong to the external audit variables mentioned previously, it was important to include additional control variables which have been identified by previous literature as being significant ones in the analysis. For example, we examine specific firm characteristics like ROA, ROE, Leverage and Company Size:

- Return of Assets (net income/average total assets, Mahdy and Park, 2014).
- Return of Equity (net income/average equity).
- Leverage measured at year end 2013 and 2014: LEVERAGE (as measured in terms of Average Assets and Equity).
- Company size as of 31.12.2013 & 31.12.2014: SIZE (as measured in terms of the natural logarithm of total assets Klein 2002, Regoliosi and D'Eri 2012).

### 3.3 Empirical results

Descriptive statistics

Table 1 shows the mean and the std. deviation.

**Table 1.** Descriptive Statistics of All Variables

<b>Panel A: Full Sample (n=44 )</b>		
<u>Variable</u>	<u>Mean</u>	<u>Std. Deviation</u>
IAC	0.91	1.427
Opinion with paragraph	0.41	0.498
Number of paragraphs	1.22	1.725
Audit company code	0.15	0.363
ROA	-0.05	0.117
ROE	-0.07	2.307
Leverage	-2.30	47.356
Size	7.66	1.242

## Correlations

Table 2 present Pearson correlations between the transformed dependent and independent variables. The following correlations support several theoretical hypotheses: *IAC* is significantly positively correlated with *Number of paragraphs*. Table 2 also shows that many explanatory variables are significantly correlated with each other. The test of the formal hypothesis is based on linear regression analysis.

**Table 2.** Pearson Correlation Coefficients between the Variables

<u>Variable</u>	<u>IAC</u>	<u>Opinion with paragraph</u>	<u>Number of paragraphs</u>	<u>Audit company code</u>	<u>ROA</u>	<u>ROE</u>	<u>Leverage</u>	<u>Size</u>
IAC	1							
Opinion with paragraph	0.239	1						
Number of paragraphs	0.369*	0.851**	1					
Audit company code	0.069	0.136	-0.019	1				
ROA	0.052	-0.579**	-0.547**	-0.207	1			
ROE	0.001	-0.016	-0.072	0.018	-0.179	1		
Leverage	-0.219	-0.107	-0.115	0.043	0.022	-0.871**	1	
Size	0.213	0.203	0.180	0.215	-0.274	0.050	0.037	1

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the *Adjusted R<sup>2</sup>* is 0.209 which is satisfactory.

**Table 3.** Regression Model Summary

	Adjusted	ANOVA <sup>a</sup>	
	R Square	F	Sig
Regression	0.209	2.545	0.032 <sup>b</sup>

a. Dependent Variable: IAC  
b. Predictors: (Constant), Opinion with paragraph, Number of paragraphs, Audit company code, ROA, ROE, Leverage, Size.

Table 4 presents the empirical results. Significant variable is *Number of paragraphs*. As far as control variables are concerned, we can see that IAC is significant positive associated with *Size* and *ROA*.

**Table 4.** Regression Coefficients<sup>a</sup>

	Unstandardized		Standardized		
	B	Std. Error	Beta	t	Sig.
<i>(Constant)</i>	-8.350	4.138		-2.018	0.052
<i>Opinion with paragraph</i>	-0.707	0.782	-0.250	-0.905	0.372
<i>Number of paragraphs</i>	0.599	0.257	0.714	2.328	0.026
<i>Audit company code</i>	0.180	0.621	0.048	0.289	0.774
<i>ROA</i>	4.938	2.149	0.425	2.298	0.028
<i>ROE</i>	-0.113	0.189	-0.189	-0.599	0.553
<i>Leverage</i>	-0.023	0.021	-0.352	-1.061	0.296
<i>Size</i>	1.161	0.537	0.360	2.160	0.038

a. Dependent Variable: IAC  
b. Predictors: (Constant), Opinion with paragraph, Number of paragraphs, Audit company code, ROA, ROE, Leverage, Size.

## 4 Conclusions

The purpose of this study is to provide insights into the internal control quality, the compliance with the internal audit regulation and the relation with the external audit. In particular, we investigate the relation between compliance with the internal audit regulations as they depict on the annual reports and the present interaction with the indicators of external audit.

We conduct our study in Greece and specifically on food and beverage companies, which are listed in ASE for the following reasons. Firstly, a corporate governance code is applied in Greece, in particular the “comply-or-explain” regime which by its structure it contains important information on the internal audit system and its application. Secondly, we wished to view the correlation between internal audit quality and the external audit opinion. Last but not least, the specific sector of food and beverage industry is particularly important in our country due to its relation both to the primary and the tertiary sector of production, especially in these two years during the elation of the economic crisis, examined in our sample.

The results found indicate that internal audit compliance, the dependent variable, is a complexion of: 1) the segmentation of duties and 2) professional competence and knowledge adequacy and is related to a great extent with one of the three independent variables, that is “number with paragraph” which refers to the number of issues that the external auditor puts stress on without on the other hand his positive view to be influenced in the external audit report. There is also a high degree of correlation with the two of the four control variables, such as “SIZE”, which refers to the company’s size, and “ROA”, which is an indicator of how profitable a company is relative to its total assets.

Although considerable attention was given to the method and the design of this paper, some *limitations* still exist. Firstly, in order to be able to conduct the comprehensive literature review, the focus was kept relatively narrow in IAQ. Also, we found only 23 companies for the year 2013 and 21 for the year 2014 listed in ASE that are part of the food-beverage sector due to the economic crisis that our country has been facing for the last five years, many companies have been on suspension regime. Secondly, the existing literature studying the relation between IAQ and IAC is rather restricted, due to the fact that reports in IA departments are not publicly available. Results provided by this research cannot be regarded as generally applicable, although this study should contribute to the development of a deeper understanding of the characteristics of Internal Audit Quality.

The suggestions formed after the completion of this present research paper on *future research* could be as follows:

1. Extension of research to other sectors of Athens Stock Exchange in order to broaden our knowledge on the quality of internal audit on more sectors of ASE.
2. The correlation of internal audit quality with financial sizes. This investigation will provide the possible existence of relations between the internal audit quality and the financial sizes of a company.

3. Wider evaluation of the compliance with internal audit models or with corporate governance codes on the part that refers to the known object of internal audit.
4. The correlation of internal audit quality with the external audit and the interaction between them.
5. Focusing analysis on the specific components of the IA indicator or create other IA total indicators and attempting to assess the contribution of several CG elements to other aspects of IAQ.

The contribution of internal audit quality has greatly increased nowadays due to the hard economic conditions that our country faces. Internal audit can resolutely contribute to the improvement of competitiveness of Greek company, specifically in food and beverage sector and by extension to Greek Economy. This improvement can constitute a major factor so as Greece exits the economic crisis.

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## Appendix A

Industry Segment	Companies
Refreshments	Coca Cola AE
Distillation & Wine Production	Boutari SA
	Constantin Lazarides SA
Agriculture & Fishing	Dias SA
	Galaxidi Marine Farm SA
	Hellenic Fishfarming SA
	Nireus SA
	Kreka SA
	Selonda SA
Food	Creta Farm SA
	Elgeka SA
	Evrofarma SA
	Hellenic Sugar Industry SA
	K.Sarantopoulos SA
	Karamolegos SA
	Kepenos Flour Mills SA
	Kri-Kri SA
	Kriton Artos SA
	Loulis Mills SA
	Nikas SA
	Perseusgroup SA
	Sons E.Xatzikraniotis Flour Industry SA
	SteliosKanakis SA