Assessing the Importance of Internal Audit and ESG factors in Mitigating Financial Risk

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Aim of the Paper

To rigorously evaluate the effectiveness of internal audit functions in mitigating financial risks and integrating ESG (Environmental, Social, and Governance) considerations within the contemporary corporate environment.

1

Dual Focus: Investigating the combined effect of robust internal audits and ESG practices on financial performance, transparency, and regulatory compliance.

2

Empirical Insight: Offering firm-level, quantitative evidence from multiple sectors to inform theory and practice in integrated risk governance.

Key Contribution of the Study

Empirical Contribution

- Provides **quantitative evidence** from 120 professionals across multiple sectors of the Greek economy on how internal audit and ESG practices jointly contribute to mitigating financial risk.
- Tests previously **unexamined interactions** between internal audit effectiveness, ESG integration, and organizational resilience.

Theoretical Reinforcement

- Validates existing theories (e.g., agency theory, resource-based view) by showing how internal audits are ***not just compliance mechanisms*** but **strategic assets in risk governance**.
- Highlights the expanding **role of ESG in corporate governance** through its integration into audit processes.

Evidence-based recommendations

- Identifies **best practices** for embedding ESG metrics into internal audit workflows.
- Offers **actionable recommendations** to enhance audit-ESG alignment for improved transparency, sustainability, and financial performance.

Literature Review - Rise of ESG and non Financial reporting

Aluchna et al. (2022): EU Directive 2014/95/EU improved ESG performance, particularly social/ environmental—but not governance.

Turzo et al. (2022): NFR lacks consistency globally due to missing regulations; need for structured ESG frameworks.

Saini et al. (2022): Bibliometric mapping of ESG disclosure evolution—emphasized growth in research, but gaps in standardized ESG evaluation.

Literature Review - ESG Integration Challenges and Audit Implications

Zhang et al. (2023): ESG disclosure increases audit fees; signals rising perceived risk and scrutiny from auditors.

McMeeking et al. (2022): Auditors weigh voluntary ESG disclosures when assessing audit risk—especially post-crisis.

Hua & Alam (2021): Higher ESG risks = higher audit fees and reduced earnings manipulation, showing how ESG affects audit quality.

Literature Review - Internal Controls and Risk Mitigation

Cohen & Sayag (2010): Management support and auditor competence are key to internal audit effectiveness.

Akwaa-Sekyi & Gené (2016): Strong internal controls reduce credit risk in banks.

Chen et al. (2020): Internal controls improve corporate cash management and M&A decisions in China.

Literature Review - Towards Integration

Bozzolan & Miihkinen (2021): Investors demand ESG-related risk disclosures, yet assurance remains inconsistent.

Kamarudin et al. (2023): ESG risk must be considered in audit procedures; limited research on internal auditors' roles.

Boufounou et al. (2024): Study on Greek local governments shows gaps in internal audit implementation, especially in ESG-related areas.

Research Questions

Does the perception of internal audit effectiveness differ across age groups taking into account ESG factors?

Is there a difference between genders in the perceived effectiveness of internal audits in fraud prevention based on ESG factors?

Are there industry-specific differences in how organizations assess their risk tolerance based on ESG Factors?

Research Methodology

Research Design

Adopted a quantitative approach to examine how internal audit mitigates financial risk

Supports **measurable, replicable insights** across corporate contexts

Anchored in empirical, variable-based analysis (Creswell, 2014; Bryman, 2012)

Suitable for evaluating internal control systems using structured instruments

Sampling Strategy

Employed **convenience sampling** due to time, budget, and access constraints

Targeted professionals with audit/finance expertise for relevant insight

Enables fast, efficient participant recruitment (Etikan et al., 2016)

Limitation: Reduces generalizability but supports exploratory analysis

Data Composition and Sample Structure

Participants

- **120** internal auditors and financial professionals
- Representing organizations across **diverse sectors**
- Recruited using **convenience sampling**

Structured online questionnaire covering

- Demographics & professional background
- Perceptions of internal audit functions

Distribution

- Shared via **professional social media groups**
- Utilized **Google Forms** for data capture and storage

Ethical Considerations

- Participants received **informed consent forms**
- **Assured anonymity, voluntary participation, and withdrawal rights**
- Aligned with APA ethical standards

Analysis - Linear Regression

The regression equation applied in this study uses a single independent variable to predict a dependent variable.

$$Y=\beta_0+\beta_1 X+\epsilon$$

Where

- **Y**: Total Internal Control Effectiveness Score
- β_0: Intercept (constant of the equation)
- β_1: Coefficient of the independent variable, indicating the change in the dependent variable for each unit change in the independent variable
- **X**: Organization's willingness to pursue investment opportunities under uncertainty
- ε: Error term

Investigation of Research Question 1

Does the perception of internal audit effectiveness differ across age groups taking into account ESG factors?

Ranks

	In which age category do you belong?	N	Mean Rank
Sum Internal Control Effectiveness Scale	21-29	30	35,53
	30-39	36	29,39
	40-49	22	30,27
	50-59	32	27,19
	Total	120	

Test Statistics[a,b]

	Sum Internal Control Effectiveness Scale
Kruskal-Wallis H	1,924
df	3
Asymp. Sig.	,588

a. Kruskal Wallis Test
b. Grouping Variable: In which age category do you belong?

- **No significant difference** in perceptions across age groups (p =0.588)
- **21–29 age group** had highest mean rank (35.53), but not statistically significant
- Supports uniform audit engagement across all age groups, and effective communication and training across the organisation

Investigation of Research Question 2

Is there a difference between genders in the perceived effectiveness of internal audits in fraud prevention based on ESG factors?

Ranks

	What is you gender?	N	Mean Rank
Our organization's internal control system effectively prevents fraudulent activities.	Male	52	28,38
	Female	68	32,12
	Total	120	

Test Statistics[a,b]

	Our organization's internal control system effectively prevents fraudulent activities.
Kruskal-Wallis H	,703
df	1
Asymp. Sig.	,402

a. Kruskal Wallis Test
b. Grouping Variable: What is you gender?

- **No significant difference** in perceived audit effectiveness by gender (p =0.402)
- Women reported slightly higher mean rank (32.12) than men (28.38)
- **Null hypothesis retained**: gender does not influence audit perceptions
- Indicates **perception consistency** across male and female professionals

Investigation of Research Question 3

Are there industry-specific differences in how organizations assess their risk tolerance based on ESG Factors?

Ranks

	Please indicate the sector in which your organization operates	N	Mean Rank
Sum Organizational Risk Tolerance	Finance and Banking	32	20,94
	Manufacturing	26	28,73
	Technology	32	39,31
	Services	30	32,83
	Total	120	

Test Statistics[a,b]

	Sum Organizational Risk Tolerance
Kruskal-Wallis H	9,543
df	3
Asymp. Sig.	,023

a. Kruskal Wallis Test
b. Grouping Variable: Please indicate the sector in which your organization operates

- **Statistically significant** differences in risk tolerance across sectors (p =0.023)
- **Finance sector** had the **lowest** perceived risk tolerance
- **Technology sector** showed the **highest** risk tolerance
- Findings support the need for sector-specific risk strategies

Investigation of Research Question 4

Can the effectiveness of internal audit decision-making predict an organization's willingness to pursue investment opportunities under uncertainty and ESG?

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,782	,790		9,853	,000
	In the face of significant financial uncertainties, how likely is your organization to pursue investment opportunities?	,395	,232	,218	1,705	,094

a. Dependent Variable: Sum Internal Control Effectiveness Scale

- **No significant predictive relationship** found (p = 0.094)
- Positive trend observed, but not statistically strong
- **R = 0.218** indicates only a weak linear relationship
- Internal audit effectiveness likely influenced by **more complex or unmeasured factors**

Key Takeaways and Theoretical Contribution

Core Findings

- Internal audit functions play a **vital role in risk mitigation**, corporate integrity, and financial resilience.
- Confirmed the applicability of **agency theory** (Jensen & Meckling, 1976) and **resource-based theory** (Barney, 1991) in the context of audit governance.

Empirical Validation

- Quantitative results support the strategic role of internal audits as more than compliance tools.
- Reinforces past studies (e.g., Akwaa-Sekyi & Moreno, 2017; Chen et al., 2020) that link audits to financial discipline.

ESG Integration and Strategic Implications

ESG and Internal Audit

- Audits must **evolve to include ESG**: environmental impact, labor practices, diversity, etc.
- Auditors are uniquely positioned to **validate ESG data**, assess sustainability controls, and monitor compliance (Boufounou et al., 2024; COSO, 2013).

A Strategic Shift

- Embedding ESG in audit processes builds **organizational transparency** and **non-financial reporting credibility**.
- Enhances long-term risk awareness and strengthens corporate sustainability.

Practical Implications & Future Directions

Practical Implications

- **Perceptions of audit effectiveness** did not vary by age, gender, or role—supports unified governance efforts.
- Audit functions should be **inclusive, adaptive, and ESG-aware**, reinforcing accountability across the board.

Future Research

- Explore how AI, ESG standards, and global regulations reshape audit practices.
- Aim: governance systems that are **financially sound**, **socially responsible**, and **environmentally sustainable**.

Thank You

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