

## Evaluation of Climate Change As a Global Risk Factor in Terms of Internal Audit Risks

### *Küresel Bir Risk Faktörü Olarak İklim Değişikliğinin İç Denetim Riskleri Açısından Değerlendirilmesi*

#### Abstract

Internal audit is a field of practice that adds value to organizations. Considering that the management, economy, and finance world of the future will become more complex, it can be said that the assurance and consultancy services provided by the internal audit to the top managers will gain increasing importance. The risks faced by risk-based internal audit, which has become a modern internal audit approach, tend to increase with the changing and dynamic environment. One of these risks is climate change, which has become more evident in the 21st century, affecting the whole world and leaving visible results locally. Climate change is the increasing trend in global temperatures with the effect of greenhouse gases. In our study, climate change was emphasized and its results on the earth were evaluated. One of these consequences is the impact of climate change on the internal audit activity. In this study, the place of climate change in internal audit risks has been examined by compiling from international reports. Studies show that climate change, as an internal audit risk focus, has been on the rise especially in the last five years. If the world or businesses want to respond to climate change, the measures taken and the solutions reached should be with a participatory approach from the individual or micro level to the social or universal level.

**Keywords:** *Climate change, internal audit risks, risk factors*

#### Öz

İç denetim kurumlara değer katan bir uygulama alanıdır. Geleceğin yönetim, ekonomi ve finans dünyasının daha karmaşık hale geleceği göz önüne alındığında, iç denetimin üst düzey yöneticilere sağladığı güvence ve danışmanlık hizmetlerinin giderek önem kazanacağı söylenebilir. Modern bir iç denetim yaklaşımı haline gelen risk odaklı iç denetimin karşılaştığı riskler, değişen ve dinamik ortamla birlikte artma eğilimindedir. Bu risklerden biri de 21. yüzyılda daha da belirginleşen, tüm dünyayı etkileyen ve yerelde görünür sonuçlar bırakan iklim değişikliğidir. İklim değişikliği, sera gazlarının etkisiyle küresel sıcaklıkların artması eğilimidir. Çalışmamızda iklim değişikliği üzerinde durulmuş ve bunun yeryüzündeki sonuçları değerlendirilmiştir. Bu sonuçlardan biri de iklim değişikliğinin iç denetim faaliyeti üzerindeki etkisidir. Bu çalışmada iklim değişikliğinin iç denetim riskleri içindeki yeri uluslararası raporlardan derlenerek incelenmiştir. Araştırmalar, iç denetimin risk odağı olarak iklim değişikliğinin özellikle son beş yılda artış gösterdiğini gösteriyor. Eğer dünya ya da işletmeler iklim değişikliğine yanıt vermek istiyorsa, alınan önlemlerin ve ulaşılan çözümlerin bireysel ya da mikro düzeyden toplumsal ya da evrensel düzeye kadar katılımcı bir yaklaşımla olması gerekmektedir.

**Anahtar Kelimeler:** *İç denetim riskleri, iklim değişikliği, risk faktörleri*

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**Cite this article as:** Tanç, A., & Yenisu, E. (2023). Evaluation of climate change as a global risk factor in terms of internal audit risks. *Journal of Business Administration and Social Studies*, 7(2), 156-166.

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**Received:** August 29, 2023

**Accepted:** September 04, 2023

**Publication Date:** September 25, 2023



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## Introduction

Internal audit can be considered as a management tool that facilitates the implementation of international standards (Aslan, 2010; 63). In Turkey, the necessary importance is not given to internal audit by managers and employees (Memiş, 2007; 475). In the world, in parallel with the increase in governance trends, internal audit activity is used in a very wide area. As

a matter of fact, in the globalizing world, it is requested that company management act more transparently and responsibly in the international arena and be cautious against risks that may threaten the company (Demirbaş, 2005; 168). As an interdisciplinary approach, the internal audit activity contributes to finding and solving the deficiencies in the planning, organizing, directing, coordination, and control activities, which are the basic functions of business management (Tuan and Memiş, 2007; 13). As an approach, internal audit is not only for the private sector today, but it is also effective in public administrations. As a matter of fact, the internal audit activity is an innovative approach to public administration and will contribute to the effective, economic, and efficient management of public resources with financial transparency and accountability (Şahin, 2008; 300-301).

On the other hand, businesses can succeed significant success in achieving corporate goals by carrying out continuous audit and internal audit activities together (Memiş and Tüm, 2011; 145). Internal audit evaluates risks in ensuring information security in businesses and provides feedback and suggestions to increase efficiency and productivity in line with corporate purposes (Kurnaz and Dindaroğlu, 2015; 51). The main factors that determine the effectiveness of internal audit are the competence of the internal audit staff and the interaction of internal audit with the audit committee (Josh et al., 2022; 35). However, there is an important relationship between the audit committee, the risk management system, and risk-based internal audit. The fact that the members of the audit committee are experienced facilitates the implementation of the risk-based internal audit approach in the institution (Abidin, 2017; 373).

The definition of the concept of audit is in a constant change in the world and in Turkey. As a matter of fact, the traces of this change are seen in the innovations in the understanding of audit (Bozkurt, 2013; 61). With the rapidly increasing use of developing and changing information technologies in business processes, the internal audit function has also started to focus on information technology audit (Önce and İşgüden, 2012; 60-61). Moreover, technological developments will increase the importance of internal auditors supporting managers in their decisions and providing consultancy on information technologies (Sabuncu, 2018; 788). To be concrete, the importance of cybersecurity and digital assurance concepts will increase in terms of internal audit activities with the digital transformation experienced in organizations. In other words, cybersecurity and digital assurance will emerge as one of the most important risk focuses in terms of internal audit in the coming years (Akmeşe, 2020; 116). According to empirical findings, there is a positive relationship between the digitalization of the business environment and the use of data analytics for internal auditors. The more organizations become digital, the more the way internal auditors work is affected (Betti, Sarens, & Poncin, 2021; 881). When the effects of digitalization are evaluated regionally, developments in the changing environmental and information technologies in Europe lead to changes in the internal audit process (Allegri, 2006; 852). On the other hand, developments

in the field of financial technologies are also important factors affecting internal audit activity. As a matter of fact, internal auditors should have sufficient knowledge about blockchain technology, especially in terms of risk management, with its increasing importance in the financial world. To tell the truth, blockchain technology will affect internal audit activities more over time (Karahan and Tüfekçi, 2019; 68).

The change in internal audit activities is in line with developments in different sectors. With the establishment of internal audit departments in the banking sector, an effective internal control mechanism will be established, risks of fraud and abuse will be reduced, and management activities will be contributed (Ceran, 2009; 177). More importantly, it has been seen that the audit approach applied by the banking sector is very detailed and broad (Kartal, 2013; 34). On the other hand, the Standards of the Institute of Internal Auditors and the other evaluations they have published have significantly affected the convergence of companies in terms of internal audit in some countries (Sarens et al., 2011; 104).

There is an organic link between internal audit, internal control, and independent audit. Although internal control and internal audit are different concepts, they are inseparable parts. Internal audit is indispensable for ensuring the effectiveness of internal control and achieving targets (Sabuncu, 2017; 170-171). Actually, the quality of the internal control is positively affected by the reporting and business performance of the internal audit system in the organization (Fadzil et al., 2005; 860). On the other hand, for a corporate structure that contributes to the objectives of the business, internal control, internal audit, and independent audit must be in harmony and complement each other in cooperation (Demir, Ülker, & Arslan; 2018; 95). Moreover, if there is a strong internal control and internal audit mechanism in the enterprise, this will increase the quality of the external audit and reduce the costs of the independent external audit (Sağlar, 2009; 357). This will also improve the quality of financial information in the economy as a whole.

Internal audit increases the quality of corporate governance with the assurance it provides impartially and independently, on the other hand, developments in corporate governance allow for a better internal audit activity (Türedi, Karakaya, & İldem, 2015; 70). As the size of the firm increases, the rate of risk-based internal audit planning also increases (Castanheira et al., 2010; 79). It has been seen that there is a consensus that internal audit practices in large enterprises are regarded as a necessity, that internal audit increases value, increases efficiency, and has a role to prevent errors/fraud (Gökçen and Yelken, 2019; 175). On the other hand, in terms of management, internal audit and total quality management approach positively affect each other and increase the efficiency and productivity of enterprises (Aslan and Özçelik, 2009; 109). For all these gains, the audit activity can be successful if the auditor does not leave the internal audit philosophy based on international standards while carrying out the audit activity (Bayrak, 2018; 986).

With the risk-based internal audit approach, which is a modern internal audit approach, all risks that businesses may encounter in the future, unlike the traditional approach, are taken into consideration. (Türedi, Zor and Gürbüz, 2015; 12). The main role of internal audit in enterprise risk management is to provide assurance to senior managers in line with the effectiveness of risk management (Bozkurt, 2010; 28). More importantly, there is a linear relationship between the importance that companies give to internal control and internal audit and the importance they attach to risk management (Özkardeş, 2017; 198).

In recent years, there have been significant changes in internal audit approaches. In the modern internal audit approach, internal audit is no longer “informing” but “interpreting” and is an integrated assurance model that adds multifaceted/real-time value (Kahyaoğlu, 2012; 10). Internal audit today requires a broad set of special skills in all areas. As a matter of fact, the internal audit process is in a rapid change (Hass et al., 2006; 835). The audit profession has also been adversely affected by the high-risk process we are in, especially coronavirus disease 2019 (COVID-19). The way out of this negative situation can be achieved by increasing the effectiveness of audit committees and expanding continuous audit (Kaya, 2021; 134-135). While the basic principles of the audit process have not changed with the COVID-19 period, there have been major changes in the implementation processes or implementation tools (Selimoğlu and Saldı, 2021; 14). Today, in which risk management is applied to audit in line with new developments, the auditor has to focus on high-risk areas (Kishali and Pehlivanlı, 2006; 75). In our study, the issue of climate change, with its increasing importance from these risk areas, has been tried to be discussed.

This article consists of six parts. In the first part, the introduction, the literature on internal audit has been tried to be caught. A separate literature review section has not been created as the study did not include an empirical analysis and focused on qualitative approaches rather than empirical results. In the second part, which follows, we try to explain the concepts of internal audit and risk-based internal audit. In the third part, the subject of global climate change, which is essentially an out-of-field subject, is examined in general terms. In the fourth part of the article, the research method used in this study is briefly introduced. In the fifth part of the study, the effects of climate change risk on internal audit are discussed. The article is concluded with the sixth section devoted to conclusions and recommendations.

### Internal Audit and Risk-Based Internal Audit

Internal audit is a contemporary practice that adds value to organizations. As the ownership structures of businesses change and the number of related parties increases, the importance of internal audit activities has increased. The internal auditor provides independent and impartial assurance and consultancy in order to contribute to the achievement of the corporate goals and objectives of the organization he evaluates. While the internal audit unit carries out this

task with the authority it has acquired through the internal audit regulation, it can look at the organization from every aspect, in other words, from a very broad perspective. On the other hand, as a more complex business world will be faced in the future, it is expected that more importance will be attached to the internal audit activity. As a matter of fact, some authors consider the activity of internal audit as one of the basic functions of management. Again, according to some authors, modern internal audit is one of the value-creating elements.

The internal audit department, which is the internal audit activity body, is responsible to the top management of the organization. More specifically, the internal audit department reports to the board audit committee, which is coordinated by the organization's chairman and the chairman of the board. But this relationship is not a hierarchical dependency relationship. Because the internal audit department is a consulting unit and should be in a harmonious relationship with the top management.

The place of the internal audit unit in the organizational hierarchy is tried to be explained in Figure 1.

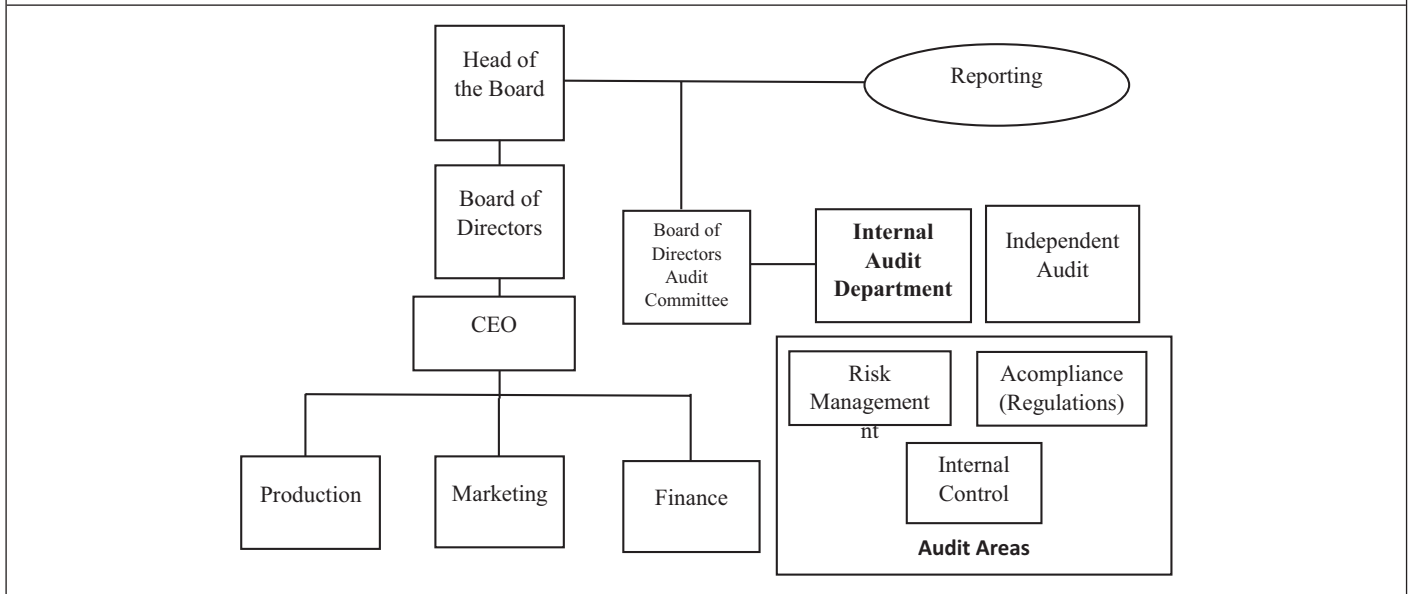
Internal audit activity basically includes three elements as stated in international internal audit standards. As can be seen from Figure 1, these are as follows:

- Contributing to corporate risk management in all aspects,
- Monitoring compliance with applicable rules and legislation,
- To evaluate the effectiveness of the internal control in the organization.

In addition to providing consultancy and assurance services to the top management, the internal audit activity also contributes to the effective operation of all workflows in the organization. On the other hand, an effective internal audit activity also undertakes the role of assistant for the independent audit activity. Because a well-functioning internal control mechanism and an effective internal audit activity that adds value to the organization both provide a suitable environment for independent auditors and increase the reliability of financial or nonfinancial reporting, which is the responsibility of the senior management, directly and indirectly.

Internal audit has some basic features in terms of modern practices. First of all, today's internal audit activity must be risk-oriented. The internal auditor should provide assurance to management about risk mitigation, acceptance of risk, transfer of risk, or sharing of risk in almost any matter that may affect the achievement of the organization's goals and objectives. Ultimately, the responsibility of contributing to risk management is one of the primary tasks of the internal auditor, which should be competent. On the other hand, the internal audit activity should also be carried out as a process management spread over time, not an instant task. However, it is known that the standards constituting a source for internal audit are in an international framework. In short,

**Figure 1.**  
*The Place of the Internal Audit Department in the Organization Chart.*



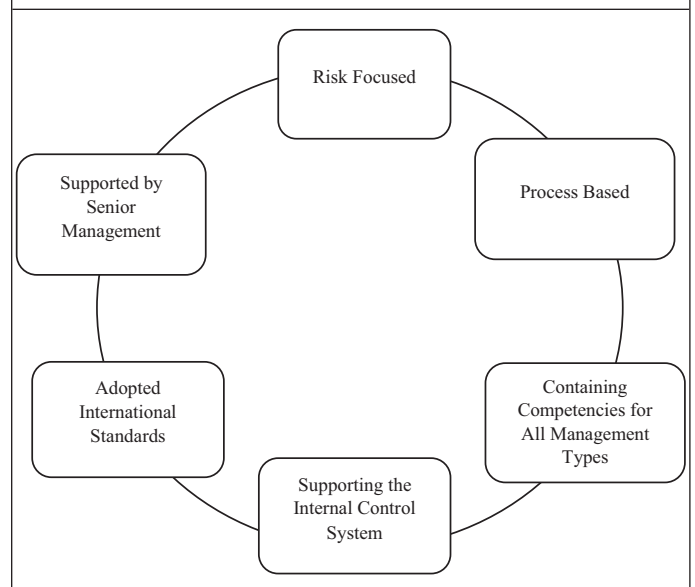
the internal audit activity should be carried out according to international standards. The scope of internal audit extends from the lowest level of the organization to the top management. As a matter of fact, the internal auditor should have the competencies to be able to dominate the operation or workflows at all levels of the organization. More specifically, the internal auditor must possess conceptual skills, human relations skills, and sometimes technical skills. In addition to all these, the internal audit activity should support the internal control system of the organization and contribute to the development of the existing internal control system in the organization. Of course, the indispensable condition for the fulfillment of all these principles is the support of the internal audit department by the senior management, in other words, a shared vision between the senior management and the internal auditor.

The main characteristics of internal audit mentioned earlier are shown in Figure 2.

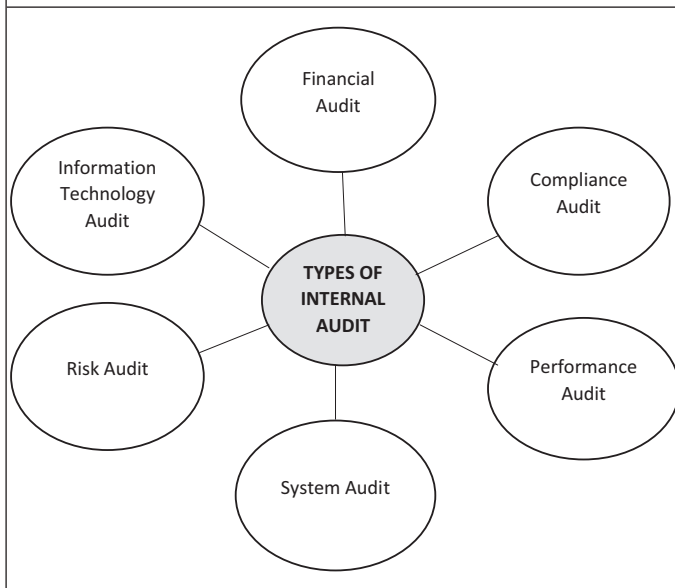
Since internal audit is a very comprehensive activity, it is divided into different types in the literature and in practice. These are financial audit, compliance audit, performance audit, system audit, risk audit and information technology audit. The reliability, timing, and accuracy in financial audit are subjected to audit tests. In compliance audit, it is widely evaluated whether the activities of the organization are compatible with the current legislation and institutional goals and objectives. In performance audit, which is another type of audit, it is examined whether both human resources and physical resources work efficiently. In the system audit, which is the next type of audit, it is tried to be determined in layers how the organization approaches the values targeted from

the lowest level to the highest level in terms of upper systems and subsystems. However, in terms of audit types, risk audit is among the issues that internal auditors are most interested in today. Actually, risk-based audit is indispensable for organizations today. This area has a special importance in terms of the values that internal auditors add to the organization. Finally, another type of audit is information technology audit. Information technologies are of great importance in the digital

**Figure 2.**  
*Key Characteristics of Modern Internal Audit.*



**Figure 3.**  
*Types of Internal Audit.*



age. Every business needs creativity, innovation, efficiency, efficiency, speed, etc. have to use information technologies for reasons such as ultimately, another important task of the internal auditor is to report to the senior management the adequacy or necessity of information technologies used for corporate goals and objectives.

The types of internal audit that we tried to briefly mention earlier are shown in Figure 3.

According to the latest definition of internal audit, the core actions of internal audit are acts of trust and consultation. In order to carry out these actions, internal auditors first take initiatives to increase the effectiveness of the internal control system in the institution. As a matter of fact, a well-functioning internal control structure is proof that operational efficiency is ensured, financial reporting is reliable, and applicable law/legislation is complied with. However, it is clear that a risk-oriented management approach plays an important role in the foundation of assurance and consultancy services today. Risk management is now indispensable for every institution in our age when disorder has become an order. For this reason, it is critical for today's internal audit activity that the internal audit unit anticipates possible risks and negotiates with senior management. While internal audit performs its main actions, it should finally address the functioning of corporate governance. As a matter of fact, it is one of the main responsibilities of the internal auditor to provide suggestions that will contribute to the improvement of governance to the top managers. To sum up, internal auditors within the scope of trust and consultancy services to the senior managers of the organization; They will contribute through the dimensions of "financial audit," "performance audit," "compliance audit," "advice services," "facilitating services," and "remedial services." The elements of the

internal audit activities mentioned earlier are tried to be summarized in Figure 4.

Internal audit has undergone significant changes since the 1950s with the rapidly changing environment. As a matter of fact, internal audit emerged as "operation control" in the first applications. Later on, it was evaluated as "conformity audit/inspection focused." In the 1990s, "operational control" gained weight. In the 2000s, the concept of "risk-based audit" became dominant in internal audit. In other words, it can be said that risk-based internal audit is the most advanced stage in historical development. Ultimately, risk assessment and risk management are among the most critical audit activities in terms of internal audit philosophy and practices today.

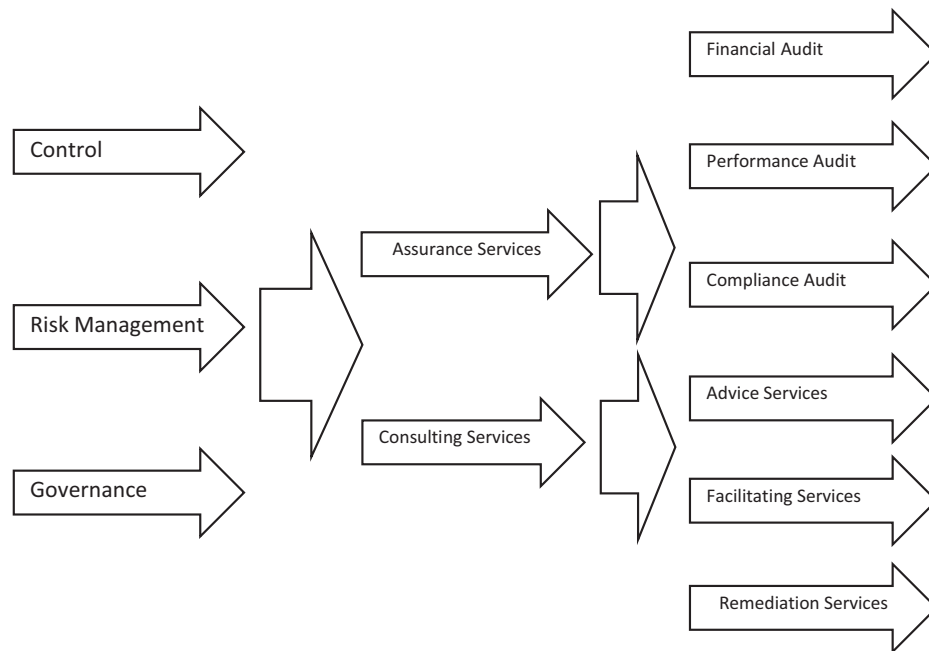
The differences between traditional internal audit and risk-based internal audit are presented in Table 1.

In traditional internal audit, internal control activities that contribute to the achievement of corporate goals and objectives are the main starting point. As a matter of fact, according to the said approach, the internal audit activity is a continuation of the internal control activities. The traditional approach assumes that every internal audit activity is a control. On the other hand, in risk-based internal audit, the focus of the audit activity is risk, not internal control. In this approach, risk-based assessment is essential. Similarly, the traditional internal audit activity is audit-oriented. However, adding value to the organization is essential in the risk-focused internal audit approach. Another difference of risk-based internal audit from traditional internal audit is that it is based on process management. As a matter of fact, the traditional internal audit approach is based on event and action.

On the other hand, the audit phenomenon has actually emerged in the form of financial statement audit in order to prevent errors and frauds. For this reason, financial statement audit comes to mind in the traditional internal audit approach. Operational control and stability came to the fore in risk-based internal audit. In other words, while the traditional approach attaches importance to financial reliability and legal/regulatory compliance, risk-based internal audit attempts to achieve corporate goals and objectives. In this respect, traditional internal audit is legislation-based. Risk-based internal audit, on the other hand, is a risk-based approach that evaluates the macro- and microenvironment. However, as in many other traditional approaches, it is important to preserve the existing order in the traditional internal audit approach. Risk-based internal audit, on the other hand, adopts a proactive approach to events and aims to lead the change. Experience has been of particular importance in performing the traditional internal audit activity, which was a product of the previous system. In risk-based internal audit, on the other hand, intensive technological tools are used in internal audit effectiveness due to the conditions of the age. In this respect, it can be said that risk-based internal audit meets new needs and can adapt to new conditions. Finally, the traditional internal audit approach aims to prepare the business for independent audit. Risk-focused



**Figure 4.**  
*Elements of Internal Audit Activity (Source: Yılancı, 2015; 176).*



internal audit, on the other hand, plays a role in controlling important risks for the organization and creating long-term value for the business through continuous negotiations with top managers.

**Table 1.**  
*Differences Between Risk-Based Internal Audit and Traditional Internal Audit*

Traditional Internal Audit	Risk-Based Internal Audit
Internal control is the focus.	Risk is the focus.
It is control-oriented.	It is focused on adding value to the organization.
It is event and action-oriented.	It is process management oriented.
Financial losses are taken into account.	Efficiency and stability are essential.
Compliance auditing is given priority.	It is aimed to define risk and improve work processes.
It is legislation-based.	It is based on risk management.
It is aimed to protect the balance of the system.	Leading the change is essential (Proactive Approach).
Auditing is based on experience.	Intensive technological tools are used in auditing.
It is for independent auditing.	Integrated position with top management takes priority.

Source: Adapted from McNamee and Selim, 1998 in Türedi et al., 2015.

### Global Climate Change and Its Effects on Our World

The world has an invaluable value for humanity in terms of its natural resources. These resources are among the elements that meet our vital needs. Human nature is part of the ecological cycle. It should not be forgotten that the universe is built on an enormous balance. Human beings have had a negative impact on the global ecological balance, especially since the industrial revolution. This intervention, which disrupts the ecological balance, has reached such a seriousness today that the harmony of human with nature has become inevitable. As a matter of fact, today, individuals, societies, states, or businesses cannot operate despite the pollution of nature. Leaving a more livable world to future generations can be achieved by adopting this approach in terms of both thought and practice.

In terms of global climate outlook, a new era has been entered, which has changed with human activities since the second half of the 19th century. Today, climate change is also defined as human activities that increase greenhouse gas emissions (Türkeş, 2000; 1). In the current century, almost all climate scientists argue that the deterioration in the world's climate system is clearly visible. If the necessary precautions are not taken in terms of the conditions that cause the deterioration of the natural balance, in other words, if human activities continue in the same way, it is highly likely that a change in process will occur as a result of global warming. Because, obviously, as a result of human activities, the accumulation of greenhouse gases in the atmosphere will increase, the natural environment will be destroyed, the ozone layer will be

thinned, and as a result of all these, there will be an increase in temperature on a global scale (Öztürk, 2002; 48). The main reason for the said global temperature increase is known as the “greenhouse effect” in the literature. The greenhouse effect occurs when the rays coming from the sun to the earth are reflected back to the earth by the greenhouse gases in the atmosphere after they are reflected from the surface. The greenhouse effect is mainly due to atmospheric water. As a matter of fact, about 85% of the greenhouse effect is caused by water vapor and 12% by other small water molecules in the atmosphere. On the other hand, some various gases other than the water-based greenhouse effect can also cause the greenhouse effect. For example; The amount of carbon dioxide, chlorofluorocarbon, methane, ozone, and nitrogen oxide in the atmosphere has also increased significantly in recent years (Aksay, 2005; 31).

Today, climate change is an indisputable reality both as a common view of those who are interested in the subject and according to the graphic depicted earlier. The consequences of climate change, in general, are as follows:

- A significant increase in surface temperature
- Melting glaciers and rising sea levels
- Excessive precipitation that may cause natural disasters (flood, overflow, landslide, etc.) in some regions
- Drought in terms of agricultural lands and forests
- Decrease in biodiversity and ecosystem resources

Human activities (anthropogenic effects) have an important place among the causes of climate change. Human activities have slow but lasting effects on the climate. On the other hand, these effects affect not only the human race but all living systems. For example, with an increase in average temperature, the moisture in the soil decreases, which leads to the destruction of plants, animals and microorganisms that can live in a humid environment. As a result, populations of living things that can adapt to climate change are increasing rapidly, and species that cannot adapt are facing extinction. In other words, the ecological balance is deteriorating (Demir, 2009; 52).

On the other hand, no study has been found in the literature that directly addresses the relationship between internal audit and climate change risk. In this area, it has been observed that the relationship between risk-based internal audit and global risks or operational risks is focused (Vijayakumar and Nagaraja, 2012; Drogalas and Siopi, 2017; Weekes-Marshall, 2020; Tamimi, 2021).

### Material and Methods

The main research method used in the study is “content analysis.” According to Weber (1990) and Stemler (2001), content analysis, in the most general sense, allows the researcher to synthesize texts consisting of a large number of words within the framework of smaller categories. Similarly, content analysis is a research method that allows to categorize written texts

into different groups or categories according to selected criteria (Gamerschlag et al., 2011; 241). According to Kolbe and Burnett (1991), content analysis provides a systematic examination of the theme of available data. Numerous studies have been conducted in the social sciences literature using content analysis as a method (Tate et al., 2010; Gamerschlag et al., 2011; Seuring & Gold, 2012 et al.).

Although content analysis generally includes qualitative analysis, it is rarely used as a quantitative method. The method used in this study is qualitative content analysis. In qualitative content analysis, first the sample is determined and then the content at hand is subjected to qualitative analysis in line with the research hypotheses. In this study, Risk in Focus 2019, 2020, 2021, 2022, and 2023 reports published by the European Confederation of Institutes of Internal Audit (ECIIA) were examined as a sample. Of course, in this review, these reports were primarily handled within the framework of the internal audit function and climate change.

In the literature, there are studies in which systematic literature reviews with content analysis are conducted (e.g., Seuring & Gold, 2012). However, as in other basic research methods, there are certain stages in content analysis. Mayring (2008) listed them as “material collection,” “descriptive analysis,” “category selection,” and “material evaluation.” In this study, however, a different process was followed and the information that would support the hypothesis developed in the research was directly focused on.

### Evaluation of Climate Change in Terms of Internal Audit Risks

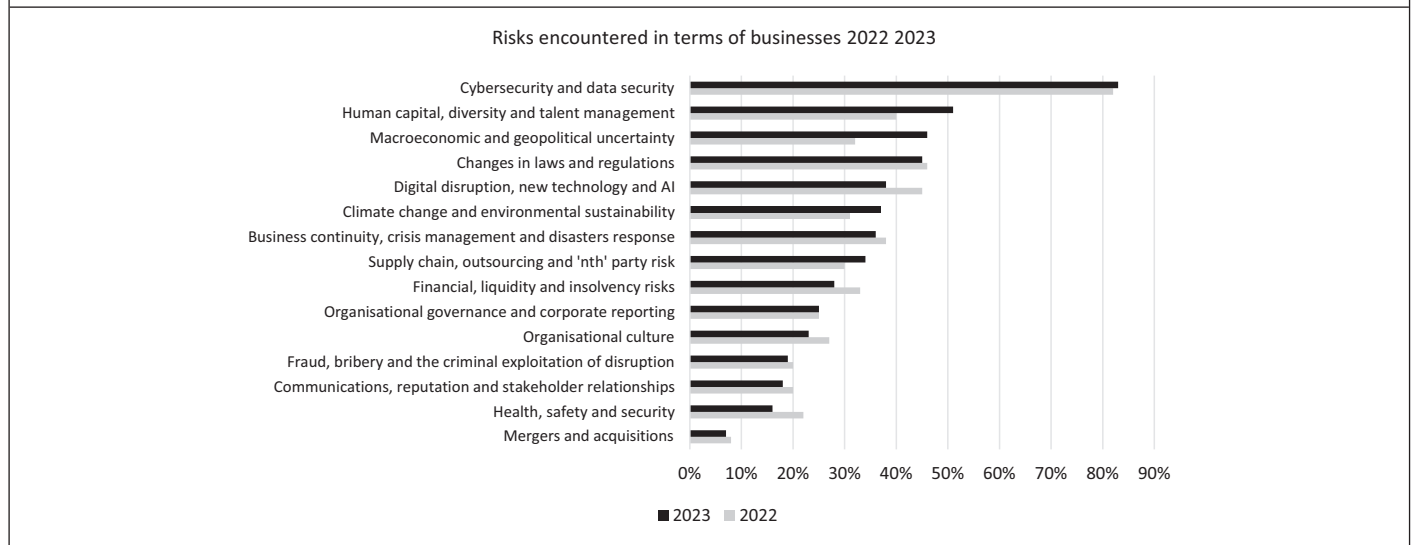
Internal audit activity is affected by many variables today. In traditional internal audit, the audit activity was carried out more internally, in other words, internal control-oriented. In risk-based internal audit, which is the most modern approach in internal audit, audit activities are carried out on the axis of various risks. External environmental factors that change rapidly and become more dynamic bring significant risks to institutions. To tell the truth, the ECIIA conducted a survey called “Risk In Focus 2023” on the internal auditors on the subject and listed the main risk focuses predicted by the internal auditors as in Figure 5:

The ECIIA has been conducting a survey of internal auditors for the last 6 years and publishing the Risk in Focus report. According to the aforementioned reports, climate change, as a risk focus, has been the risk focus that has increased the fastest among about 15 risk types over time.

Figure 5 asks internal auditors, “*What are the five most important risk factors for your organization?*” When asked, the change in the percentile between the years 2019–2023, which also gives the answer to this question on climate change, is shown. Since climate change was not seen as a risk focus in 2018 or was not included in the report of that year, it was not shown in the chart.

**Figure 5.**

*Internal Audit Risk Focus 2022 2023 Comparison by Internal Auditors. Source: Risk in Focus 2023, (ECIIA, 2023; 6)*



According to Figure 6, the percentage of internal auditors who consider climate change among the top 5 risks; it was 8% in 2019, 14% in 2020, 22% in 2021, 31% in 2022 and 37% in 2023. The most important finding that can be obtained from Figure 6 is that climate change has become a rapidly increasing risk focus especially in recent years. As a matter of fact, the answers received from the questions asked to the internal auditors were compiled in the said reports (Risk in Focus). In other words, internal auditors stated that climate change has become an increasing risk focus, even the fastest increasing risk focus in the last 5 years among other risk focuses. On the other hand, in the 2023 report of "Risk in Focus," when the internal auditors included in the sample were asked about their risk ranking for 2026, it was stated that "climate change and

environmental sustainability" would take the third place, which is currently in the sixth place (See Figure 5).

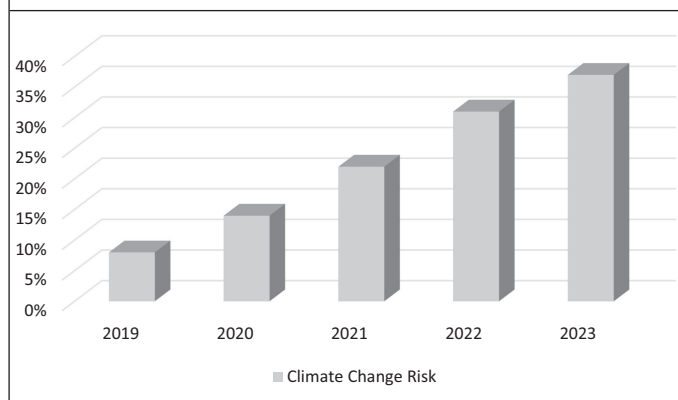
One of the most important tools for businesses in the fight against climate change is their commitment to the sustainability approach. Businesses that withdraw from the sustainability approach make their future more risky. Businesses that align their internal audit understanding with sustainability and align their mission, values, and strategies with the sustainability agenda can have a longer lifespan. In this way, businesses can have the opportunity to better see the gaps between their goals and the results they achieve in practice. Businesses that want to respond to the risk of climate change can monitor what strategic actions their organizations are taking through the sustainability goals they set by looking at existing frameworks or guidelines such as ISO 26000 and the UN's Sustainable Development Goals. This approach should be a complete roadmap for businesses. These initiatives are also important in terms of clarifying the audit areas that must be audited. These determined targets can minimize the negativities in environmental impact issues such as deforestation, chemical wastes, amount of greenhouse gas emissions, and water consumption. In addition to all these, with this understanding, protecting human rights, promoting economic integration and developing products and services that are not harmful to the planet can be realized through the supply chain (Risk in Focus 2022, 2021; 33).

Internal audit has significant implications for climate change risk and environmental sustainability. The effects can be listed as follows (Risk in Focus 2023, 2022; 26):

1. Internal auditors should always be in dialogue with the CEO or the board of directors. Internal auditors should first explain to the top management of the organization where

**Figure 6.**

*Results of the Survey of Internal Auditors in terms of Climate Change Risk (2019-2023). Source: Risk in Focus 2019, 2020, 2021, 2022, 2023, ECIIA*





the organization stands on climate change. They should then draw a picture of what the business really wants to achieve in the context of current regulations, potential competitors, and society's expectations.

2. Internal auditors should understand how well the business is within the scope of its sustainability goals. They should then describe the practical implications of this understanding for business and action plans at all levels.
3. Consideration should be given to the extent to which management takes into account both the impact of the organization on the environment and the impact of the environment on the organization (double materiality).
4. The reliability of the organization's climate-related key performance indicators should be evaluated.
5. The objectives and risks described earlier should be subject to control assessment and the relevant processes should be reviewed in terms of risk management.
6. How closely those who plan or carry out risk management, which is the second line in the organization, monitor climate-related risks and, of course, the accuracy of climate-related data sources should be reviewed.
7. In order to avoid the negative effects of all these costs or risks, corporate stakeholder communication should be questioned in terms of which data is supported and necessary measures should be taken.

Internal audit may conduct the audit activity under an environmental social governance (ESG) lens. On the other hand, internal auditors can score those audited with sustainability metrics to describe how the company is performing in terms of sustainability goals. However, internal audit value can also take the form of consulting support. Climate change and sustainability risk sources should become a central theme for corporate decision-making. Certainly, chief audit executive (CAEs) should be present at strategy development meetings. As a matter of fact, internal audit is important in terms of its contribution to corporate strategy. If internal auditors believe that sustainability principles are ignored in large capital investments, development of new products or issues that may affect the supply chain, they should definitely put forward their objections concretely and objectively (Risk in Focus 2022, 2021; 33). In the "Risk in Focus 2022" report, climate change and sustainability are recognized as a key risk focus. In this report, the following questions were defined for internal auditors (Risk in Focus 2022, 2021; 34):

- Is climate change and sustainability central to the company's values, mission, and strategic goals?
- Has the business identified any sustainability goals, and if so, how do these goals align with the UN's 17 SDGs?
- Is there a risk of business going backwards or loss of reputation due to the activities it carries out?
- Does the business take into account climate change and sustainability by preparing its products or services for the future, and has it developed projects for this?
- Does the business have a scenario planning for future risks? Is it prepared for the physical and political risks associated with climate?

- How reliable and realistic is the data used by the company in its environmental impact models?
- Does the business have adequate initiatives to reduce greenhouse gas emissions and move away from unsustainable production processes and nonrecyclable materials, and what progress has been made in this regard?

The questions mentioned earlier explain the elements that can enable internal auditors, in other words, organizations to be prepared for climate change risk. These questions can be a guide for internal auditors, especially in terms of creating concrete action plans in internal audit.

All these approaches and data show that the risk of climate change is increasingly worrying businesses today. Every business should be more realistic about risk management and more sensitive to the environment. As a matter of fact, the concept of social responsibility, which is a traditional obligation for businesses, focuses especially on the environmental sensitivity dimension. In terms of countries, one of the basic requirements of sustainable development is environmental sensitivity. It should be noted that despite the environment, a development strategy will not be a sustainable approach in the long run. In this regard, individuals, organizations, states and societies have great responsibilities. As a matter of fact, reaching the targeted goals on climate change and sustainability can only be achieved by taking the issue into account by all segments.

## Discussion and Conclusion

Internal audit activity has had to develop new approaches to replace traditional practices due to rapidly changing environmental conditions in the 21st century. Today, the modern internal audit activity is a risk-oriented internal audit approach that has become an important tool in the management of corporate risk. In this respect, it can be said that the main purpose of modern internal audit is to provide assurance services and consultancy to the top management of the institution in terms of all kinds of risks that may be encountered. In this respect, it can be argued that internal auditors actually contribute to the prevention of business blindness in terms of institutions. As a matter of fact, the internal audit activity supported by the top managers of the institution and carried out independently and impartially will add significant value to the institution. Ultimately, the internal auditor will have a significant contribution to achieving business objectives. Of course, internal audit benefits risk management in terms of all kinds of risks, enables the internal control system to work better, and clearly contributes to compliance with internal or external legislation, increasing the value of internal audit.

In this study, attention has been drawn to the possible effects of climate change risk, which may pose a risk for institutions and become a risk focus, on the internal audit activity. According to experts, climate change and its consequences have become an increasing risk focus for individuals or organizations at all levels. If institutions do not take adequate precautions against

the risk of climate change, they may face significant economic losses. According to the reports titled Risk in Focus 2019, 2020, 2021, 2022, and 2023 (Risk Focus) published by ECIIA for the last 6 years and in which the risk focuses expected by internal auditors in the future are determined by survey, climate change is the fastest growing internal audit risk focus in the last 6 years. According to the report in question, internal auditors should definitely guide their organizations to take action against climate change. In the report, which explains how to respond to the climate change risk from the perspective of internal audit, it is stated that climate change and sustainability should be at the center of the values, missions, and strategic goals of the companies. Therefore, it was emphasized that institutions should take precautions from the top to the bottom in order to combat climate change risks.

Risk is an objective measure of uncertainty. Risk management, which includes risk prevention, sharing or acceptance processes, has become more important in recent years due to the rapidly changing environment in which businesses are located. When considered in this sense, it can be said that risk is an element of gain or loss, especially in the long run. In addition, the risks that climate change poses to institutions and humanity are remarkable. Climate change and other risk focuses should definitely be evaluated in terms of internal audit as an application field that adds value to corporate structures.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept – A.T.; Design – A.T., E.Y.; Supervision – A.T.; Resources – A.T., E.Y.; Materials – A.T.; Data Collection and/or Processing – A.T., E.Y.; Analysis and/or Interpretation – E.Y.; Literature Search – A.T., E.Y.; Writing Manuscript – E.Y.; Critical Review – A.T.

**Declaration of Interests:** The authors have no conflict of interest to declare.

**Funding:** The authors declared that this study has received no financial support.

**Hakem Değerlendirmesi:** Dış bağımsız.

**Yazar Katkıları:** Fikir – A.T.; Tasarım – A.T., E.Y.; Denetleme – A.T.; Kaynaklar – A.T., E.Y.; Malzemeler – A.T.; Veri Toplanması ve/veya İşlemesi – A.T., E.Y.; Analiz ve/veya Yorum – E.Y.; Literatür Taraması – A.T., E.Y.; Yazıyı Yazan – E.Y.; Eleştirel İnceleme – A.T.

**Çıkar Çatışması:** Yazarlar çıkar çatışması bildirmemişlerdir.

**Finansal Destek:** Yazarlar bu çalışma için finansal destek almadığını beyan etmiştir.

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