

Article

The Role of Sustainability Statements in Investor Relations: An Analysis of the Annual Reports of Airline Companies

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Abstract: Investors are one of the primary target audiences for corporate communication; they seek non-financial as well as financial information from the companies they invest in, and they consider the social and environmental sustainability of these companies in addition to their economic sustainability. Because of this, as a tool for investor relations, annual reports now routinely and regularly incorporate non-financial information. This study examined thirty annual reports from six public airline firms issued between 2018 and 2022. A total of 8115 expressions on social, economic, and environmental sustainability issues—divided into 125 themes—were coded and analyzed in Maxqda 2020. Among the conclusions was the fact that, in 2022, all of the examined companies devoted 9% of their pages to sustainability statements and included them as an individual topic in their reports. It was found that 64% of both the sustainability-related pages of the reports and the messages of the company managers included in the report consisted of social sustainability statements, with the theme of governance playing an important role in these explanations. Additionally, it was revealed that the topics of governance issues (22.6%), the natural environment (21.7%), and human resources development (15.5%) are the most frequently discussed social, environmental, and economic sustainability themes in corporate annual reports.

Keywords: sustainability communication; investor relations; annual report; airline companies



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1. Introduction

With the increase in phenomena such as rapid population growth rates, resource use, and the destructive effects of humans on the planet, the public began to recognize and talk about the damaging impacts of humans on the environment in the 1960s, and this awareness spread internationally in the 1970s [1–7].

The signing of the “Sustainable human development and development” declaration by the member countries of the United Nations at the Rio Summit held in 1992 is accepted as the beginning of the era of sustainability and sustainable development [5,8–11]. At the 2002 Johannesburg Summit, important decisions were made to prevent poverty, diversify energy supply and provide a fair share of renewable energy resources, reduce biodiversity loss, increase corporate social responsibility (CSR) and accountability, and ensure the effective implementation of interstate agreements and the creation of national sustainable development strategies [12,13]. In 2015, the UN provided an agenda that includes 17 Sustainable Development Goals (SDGs) to be achieved by 2030 [14,15]. The main feature of the concept of sustainability is that it focuses on “human future, protecting the resources used and transferring them to future generations” [16].

Multinational corporations that cannot stay indifferent in the face of these developments have begun to conduct their operations under the name of corporate sustainability (CS) for marketing, business, corporate reputation, and/or social reasons [17–21]. CS is the

strategic management process of aligning economic, social, and environmental objectives and principles [18].

2. Sustainability Communication (SC)

CS draws on the more widely accepted concepts of sustainable development, corporate social responsibility (CSR), stakeholder, and corporate accountability theories [22] and must not be considered separate from the concepts of corporate governance and corporate citizenship. Many studies look at how these concepts relate to one another and try to reveal their differences [19,23–29].

According to stakeholder theory, which underpins CSR studies, a company's enduring prosperity and viability depend on maximizing its total value for diverse stakeholder groups [30]. Stakeholder groups include shareholders, customers, suppliers, employees, governments, trade organizations, communities, political groups, and investors [31–33]. The pressure from various external stakeholders, including academics, the government, investors, consumers, and environmental protection organizations, has a constructive influence on the scope of an environmental statement [34].

Elkington [35] states that effective, long-term collaborations between the public, private, and stakeholder sectors are the key to achieving exceptional triple-profit performance (social, environmental, and economic). Today, many institutions are integrating the triple bottom line (TBL) concept—which emphasizes the interconnectedness between the economic, environmental, and social aspects of sustainability—into their CSR initiatives [29,36,37].

With the growing importance of social, environmental, and financial issues among stakeholders and the reporting of efforts made in these areas, the concept of sustainability communication (SC) is becoming more and more focused in the field of corporate communication [20,38–45]. SC refers to all communication processes that are used to manage relationships between stakeholders to raise awareness and change behavior [18,39] on social issues such as the preservation of the environment and natural resources, combating climate change, social equality, human rights, and justice [20,40–45].

To effectively manage or impact the communication process around sustainability, which lies at the convergence of several areas, certain methods and tools are required [46], like growing the new media environment [43], especially with respect to the potential of websites [47,48]. Unruh et al. [49] and Bernow et al. [50] analyzed the fact that investors perceive a significant correlation between corporate sustainability performance and financial performance and utilize sustainability-related data more as a rationale for investment decisions. Sustainability communication has become a professional area for PR specialists since its development in the field of environmental communication and social reporting [18].

2.1. Sustainable Financial Communication and Investor Relations

Due to the financial reporting crises in the 2000s, investor groups and governments started to put more pressure on industry, which made it crucial to create legal regulations on this matter and professionalize financial communication [51–54].

Many investors, on the other hand, place high value in the fact that the company in which they invest amounts to a good corporate citizen who engages in societal and environmental initiatives [55–57]. According to Cutlip and Center, investor relations is a component of corporate public relations that cultivates and sustains mutually advantageous relationships with shareholders and other stakeholders in the financial community to enhance market value [58]. In more concise terms, investor relations is a corporate communication function in addition to being a financial discipline [59,60].

The primary roles of investor relations involve ensuring adherence to regulatory requirements, managing relationships with financial target groups, and contributing to a company's image and reputation [61]. Investor relations should be integrated with public relations holistically, including engagement with key target groups [62–68]. Long-term relationships between a company and its target audience are important, according to those

who approach the subject matter from a more communication-oriented than financial perspective. They also stress the need for proactive rather than reactive management of investor relations practices [65].

An investor relations unit, often referred to as the “filter” of financial communication, applies specific filters to the messages a company sends out to customers, suppliers, and the media. It also must accurately inform current investors using instruments like annual reports and annual meetings [68–70]. Furthermore, companies have been allocating more resources to investor relations, publications other than annual reports, and disclosure commercials that demonstrate non-financial facts and their abstract values corresponding to those of a business [71]. According to Penning’s research, messages created by public relations professionals are more valuable to individual investors than data from the media and other similar sources [72].

Annual reports are the most significant instruments for companies for giving messages to their stakeholders [73,74], and investors rely heavily on them for information related to a company’s management and, in particular, past performance [72]. Currently, strengthening a company’s identity, reputation, and image in a way that affects stakeholders is one of the main objectives of annual reports [38,75]. More than half of the companies questioned by Polishchuk et al. [76] stated that the most often-used investor relations instruments were presentations and newsletters (71%), questions and answers (61.1%), and annual reports (52.7%).

Annual reports that are written and presented briefly and concisely, with pictures included, are more comprehensible [73,77,78]. Corporate annual reports employ financial graphs to “manage” the reader’s positive view of a company’s success through selection, thus creating an impression management strategy [77,79]. Accordingly, Thomas (1997) [80] examined the letters written by the chairmen of firms that have been in decline for over five years. He found that using passive phrases was more prevalent when a company was losing money [73].

The use of corporate narratives in reports has risen because annual reports involve technical details and are difficult for investors with limited financial literacy to understand [81]. According to previous research on corporate narratives, companies use narrative annual report descriptions to develop positive images and control perceptions [82–87].

2.2. *The Role of Sustainability Statements in Annual Reports as a Tool for Investor Relations*

Companies have been gaining awareness of social responsibility, accountability, transparency, and sustainability with respect to their stakeholders since the end of the 1990s, but they have begun to fall short in providing the information that stakeholders require [9,88–91]. In fact, companies nowadays should consider all of their social stakeholders when producing messages (including the public, government, non-profit organizations, employees, and consumers) [92], and annual reports should be delivered in a manner that satisfies stakeholder expectations [93–97].

Because of this, as relevant regulations and stakeholder requests have increased, businesses have begun to include non-financial issues in their reports. As a result, financial reporting has expanded to include environmental, social, and managerial issues [92,94,98–102].

In addition to the pressure that laws and regulations on this subject place on businesses, other reasons for the rise in sustainability studies and reports are considered to include acquiring an advantage over the competition [103] and building a favorable impression for employees [104] and the media [105].

A company is highly incentivized to ensure that its sustainability performance discloses performance-related information to enhance its market value [106]. Kim and Verrecchia (1994) proposed an information disclosure trade model, arguing that such disclosure could result in varying investor comprehensions of a firm’s value, especially as some investors may possess specific information about a firm’s operations [107].

In fact, investors demand that annual reports include more sustainability disclosures. Air Canada Company President Rovinescu stated that “Beyond being the right thing to do,

we recognize that sustainability and social responsibility are increasingly a key criterion for investor decisions. Moreover, corporate sustainability reinforces and binds all our core priorities" [108].

Mercer (2004) describes disclosure credibility as "investor perceptions regarding the credibility of a specific disclosure" [109,110]. Jahn and Brühl examined the impact of disclosing negative CSR-related information and confirmed that such disclosures do not have detrimental effects. Their findings contribute to elucidating earlier research outcomes [111,112]. The sustainability disclosures of a company, whether negative or positive, play a critical role in the decisions of investors.

A report published by an institution about the economic, environmental, and social effects caused by its daily performance is called a sustainability report, according to the Global Reporting Initiative (GRI), which was established in 1997 and lays out the standards used in sustainability reporting worldwide. The GRI standards aim to increase the transparency of companies' sustainability activities and communication skills to present the impact and contributions of these efforts [113].

Another reporting framework is the Carbon Disclosure Project (CDP), which was launched in 2000 to collect and share information that would enable companies, investors, and governments to take measures against the threat of climate change. This framework analyzes methods pertaining to climate change, water consumption, greenhouse gas emissions, and water and forest management [114].

Even though sustainability reports are a valuable source of non-financial information for stakeholders and investors, integrating financial information with the concepts of sustainability, management, and reporting will provide far more favorable results [21,115,116]. Therefore, while examining a company's operations, an integrated strategy that addresses profitability together with a social responsibility approach is required. Furthermore, in addition to assessing the past in their reporting, investors expect corporations to provide information regarding potential risks and opportunities in the future [117–119]. Therefore, Eccles and Krzus [120] refer to the resulting integrated reporting as the "single report" and describe it as a report that, in order to engage with stakeholders, delivers this information by connecting them with one another. In this regard, all stakeholders and share valuation will benefit from the report's integrated presentation of non-financial information [121–123].

2.3. An Overview of Sustainability Studies in the Aviation Sector

Climate change negatively affects people, economies, ecosystems, and the environment around the world [124]. The rise in atmospheric CO₂ levels from 19.809 to 33.431 million tons over the past decade poses a threat to life [125]. The mass of transportation systems, which are one of the factors that negatively affect emissions in many countries, has increased by 1412 million tons (31%) globally, especially between 1990 and 2000 [126,127]. Major changes in the transportation sector directly contribute to climate change related to environmental degradation [128] and increase CO₂ emissions [129].

The number of airline firms that create and submit sustainability reports in compliance with the GRI framework has been rising annually as a result of sustainability reporting, a recent trend in CSR reporting within the airline industry [130]. Upon reviewing the literature on sustainability in the aviation industry, it becomes evident that research about the perspectives of different stakeholder groups regarding corporate social responsibility (CSR) has greater weight [131,132].

Kuo et al. [133] investigated the motivations of and obstacles faced by airline companies when reporting CSR outcomes, including market shares, management systems, management culture, employees' understanding of CSR, reputation and brand value, and communication with stakeholders. Johansson [134] emphasizes that most of these reports use the Sustainable Development Goals (SDGs).

Mak and Chan, who conducted the first comprehensive study on reporting and CSR dimensions in this industry, examined Asian Pacific airlines [121] and Japanese airlines [122]. Mak et al. [123] concluded that reports authored by European airlines exhibit a greater

depth of content compared to those of their Asian counterparts. Chen and Lin [135] examined CSR commitments and practices in twelve major Asian airlines' CSR reports and on their business websites. They argue that airline strategies are significantly shaped by corporate social responsibility (CSR). These reports address various social responsibility themes, including the workplace, market, environment, and society, with flight safety being the most significant. Assessing CSR initiatives reported by members of three major airline alliances, Cowper-Smith and Grosbois [136] focused on the environmental rather than social and economic dimensions of CSR and identified that emissions reduction programs were the most prevalent among the seven main environmental themes addressed. Kemp and Vinke [137] conducted a study to determine the CSR themes and dimensions used in the Pakistani aviation industry and stated that they should increase the number of CSR disclosures (CSDs) included in annual reports.

According to a study of the purposes, goals, and variations of corporate social responsibility reports in China and the USA, including with respect to the aviation industry, the primary purpose of CSR reports was found to be to strengthen the image of a company [138]. In an article that investigates the boundaries of CSR reporting in the aviation industry, 35 airline companies' reporting content was thematically analyzed to identify 40 determinants, including three main structures (reputation management, ownership, and control and accountability) [139]. In another study, it was emphasized that the average sustainability reporting rate of 53% for major airlines in the USA was lower than that of other sectors [129]. According to another research result, it was revealed that Korean Air put more focus on interaction with stakeholders in its sustainability reports following the CSR crisis [140].

Zieba and Johansson [141] examined the current literature on airline sustainability reporting and future research directions using comprehensive literature review principles. The results showed that this industry does not have an integrated policy and understanding of how to assess sustainability performance, resulting in inconsistent practices.

3. Methodology

This study examined textual and visual messages and sustainability disclosures that impact investor relations in a total of thirty reports from six publicly listed airline companies that were issued between 2018 and 2022. We first examined the ten airlines listed in Table 1, which are also on Forbes' list [142] of "The World's largest public companies" However, it was seen in the analysis of annual reports that the top three companies—Delta Airlines, American Airlines Group, and United Airlines Holding—also published 10-K reports. As set out by the SEC, companies include only financial information in their 10-K reports, so these reports are addressed only to investors with high financial literacy [143]. For this reason, their format is quite different from other annual reports. In order to create an equal comparison between the companies, these three companies were excluded from the evaluation.

Seven companies were also examined in terms of whether they carried out sustainability reporting. It was observed that China Southern Group only issues a social responsibility report and lacks a sustainability report. Additionally, this company's annual reports do not address sustainability, and it was decided to eliminate this company from this study. The remaining six firms' sustainability reporting records span a minimum of five years. Lufthansa Airlines (LH) has been publishing sustainability reports called 'Balance' since 2007. Since 2009, Southwest Airlines' integrated report has included sustainability statements based on the GRI principles. International Airlines Group (IAG) has been publishing a sustainability report since 2011.

In 2012, Air Canada (AC) began releasing its sustainability report, "Citizens of the World". In 2014, Turkish Airlines (TK) joined the list of companies that report on sustainability. Air France (AF-KLM) published its first sustainability report in 2018. Therefore, the annual reports of six companies between 2018 and 2022 were included in the research, and thirty reports were analyzed, depending on the year that a company started reporting.

The IATA binary codes of the mentioned airline companies are also indicated separately in Table 1. However, these code were not used to identify International Airlines Group and Air France-KLM because both companies include more than one airline; instead, the initials IAG and AF were used, respectively.

Table 1. Forbes' world's biggest public airline companies by revenue (as of January 2023).

Rank	Airline	Country	Revenue (USD, Billion)	Profit	Assets	Market Cap.	Employees
1	Delta Airlines (DL)	USA	53.99	1.90	73.13	21.81	95.000
2	American Airlines (AA)	USA	52.26	1.77	66.79	9.05	129.700
3	United Airlines (UA)	USA	48.82	1.92	70.42	14.7	92.800
4	Lufthansa Group (LH)	Germany	35.8	0.94	48.79	12.10	109.509
5	Air France-KLM (AF)	France/The Netherlands	29.41	0.97	34.81	4.12	78.950
6	Southwest Airlines (WN)	USA	24.83	0.65	35.55	17.65	66.000
7	International Airlines Group (IAG)	UK/Spain	24.28	1.15	41.95	9.41	66.044
8	Turkish Airlines (TK)	Turkiye	19.68	2.79	32.00	8.88	40.264
9	China Southern Airlines (CZ)	China	12.92	-4.81	44.92	12.54	100.431
10	Air Canada (AC)	Canada	12.72	-1.31	21.78	5.33	42.916

Regulations in countries are affecting the ESG information in the annual reports of these companies. Therefore, LH, listed on the German Stock Exchange; AF, listed on Euronext Paris in France; and IAG, listed on the London, UK, and Spain Stock Exchanges, as companies based in member countries, have to act in accordance with European Union directives.

European Union (EU) Directive 2014/95/EU stipulated the disclosure of non-financial information for large companies. The European Union (EU) Directive on Non-Financial Reporting (2014/95/EU) stipulates that companies must include non-financial statements in their annual reports, encompassing areas such as environmental protection, treatment of employees, and board diversity. It recommends the use of regulations including UN Global Compact, OECD Guidelines, or Global Reporting Initiative (GRI) [144].

Moreover, the Companies Act 2006 Regulations 2013 in the United Kingdom (UK) came into force after 2013. Specifically, these regulations require disclosure concerning greenhouse gas (GHG) emissions, gender distribution, and human rights matters [145]. Mion and Adau's [146] study of the implementation of Directive 2014/95/EU, comparing Italian and German firms, indicated that the German Modernization Law regarding non-financial disclosures has standards that exceed those of the EU directive.

Unlike the EU, the United States lacks ESG-reporting and disclosure policies. However, in 2021, the SEC's Acting Chair Lee declared the critical requirement of declaring non-financial disclosure and the SEC's intention to develop a "comprehensive framework that produces consistent, comparable and reliable climate-related and ESG disclosures" [147].

The Canadian government promotes sustainable development regarding climate change, air and water quality, and the conservation of natural habitats while reducing environmental impacts. The Federal Sustainable Development Act from 2008 is a holistic approach to sustainable development [148].

In Türkiye, Borsa Istanbul companies are subject to the Corporate Governance Communiqué about sustainability disclosures in their annual reports. Article 8 of the Corporate Governance Principles section of the Corporate Governance Communiqué, which came into force in 2014, states that "The annual reports shall also include an explanation as to whether the sustainability principles are applied or not, if not, a justified explanation regarding this, and an explanation regarding the effects on environmental and social risk management due to not fully complying with these principles". In paragraph 3 of this article, it is stated that the implementation of the sustainability principles announced by the Board is voluntary [149].

Therefore, AC, listed on the Toronto Stock Exchange; WN, listed on the New York Stock Exchange; and TK, listed on the Borsa Istanbul, were encouraged but not required by their respective governments to make sustainability disclosures.

Since this study analyzed airline companies within the framework created by taking into account GRI standards, it also evaluated whether the companies took the GRI guide into consideration.

WN's annual report is also based on the "GRI Standards" in place since 2009. It is stated that "The 2018 WN One Report follows the principles outlined in the Global Reporting Initiative's (GRI) G4 Guidelines" [150].

LH's annual report is based on the "GRI Standards 2016" in place since 2017. "In accordance with CSR Directive Implementation Act (CSR Richtlinie-Umsetzungsgesetz—CSR-RUG) passed on 19 April 2017, Deutsche Lufthansa AG is again publishing a separate combined non-financial report for the financial year 2018 in accordance with Sections 315b and 315c German Commercial Code (HGB) in conjunction with Sections 289b to 289e HGB". Moreover, there is an "Independent Practitioner's Report on a Limited Assurance Engagement on Non-Financial Reporting" in the annual report from 2018 [151].

In 2018, IAG collaborated with GRI and IATA to develop a GRI Sectorial Guidance book for airlines [152]. Since 2018, IAG has included the statement, "The Non-Financial Information Statement in response to the requirements of Law 11/2018, of 28 December (amending the Commercial Code, the revised Capital Companies Law approved by Legislative Royal Decree 1/2010, of 2 July 2010 and Audit Law 22/2015, of 20 July 2015), is part of this Management Report and is available on the Company's website (www.iairgroup.com)", every year on their annual report content page and addressed sustainability-related issues in detail under the subheadings A. Governance, B. Planet, and C. People and Prosperity, which IAG developed under the strategic report heading according to the GRI guidelines.

AC's sustainability disclosure is reported through its Corporate Sustainability Report, "Citizens of the World", and CDP report in place since 2019. It is stated that "AC was proud to have been the first Canadian airline to confirm its commitment to achieving the Sustainable Development Goals and to joining the UN Global Compact, which encourages all businesses to adopt sustainable, socially responsible practices" [108].

TK has included the Sustainability Principles Compliance Report in its annual report since 2020 and applies GRI standards [153]. Among the companies included in this research, only AF's annual report does not contain any information on GRI guidelines.

In this study, only the annual reports of the companies were analyzed. The sustainability reports are not included in this research. This is because annual reports, the best means by which businesses communicate with investors and other stakeholders in society, also function well for disseminating non-financial information to audiences who lack basic financial literacy. This study examined the language used in these reports, the reports' cover pages, the accompanying visuals, the main titles, the CEO and Chairman's statements, and how a company presented its sustainability vision and financial communication efforts. This study also sought answers to the following questions:

- What is the nature of the annual report's rhetoric and narrative?
- Is there any information or visuals regarding sustainability on the front cover of the annual report?
- Is there a title pertaining to sustainability among the annual report's subject titles?
- How are the social, environmental, and economic sustainability statements distributed in the annual report's CEO message/letter?
- How does the general distribution of statements in the sustainability-related sections of the annual reports vary by company?
- How are the statements in the annual report's sustainability section distributed across social, environmental, and economic-sustainability-related topics?
- How are the statements in the annual report's sustainability section distributed with respect to sub-themes of social, environmental, and economic-sustainability-related topics?
- What are the topics under the themes of social, environmental, and economic sustainability that companies touch on the most in the sustainability-related parts of their annual reports?

This study used a 125-item scale to conduct content analysis on the economic, environmental, and social aspects of sustainability. The scale was developed by Sobhani et al. and included expert opinions through the implementation of a pilot survey. The dimensions and themes of CSR practices were based on the GRI framework, the UNEP Finance Initiative, ACCA guidelines, Equator Principles, and global sustainability reporting guidelines such as SA8000 and AA1000 [154]. Governance issues in relation to scale were evaluated under the social dimension. This study's sustainability subjects, and the number of items included, are as follows:

1. Economic sustainability disclosure (14)
2. Environmental sustainability disclosure (Total 24)
 - 2.1. Disclosure of energy issues (9)
 - 2.2. Disclosure of natural environment issues (15)
3. Social sustainability disclosure (Total 87)
 - 3.1. Contribution to community disclosure (28)
 - 3.2. Human resources development disclosure (23)
 - 3.3. Disclosure of human rights information (12)
 - 3.4. Product responsibility disclosure (11)
 - 3.5. Disclosure of governance issues (13)

Annual report data were subjected to content analysis using Maxqda 2020 Qualitative Data Analysis software to examine the features of both written and visual material. Content analysis included an objective quantitative statistical analysis of data as well as the examination and interpretation of explicit content [155].

4. Results

The annual reports were examined primarily in terms of the language used. In all five of LH's reports, both the CEO and the Chairman of the Supervisory Board employed the inclusive 'we' rhetoric extensively in their introduction letters to shareholders. On the other hand, the language that dominates the rest of the report is passive. Furthermore, the phrase "Transforming the Way We Connect People, Cultures, and Economics" appeared on the cover of LH's 2020 report, and "We Grow, We Shape, We Lead" appeared in 2022.

In IAG's reports, both the Chairman's and CEO's introduction letters and the entire reports use the 'we' rhetoric. The titles of the 2020 and 2022 reports are "Managing the Crisis, Transforming Our Business, Shaping Our Future" and "Connected by Our Purpose", respectively. IAG also included links at the beginning of their reports to make them easier to read online, as well as guidance for accessing related documents. Across all the analyzed reports from AF, WN, and TK, the "we" language was found to be used regularly. The phrases "Together on This Journey" and "We will succeed together" appeared on TK's covers in 2020 and 2021, respectively. AC did not utilize the 'we' rhetoric until 2022, except in the CEO introduction letters, and only started using it extensively in 2022.

When it comes to corporate storytelling, it was seen that only WN uses this approach substantially in annual reports. This includes stories from the company itself, as well as from its customers and employees from the first-person perspective. Moreover, it was revealed that TK had explained how it evolved from the past to the present as well as the steps involved in updating its technology, particularly in the 2018 report that included visuals to support its arguments.

When the reports were evaluated generally, it was revealed that WN's reports have the quality of being the most readable, brief, and rich in visuals, as they were created as integrated reports. IAG, on the other hand, was successful in producing comprehensive but easily readable reports by using reader-friendly tips, simple language, and expressions reinforced by graphic narratives. TK's report was also more readable, concise, and visually appealing than other reports.

Upon examining the annual report covers, it was found that the reports issued by LH, IAG, and TK all included statements regarding each company's vision. Sustainability was

highlighted through the phrases “Creating Sustainable Value” on the 2019 cover of LH’s report and “Leading Sustainable Aviation” on the 2019 cover of IAG’s report, among others. It was noted that there were no sustainability-related phrases on the covers of other companies.

When the annual report covers were examined visually, it was noticed that three reports did not use any visuals, while 18 of the 30 reports featured employee photos, three passenger photos, and ten airplane photos on the cover. Four pictures show either an aircraft with employees or passengers and employees together. Employee photos are featured on every report cover issued by WN, which highlights the value it provides to its employees in a very noticeable way. Four of TK’s reports have photographs of its employees on the cover page; LH has three, AC and AF have two, and IAG has one.

The volume of space that companies dedicated to the topic of sustainability in their annual reports, as well as whether and how they have used the subject as a title, were all examined. The ratio of the relevant pages to the whole annual report was also revealed.

WN has developed a short and concise report because it provides an integrated report and categorizes information under the titles of people, planet, and performance as specified in GRI. The entirety of the WN report was evaluated; hence, no percentage was provided for WN in Table 2, only specifying the total number of pages, and the values were not added to the overall amount.

Table 2. Numbers of pages in the annual reports of the companies, the number of pages on sustainability, and the page-to-page ratios.

	2018		%	2019		%	2020		%	2021		%	2022		%
LH	20	244	8	24	258	9	31	284	11	41	308	13	55	336	16
AF	5	216	2	20	216	9	5	213	2	12	206	6	8	233	3
IAG	21	193	11	22	212	10	32	230	14	36	291	12	32	288	11
WN		92			103			68			117			147	
TK	23	290	8	11	240	5	15	265	6	13	273	5	13	305	4
AC	5	164	3	9	176	5	11	148	7	14	180	8	13	168	8
Total	74	1107	7	86	1102	8	94	1140	8	116	1258	9	121	1330	9

Upon reviewing the reports from other companies, it was made clear that only IAG addressed the matter as a whole under the title of “Sustainability” and that they have continued this practice to this day. LH chose to refer to its statements on this matter as the “Combined Non-Financial Report”, modifying this title to “Combined Non-Financial Declarations” in 2020, and included a summary of all its statements under this heading. AF, on the other hand, conveyed its sustainability studies under the title of “Flight Plan” in 2019. Furthermore, the titles “Innovation & Sustainability”, “Customer & Product”, and “People & Organization” were included in this research since they contain important remarks about sustainability. Therefore, the number of sustainability-related pages of AF’s 2019 report is more than the previous and following years. AF employed a “Sustainability” title in its other four reports. As a result, the analysis for the years when AF used this title only includes the statements made in this heading.

In its reports, AC provided statements on “Citizens of the World”, “Sustainability and Social Impact”, and “Towards a Sustainable Future”. In 2022, it gathered these statements under the heading of “Corporate Strategy”. In contrast, TK dispersed its sustainability explanations throughout a significant portion of its report; sections titled “Corporate Development”, “Quality and Social Responsibility”, “Human Resources”, and “Corporate Governance” stood out and were included in the analysis, taking into account the most relevant pages. Especially in TK’s 2018 report, the number of pages is higher than in other years due to the distribution of relevant pages under various topics. As TK and AC’s reports lack a sustainability-related title and do not clearly address the issue under a topic heading in comparison to other reports, word scanning was conducted to look through their reports. Topics that mentioned sustainability at least five times were identified and included in the analysis.

In Table 2, the overall number of pages in all the companies' annual reports, excluding WN, was 1107 in 2018, increasing to 1330 in 2022, and the number of pages allocated to sustainability increased from 74 in 2018 to 121 by 2022. If the page numbers are compared, the result of the analysis will not reflect the truth since the report format, font, and visual usage of each company will be different from those of other companies. Thus, the number of pages a company devoted to sustainability was proportioned to the total number of pages of a company's annual report, and analysis was conducted based on these ratios.

When the pages were proportioned, the ratio of sustainability pages to the whole annual report rose from 7% in 2018 to 9% in 2022. In particular, because WN adopted an integrated reporting approach, the subject of sustainability was visible throughout the report. Furthermore, LH and IAG have risen above the average by allocating over 10% of their reports to sustainability statements. AC, AF, and TK's discussion of sustainability under many headings has led to an increase in the number of pages. Despite this, the page rates in the reports of these companies remained below 10%.

This study examined the presence of sustainability as a theme in the titles and subtitles of introductions that were provided as letters or messages from the CEO or the Chairman in the reports. Additionally, we determined which aspects of a sustainability issue—social, economic, managerial, and environmental—were emphasized more by the managers in these articles. The results are summarized in Table 3.

Table 3. Distribution of sustainability themes in the introduction letters written by the CEO and Chairman in the annual reports of the companies published between 2018 and 2022.

	Social	%	Environment	%	Economic	%	Total
Lufthansa Group (LH)	68	14.8	12	9.8	30	22.2	110
Air France-KLM (AF)	73	15.9	17	13.9	21	15.5	111
Southwest Airlines (WN)	27	5.9		0		0	27
Intern. Airlines Group (IAG)	96	21.0	57	46.7	31	22.9	184
Turkish Airlines (TK)	87	19.0	9	7.3	32	23.7	128
Air Canada (AC)	106	23.1	27	22.1	21	15.5	154
Total	457	100	122	100	135	100	714
		64		17		19	100

Both the chairman and the CEO wrote messages in IAG's annual reports. The essays authored by the Chairman are titled "A Business Model Built for Sustainable Growth" in the 2018 report and "Building on Our Commitment to Sustainable Growth" in the 2019 edition. The CEO's writing in the 2021 report includes the phrase "Connecting People, Creating Sustainable Value", and the subtitle includes the phrase "Sustainable Value Creation". At IAG, social sustainability issues cover a variety of subjects, ranging from social responsibility to human rights and from customers to human resources. Compared to leaders from other companies, IAG executives have given environmental concerns much greater attention. Climate change, cutting carbon emissions, and energy efficiency are the topics they concentrate on the most on the subject of environmental sustainability. The leaders not only explained their goals about the environment but also the concrete steps they have taken.

Like IAG, both the CEO and Chairman of LH have published introduction letters. The managers avoided using titles in their articles but instead concentrated on topics such as customer service, social activities, and female employee rate among social issues. In terms of economic sustainability, they prioritized shareholder earnings and economic growth. The environmental explanations have been limited to outlining the actions that need to be taken to reduce pollution in the environment and carbon emissions. The AC manager, on the other hand, referred to sustainability as a subheading in his 2021 essay. In terms of management issues, the recognition of awards and a vision for sustainable growth were emphasized, while social issues were primarily employee and customer relations. Environmental explanations were related to carbon emission.

When AF was examined, it was discovered that in the first four years of reporting, environmental statements were made only once, and environmental policy was cited so frequently that it was assessed according to 16 codes following the CEO change in 2022. In addition, one of the subtitles in 2022 was “Frontrunner in Sustainable Aviation”. While employee satisfaction and social benefit issues were highlighted in regard to social issues, emphasis was placed on the awards received by a company concerning managerial issues.

TK, on the other hand, made very little mention of environmental issues, and it was found that this company’s CEO concentrated more on management issues, such as company size, new products, new technology, and infrastructure investments. The inauguration of Istanbul Airport in Turkey became the focal point of all of the CEO’s writings, serving as a positive move for the company. There was no introduction letter in WN’s reports released between 2018 and 2020; instead, the CEO of the company made one-sentence remarks under the title “A Word from Gary”. The new CEO, who was appointed in 2021, issued remarks highlighting the value that the company attaches to employees and customers, as well as the company’s vision. He kept his introduction letters short.

In Table 3, it can be seen that 64% of the writings by the CEO and Chairman address social sustainability issues. Managerial issues account for a significant percentage as well. Managerial issues include a company’s sustainability goals, policies for sustainable growth, and awards received. Economic sustainability statements also take second place, with a rate of 19%. When examined on a company-by-company basis, it can be seen that IAG stands out from other companies due to its sensitivity to the environment. In addition, it has been observed that the managers of other companies place the most emphasis on economic issues, followed by social issues, and pay little attention to environmental sustainability.

In 2018, the statements made by the mentioned companies were identified by 1186 codes, while the encodings gradually increased towards 2022 and the number increased to 2109. In 2020 and 2021, the passenger numbers and therefore profitability of all airlines decreased due to the impact of the pandemic. Due to this, companies have limited their operations and reduced their employee numbers. However, despite having to limit some of their social-responsibility-related activities, there has not been a noticeable decline in sustainability disclosures; on the contrary, the trend has continued to climb upward. Table 4 makes it obvious that LH, WN, and IAG outperformed the other companies in terms of their sustainability statements.

Table 4. The number of codes related to sustainability in the annual reports of companies.

	2018	2019	2020	2021	2022	Total
Lufthansa Group (LH)	292	294	338	447	475	1846
Air France-KLM (AF)	90	134	127	138	180	682
Southwest Airlines (WN)	289	323	408	429	483	1932
International Airlines Group (IAG)	306	431	395	317	491	1940
Turkish Airlines (TK)	121	149	158	202	291	921
Air Canada (AC)	88	117	196	204	189	794
Total	1186	1461	1622	1737	2109	8115

The annual reports elaborate on the social, managerial, environmental, and economic elements of sustainability. In the scale used in this study, the managerial dimension (governance issues) is examined alongside the social dimension. Table 5 presents the companies’ sustainability statements mainly in terms of their social, environmental, and economic aspects, which are the primary themes.

The social sustainability statements, which also include managerial issues and have subheadings relating to social responsibility, human rights, product responsibility, and human resources, have been coded 5214 times and rank first, with a weight of 64.3%, when we look at which companies make more statements under a given main theme in their annual reports overall. Environmental sustainability issues were coded 2620 times and took second place with a weight of 32.3%. Table 5 shows that companies cited economic sustainability the least of all the sustainability themes.

Table 5. The number and percentages of social, environmental, and economic statements in the annual reports of companies.

	AC	%	AF	%	IAG	%	LH	%	WN	%	TK	%	Total	%
Social	557	70.2	369	54.1	1103	56.9	1248	67.6	1284	66.5	653	70.9	5214	64.3
Environmental	206	25.9	279	40.9	790	40.7	556	30.1	565	29.2	224	24.3	2620	32.3
Economic	31	3.9	34	5.0	47	2.4	42	2.3	83	4.3	44	4.8	281	3.5
Total	794	100	682	100	1940	100	1846	100	1932	100	921	100	8115	100

When the sustainability statements in annual reports are compared to the statements of senior management, a significant parallelism can be seen in terms of social sustainability. Managerial statements have a weight of 64%, whereas the weight of report statements is 64.3%. Even though IAG's managers have lifted the average and are very environmentally conscious, overall, the managers' statements addressing environmental issues make up 17%, whilst 32.3% of the reports' statements mention these issues. While businesses take part in environmental initiatives, the executives have not given these concerns much attention in their writings. While the leaders preferred making more remarks about economic themes (19%), only 3.5% of the pages in company reports that focused on sustainability highlighted these issues.

The themes of social, environmental, and economic sustainability in the sustainability-related parts of the annual reports were also examined. Social sustainability disclosures were divided into themes such as governance issues, product responsibility, human rights, human resources development, and community. Environmental disclosures were also separated into two parts: natural environment and energy consumption. There was no division regarding economic sustainability.

The analysis conducted with these themes showed that most of the statements focused on governance, as Table 6 also illustrates. Companies issued statements on the management aspect of sustainability at a rate of 22.6%, followed by natural environment statements at 21.7%. Following that, the reports included reasons for human resource development (15.5%), product responsibility (11.8%), and energy consumption and saving policies (10.6%), respectively. Additionally, it was discovered that companies make the fewest statements about economic sustainability (3.5%) and human rights (5.6%) issues.

Table 6. Themes in social, environmental, and economic sustainability statements of companies.

	AC	%	AF	%	IAG	%	LH	%	WN	%	TK	%	Total	%
Governance Issues	156	19.6	134	19.6	548	28.2	355	19.2	370	19.2	268	29.1	1831	22.6
Product Responsibility	104	13.1	108	15.8	96	4.9	361	19.6	139	7.2	150	16.3	958	11.8
Human Rights	51	6.4	20	2.9	65	3.4	145	7.9	124	6.4	46	5.0	451	5.6
Human resource development	147	18.5	68	10.0	236	12.2	247	13.4	429	22.2	129	14.0	1256	15.5
Contribution to community	99	12.5	39	5.7	158	8.1	140	7.6	222	11.5	60	6.5	718	8.8
Natural environment	167	21.0	187	27.4	560	28.9	420	22.8	269	13.9	158	17.2	1761	21.7
Energy Consumptions	39	4.9	92	13.5	230	11.9	136	7.4	296	15.3	66	7.2	859	10.6
Economic Sustainability	31	3.9	34	5.0	47	2.4	42	2.3	83	4.3	44	4.8	281	3.5

When we look at the corporations individually, we can observe that AC makes the most statements about the natural environment (21%), governance (19.6%), and human resources (18.5%). AF made the most remarks on the natural environment (27.4%), followed by governance (19.6%) and product responsibility (15.8%). IAG's remarks focused primarily on the natural environment (28.9%) and governance (28.2%), with only 12.2% addressing human resources. The natural environment ranked highest in regard to LH (19.8%), followed by product responsibility (19.6) and governance (19.2%). Most of the statements of WN were about human resources (22.2%), followed by governance (19.2%) and energy consumption (15.3%). In TK's statements, governance accounted for the largest amount, at 29.1%, with the natural environment coming in second at 17.2%, followed by product responsibility at 16.3%. Among all the statements, governance issues had the highest rate, 22.6%, and were ranked in

the top three for all companies, followed by the natural environment with 21.7% and human resources development with 15.5%. Human rights, community contribution, and economic sustainability statements did not rank among the top three for any company.

Lastly, the research addressed the types of explanations given by each company for topics placed under the themes of social, environmental, and economic sustainability. To this end, the subjects that accounted for at least 1% of the total codes were taken into consideration.

An overall analysis of Table 7 reveals that the companies mostly provided statements about “Customer service and facilities” (38.19%), “Initiatives to reduce greenhouse gas emissions” (37.75%), and “Corporate policy and strategy for sustainable development” (29.53%) issues. When we looked at the companies that made the fewest disclosures for these top codes, IAG’s “Customer service and facilities” (2.68%) and WN’s “Initiatives to reduce greenhouse gas emissions” (3.88%) were found to be below average. The companies that made the fewest statements regarding “Corporate policy and strategy for sustainable development” were AC (3.65%) and LH (3.79%).

Table 7. Topic titles covered by airline companies’ reports under different themes of sustainability.

Topic Titles	AC		AF		IAG		LH		WN		TK		Total	
		%		%		%		%		%		%		%
Customer service and facilities	55	6.93	42	6.16	52	2.68	176	9.53	100	5.18	71	7.71	496	38.19
Initiatives for reducing greenhouse gas emissions	43	5.42	77	11.29	131	6.75	98	5.31	75	3.88	47	5.10	471	37.75
Corporate policy and strategy for sustainable development	29	3.65	43	6.30	121	6.24	70	3.79	86	4.45	47	5.10	396	29.53
Corporate sustainability vision/mission/goal/objective	33	4.16	25	3.67	94	4.85	81	4.39	57	2.95	44	4.78	334	24.80
Issues concerning climate change	22	2.77	21	3.08	160	8.25	58	3.14	26	1.35	21	2.28	308	20.87
Investing in waste recycling/treatment plants	35	4.41	20	2.93	64	3.30	80	4.33	53	2.74	18	1.95	270	19.66
Corporate awards and recognition	39	4.91	14	2.05	-	-	31	1.68	42	2.17	66	7.17	192	17.98
Energy use efficiency	15	1.89	33	4.84	51	2.63	29	1.57	86	4.45	17	1.85	231	17.23
HRD plans and policies	35	4.41	10	1.47	27	1.39	56	3.03	68	3.52	24	2.61	220	16.43
Stakeholder engagement/view exchange programmes	13	1.64	10	1.47	99	5.10	60	3.25	37	1.92	24	2.61	243	15.99
Healthy and safe workplace for staff	34	4.28	12	1.76	28	1.44	57	3.09	32	1.66	27	2.93	190	15.16
Information related to new products	27	3.4	27	3.96	-	-	63	3.41	-	-	25	2.71	142	13.48
Disclosure process regarding CSR/sustainability performance	13	1.64	-	-	60	3.09	34	1.84	-	-	53	5.75	160	12.32
Corporate environmental policies	15	1.89	13	1.91	28	1.44	34	1.84	27	1.40	19	2.06	136	10.54
Investing in renewable energy	-	-	22	3.23	29	1.49	27	1.46	43	2.23	16	1.74	137	10.15
Compliance with environmental regulations	15	1.89	10	1.47	44	2.27	33	1.79	-	-	24	2.61	126	10.03
Steps in ensuring pollution-free environment	-	-	21	3.08	62	3.2	69	3.74	-	-	-	-	152	10.02
Investing in energy projects	-	-	16	2.35	55	2.84	20	1.08	44	2.28	10	1.09	145	9.64
Contribution of separate body to CSR activities	21	2.64	11	1.61	23	1.19	26	1.41	48	2.48	-	-	129	9.33
Employee compensation, welfare, or donation	11	1.39	-	-	24	1.24	32	1.73	29	1.50	15	1.63	111	7.49
Training employees through in-house programmes	22	2.77	-	-	-	-	22	1.19	45	2.33	11	1.19	100	7.48
Managing risks and uncertainties	-	-	-	-	91	4.69	25	1.35	24	1.24	-	-	140	7.28
Different types of products and services	9	1.13	12	1.76	-	-	35	1.90	-	-	20	2.17	76	6.96
Initiatives for reducing energy consumption	-	-	10	1.47	40	2.06	22	1.19	42	2.17	-	-	114	6.89
Male/female ratio in employment	14	1.76	7	1.03	47	2.42	25	1.35	-	-	-	-	93	6.56
‘Research and development’ for products and services	-	-	16	2.35	-	-	39	2.11	-	-	19	2.06	74	6.52
Pictorial presentations of CSR and sustainability activities	11	1.39	22	3.23	-	-	-	-	36	1.86	-	-	69	6.48

Table 7. Cont.

Topic Titles	AC		AF		IAG		LH		WN		TK		Total	
		%		%		%		%		%		%		%
Environmental cost-saving operations	17	2.14	7	1.03	41	2.11	19	1.03	-	-	-	-	84	6.31
Infrastructural and institutional development	11	1.39	20	2.93	-	-	-	-	-	-	12	1.30	43	5.62
Appreciating employees for their efforts	-	-	11	1.61	-	-	-	-	29	1.50	20	2.17	60	5.28
Other disclosures on human rights	-	-	-	-	20	1.03	41	2.22	35	1.81	-	-	96	5.06
Information about employee turnover/growth	-	-	-	-	30	1.55	20	1.08	42	2.17	-	-	92	4.80
Other HR-related disclosures	20	2.52	-	-	22	1.13	21	1.14	-	-	-	-	63	4.79
Public-private partnerships (PPPs) on sustainability issues	-	-	11	1.61	35	1.80	-	-	-	-	10	1.09	56	4.50
Corporate perceptions of CSR and sustainability conceptions	-	-	-	-	-	-	22	1.19	35	1.81	11	1.19	68	4.19
Aiding environmentally friendly programmes	-	-	8	1.17	-	-	-	-	20	1.04	11	1.19	39	3.40
Providing healthcare facilities to the poor	13	1.64	-	-	-	-	32	1.73	-	-	-	-	45	3.37
Anti-corruption measures	-	-	-	-	23	1.19	37	2.00	-	-	-	-	60	3.19
Community activities within the vicinity of corporatations	-	-	10	1.47	-	-	-	-	33	1.71	-	-	43	3.18
Fostering social capital, ethics, and morality	13	1.64	-	-	-	-	-	-	20	1.04	-	-	33	2.68
Commitment to societal development	10	1.26	-	-	-	-	-	-	22	1.14	-	-	32	2.40
Awareness building concerning energy consumption	-	-	-	-	20	1.03	19	1.03	-	-	-	-	39	2.06
Rewards and recognition for better performance	-	-	-	-	-	-	-	-	37	1.92	-	-	37	1.92
Information about trainers and trainees	-	-	-	-	-	-	-	-	30	1.55	-	-	30	1.55
Energy-saving policies	-	-	-	-	-	-	-	-	30	1.55	-	-	30	1.55
Importance of HR development	-	-	-	-	-	-	-	-	29	1.50	-	-	29	1.50
Review of corporate financial performance	-	-	-	-	-	-	-	-	25	1.29	-	-	25	1.29
Activities of a company's own training institute	-	-	-	-	-	-	-	-	24	1.24	-	-	24	1.24
Information on the ground regarding products and services	-	-	-	-	-	-	21	1.14	-	-	-	-	21	1.14
Energy-saving results	-	-	-	-	-	-	-	-	21	1.09	-	-	21	1.09
Commitment to HR development	8	1.01	-	-	-	-	-	-	-	-	-	-	8	1.01
Comparative financial growth with respect to previous years	8	1.01	-	-	-	-	-	-	-	-	-	-	8	1.01
Total	611	76.98	561	82.29	1521	78.40	1534	83.06	1432	74.12	682	74.04	6341	

On the other hand, IAG and WN have not made any statements regarding “Information related to new products”. While there was no explanation regarding “Investing in energy projects” in AC’s report, AF did not mention the issues of “Employee compensation, welfare or donation”, and TK is the only company among all companies that does not address the issue of “Contribution of separate body to CSR activities”.

Taking into account only the codes that represent more than 1% of all disclosures, Table 7 provides the frequency codes that correspond to 76.98% of the statements in AC’s reports. It was observed that Customer Service and Facilities are coded 55 times in AC reports. AC highlighted the significance of customer service in its 2021 report, stating that “financial position will allow us to make strategic investments essential to our future success, including in the areas of customer service and technology”. In addition, this company frequently reported on its endeavors to lower carbon emissions, as well as on the awards it had won and the HR practices it had put in place. Statements like “Air Canada stepped up its diversity and inclusion initiatives and developed new partnerships” included in the 2020 report are examples of this company’s human resources policy.

AF primarily addressed cutting emissions, and it also touched on corporate policies for sustainable development and customer services. Additionally, AF often releases information about new goods and makes statements about energy-use efficiency. In its 2022 report, AF made the following statement: “We believe that the best way to reduce

emissions is to continue investing in fuel efficient aircraft. In 2022, we have committed to EUR 4.5 billion investment in new aircraft. Over the next seven years, we will replace the total Boeing 737 fleet with the Airbus A320 Neo family. On average, the new A321 Neo emits 20 percent less CO₂ emissions compared to the current fleet and these aircraft are 50 percent quieter. In addition, the Boeing 747 freighters will be replaced by Airbus 350F freighters. The Airbus 350F is expected to emit over 40 percent". We regularly encountered such statements, wherein the most-coded themes were put together.

IAG made the most statements about climate change and reducing gas emissions, followed by corporate policies and stakeholder collaboration. Out of all the companies, IAG is the airline that has taken the most steps and expressed the most opinions regarding climate change and decarbonization. Under the topic of stakeholder collaboration, relations with suppliers and sustainability issues in product supply were often discussed in detail. Recycling and pollution reduction, investment in energy policies, and sustainable fuels were also observed to be at the top of IAG's agenda. Under the heading of reducing pollution, the noise pollution issue was also covered.

LH made numerous statements about customer service and customer satisfaction, and its disclosures on corporate sustainability vision and environmental issues were also the top-ranking issues of all the topics covered. LH, which is a company with various initiatives on recycling, made the following statement in its 2019 report to explain the steps that it had taken: "The measures of the Smart Plastic Reduction project cover a current annual volume of around 370 million individual items. The plan is to reduce these items by 2021 by including various players in the supply chain and service providers such as manufacturers, catering partners, cabin crew, and waste-disposal companies". Among the HRD policies, the emphasis on attractiveness as an employer attracts the most attention. Numerous statements were also made about human trafficking, modern slavery, and sexual harassment. These statements were assessed under the heading "other human rights related disclosure".

Customer service and facilities, corporate policy and strategy for sustainable development, energy use efficiency, and attempts to reduce greenhouse gas emissions were the most disclosed categories in WN's annual reports, as they were in other companies. WN made the most statements about HRD plans and policies. Using the term "people" instead of employees or customers and often emphasizing the focus on people as a philosophy, WN mentioned its HRD policy in its 2020 report, issuing the following statement: "Our People Department's priorities include (but are not limited to): attracting, developing, and retaining a diverse, talented workforce; providing opportunities for learning, development, career growth, and movement within the Company; evaluating compensation and benefits, and rewarding performance; investing in physical, emotional, mental, and financial health and well-being of Employees..."

Table 7 also shows that customer service and facilities, corporate awards and recognition, the disclosure process of CSR/sustainability performance, corporate policy and strategy for sustainable development, and initiatives for reducing GHG emissions are the most emphasized topics in TK's reports. Under the customer service code, there are often issues such as customer relations, customer surveys, and customer satisfaction, as well as the issue of improving the quality of the services provided to the customer. The company's achievements in this area, as well as the awards that it received for service quality, are also highlighted. Human rights was the topic that was least explained.

The COVID-19 pandemic has had devastating effects on airline companies because of the decline in revenue and cash flows and the travel restrictions imposed in many countries around the world. The International Civil Aviation Organization (ICAO) stated that the COVID-19 pandemic caused a 60% reduction in international air transport compared to the previous year [153].

There is no doubt that the most significant negative impact of the pandemic has been on employees. AC stated that it had a reduction of almost 20,000 employees in 2020 [156,157]. However, in 2021, this company recalled more than 10,000 employees [157].

In 2019, IAG's turnover rate was 9%, increasing to 21% in 2020. This company indicated that "the increase in turnover was due to the unfortunate but necessary resizing of the business due to COVID-19" [158].

LH stated in its report that "Extensive measures are being implemented to reduce personnel costs because of the coronavirus pandemic. Structural reduction of around 27,000 full-time positions already partially implemented. Number of employees down by 20%" [159]. While AF had 23,567 staff in 2019 and 23,064 in 2020, its number of employees decreased to 20,073 in 2021 [160].

On the other hand, TK and WN managed to retain a considerable quantity of their staff during the pandemic. In 2019, TK had 29,491 employees [161]; in 2020, it had 28,668 employees [153]; and in 2021, 27,532 employees [162] were employed by TK. WN has been able to avoid furloughs as a result of the local government's Payroll Support Policy and the outstanding efforts of their employees [163]. In their reports, the companies emphasized the restrictions and reducing capacity due to the pandemic as well as passenger requests about safeguards, such as physical distancing [153,156,158,159,164,165].

On the other hand, companies have managed to take positive steps regarding sustainability by learning lessons from the difficulties they faced during the pandemic and by focusing on research and development projects. The CEO from AC Calin Rovinescu stated that "Our focus on a customer-friendly experience and innovation has carried on throughout the COVID-19 pandemic with new touchless airport services and technology such as our biometric boarding pilot project. These innovations will remain in place post-COVID-19 because they are convenient and can speed airport passage" [156]. In 2020, with a focus on safety, public health, and well-being, AC implemented the Air Canada CleanCare+ program. Additionally, they implemented a telework policy for employees: a TouchFree bag check for Canadian flights [156,157].

The pandemic has changed IAG's hierarchy of sustainability principles, and it has prioritized health, safety, and wellbeing. During the pandemic, the company supported broader society in addressing its effects, with the operational firms aiding local communities through philanthropic endeavors and transporting vital equipment and essential medical supplies globally [158].

LH engaged in extensive discussions with investors despite the limitations imposed by the COVID-19 pandemic. Alongside regular quarterly meetings, the Executive Board and Investor Relations team conducted numerous investor conferences [158].

WN first supported their customers' and employees' wellbeing. Also, it allocated over USD 3 million in aid to assist individuals impacted by the COVID-19 pandemic [164].

AF expressed their sustainability approach during pandemic as follows: "Launching the Fly Responsibly initiative in 2019 already positioned KLM as a sustainability leader in the airline industry... The COVID-19 pandemic has strengthened calls to make the aviation industry more sustainable" [165]. KLM has developed a restructuring plan that will make KLM smaller, cheaper, more frugal, more agile, and more sustainable. Called "Van Meer naar Beter" (Building Back Better), it will enable KLM to emerge stronger after the pandemic [165]. Chairman AYCI of TK emphasized "During the pandemic, our new company Turkish Airlines Technology Inc. was established as a 100% subsidiary of TK" [153].

In addition, the companies operated cargo flights for the transport of essential equipment regarding COVID-19. These activities were also evaluated as a social responsibility event regarding social sustainability [153,156,158,159,162,164,165]. It can be seen that the decisions and measures taken by companies during the pandemic period are also effective in setting sustainable environmental goals. Furthermore, 2021 emissions did not increase due to low flying activity in the pandemic [158].

AC evaluated new objectives involving solutions for new waste streams because of the pandemic [156]. In 2020, IAG's annual report included the following statement: "Our 30-year decarbonisation plan continued to make great progress. We sped up the retirement of Boeing 747s and Airbus A340s due to COVID-19, invested in new-generation aircraft". In WN's Annual Report 2021, it is stated that "In 2021, our carbon intensity reduced 5.1%

compared with 2019 levels. When compared with 2020, carbon intensity increased 1.7% due to higher load factor. We plan to retire 28 of our older 737–700 s in 2022” [163].

In addition, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) occupied a considerable portion of the agendas of airline companies between 2018 and 2022. ICAO has embraced the CORSIA Program, which aims to reduce carbon dioxide (CO₂) emissions resulting from international aviation activities as of 2020. Aircraft operators operating international flights in all ICAO Member States are obliged to report the CO₂ emissions resulting from these flights as of 2019 [166].

IAG has attracted attention with its pioneering work on CORSIA since the beginning of the process and includes the subject in its 2019 annual report: “IAG contributes to the Fuels Task Group at the UN International Civil Aviation Organisation (ICAO), which is helping to shape new legislation for SAF as part of the upcoming CORSIA scheme. We are working on new government policy options for recycled fuels—i.e., non-biogenic, like plastics which cannot be recycled—which we believe have great potential to offer additional CO₂ reductions” [167]. In its 2022 report, it conveys the point it has reached on this issue as follows: “Contributions to our independently verified offsetting providers saw a reduction of over 225,000 tonnes of CO₂ in 2022 [168]. In its 2021 report, WN provided the following statement regarding the target it set within the scope of CORSIA: “within this plan, we set an intensity target of reducing emissions per available seat mile by at least 20% by 2030 against a 2019 baseline” [163]. Other airline companies simply stated in their reports that they were included in the CORSIA program.

5. Conclusions

Annual reports, which are among the most important and prioritized products of investor relations, are among the most effective tools for delivering both financial and non-financial information to investors. This study examined 30 reports from the six airline companies whose shares were made available to the public between 2018 and 2022. The sustainability messages found in these reports were analyzed in terms of their impact on investor relations.

An overall analysis of the reports reveals that companies mostly use the “we” rhetoric to communicate with stakeholders clearly and understandably. When compared to reports from other companies, the integrated report from WN, as well as the reports from IAG and TK, stand out as being both visually appealing and brief. Examining the report covers reveals that WN and TK have a vision that recognizes the value of employees in terms of sustainability. They prioritize placing photos of their staff on their report covers.

The theme ‘sustainability’ is only seen in IAG and AF reports. LH mentions the topic under the heading of a Non-Financial Report, while other firms include it under different topics. Pages devoted to sustainability in the annual reports grew in importance from 7% in 2018 to 9% in 2022. Because WN adopted an integrated reporting approach, the subject of sustainability was present throughout the report. Furthermore, LH and IAG have risen above the average by allocating over 10% of their reports to sustainability statements.

Examining the introduction letters—which begin with headings like “A Letter from the CEO” or “A Message from the President” and are the sections of the annual reports that readers read the most—we find that company managers give sustainability a lot of consideration. The social sustainability statements have a 64% weight since senior managers specifically address managerial issues. After social issues, managers place the most emphasis on economic matters; managers outside of IAG give environmental sustainability very little attention.

Over the years, all companies have increased the number of pages about sustainability and their sustainability disclosures by a significant amount. The statements provided by the previously mentioned companies were identified by 1186 codes in 2018. This number increased towards 2022 and reached 2109 codes. The companies with the highest share in the codes are LH, WN, and IAG. Looking at which companies make more statements under a given main theme in their annual reports, we find that social sustainability statements—which include management

issues—have a weight of 64.3%, followed by environmental sustainability statements, which come in at 32.3%, and economic statements, which remain at 3.5%.

When the sustainability statements in annual reports are compared to the statements of senior management, significant parallelism is seen in terms of social sustainability. On the other hand, it was noted that environmental sustainability explanations are more prevalent on the sustainability pages of reports, even if CEOs and managers typically give more room to economic issues related to sustainability. Upon examining the social, environmental, and economic sustainability themes that companies discuss the most in their annual reports, it was noted that governance issues rank highest at 22.6%, followed by the natural environment at 21.7% and human resources development at 15.5%.

Upon examining which subjects were most frequently discussed under this company's sustainability themes, it was found that AC made the most statements regarding customer service and facilities (6.93%), initiatives for reducing greenhouse gas emissions (5.42%), corporate awards and recognition (4.91%), HRD plans and policies (4.41%), and investing in a waste recycling/treatment plant (4.41%). Initiatives for reducing greenhouse gas emissions (11.29%), corporate policy and strategy for sustainable development (6.30%), customer service and facilities (6.16%), energy use efficiency (4.84%), and information related to new products (3.96%) were the topics that AF explained the most.

Issues concerning climate change (8.25%), initiatives for reducing greenhouse gas emissions (6.75%), corporate policy and strategy for sustainable development (6.24%), stakeholder engagement/view exchange programs (5.10%), and corporate sustainability visions/missions/goals/objectives (4.85%) were the most frequently addressed topics by IAG. LH's reports focused the most on customer service and facilities (9.53%), initiatives for reducing greenhouse gas emissions (5.31%), corporate sustainability visions/missions/goals/objectives (4.39%), investing in a waste-recycling/treatment plant (4.33%), and corporate policy and strategy for sustainable development (3.79%).

Customer service and facilities (5.18%), corporate policy and strategy for sustainable development (4.45%), energy use efficiency (4.45%), initiatives for reducing greenhouse gas emissions (3.88%), and HRD plans and policies (3.52%) were the most common subjects identified in WN's reports. In its reports, TK prioritized customer service and facilities (7.71%), corporate awards and recognition (7.17%), CSR/sustainability performance disclosure (5.75%), corporate policy and strategy for sustainable development (5.10%), and initiatives for reducing greenhouse gas emissions (5.10%).

The COVID-19 pandemic has had devastating effects on airline companies because of declines in revenue and the travel restrictions. In their reports, the companies emphasized the restrictions and reducing capacity due to the pandemic. Except for TK and WN, companies reduced the number of employees by 20% during this period.

On the other hand, companies have managed to take positive steps regarding sustainability, such as by developing new touchless airport services; focusing on safety, public health, and well-being issues; developing a telework policy for employees; and investing in new-generation aircraft for reducing gas emissions during pandemic.

Based on the aforementioned findings, airline companies primarily discussed their sustainability goals and visions about management, customer relations, human resources policies, their efforts to combat emissions—one of the challenges associated with operating an airline—and projects aimed at reducing energy consumption in sustainability statements provided in their annual reports.

In this study, it is clearly shown that companies attach more importance to sustainability disclosures gradually in order to impress investors. In addition, by taking into account the headings in the GRI guides, it is noticeable that companies are trying to document that they have taken concrete steps on social sustainability issues such as human rights and employee welfare.

When we look at their statements in general, it is possible to say that they aim to impress their investors by trying to portray themselves as airline companies that care

about their customers and employees, try to reduce their carbon footprint, and invest in environmentally friendly technologies.

While companies try to send such messages to their investors, it is worth investigating how these efforts are perceived by investors.

To examine the factors that affect investors' decisions, surveys can be conducted to determine the ranking and weight of sustainability in addition to a company's financial performance to reveal what investors understand regarding sustainability to determine which types of sustainability studies (social, environmental, etc.) affect their investment decisions.

Moreover, all sustainability items (carbon emissions, number of female employees, waste management, customer services, etc.) can be used in these studies to measure investors' awareness and reveal their expectations of companies.

Future studies could examine sustainability targets both in annual reports and in other statements made by a company (via press releases, web pages, etc.). Issues such as whether the targets declared in annual reports were achieved on the promised date, and to what extent, and whether the unrealized targets were due to a company can be analyzed.

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