

# 2023 MICCSR CASE

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Milgard Invitational Case Competition on Social Responsibility

The Airline Industry - Investors' Dilemma?

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# The Airline Industry - Investors' Dilemma?



*“The desire to travel was handed down to us by our ancestors, who in their grueling travels across trackless lands in prehistoric times looked enviously on the birds soaring freely through space, at full speed, above all obstacles, on the infinite highway of the air.” - Wilbur Wright*

*“Homo sapiens have not yet failed. Yes we are failing, but there is still time to turn everything around. We can still fix this. We still have everything in our own hands.” - Greta Thunberg*

## The Airline Industry

An airline is a company that provides air transport services for traveling passengers and/or freight. Airlines may be scheduled or charter operators. The first airline was the German airship company DELAG, founded in 1909. The four oldest non-airship airlines that still exist are the Netherlands' KLM (1919), Colombia's Avianca (1919), Australia's Qantas (1920) and the Czech Republic's Czech Airlines (1923). As of 2019, the largest airline by passengers carried and fleet size was the American Airlines Group, while Delta Air Lines was the largest by revenue. Lufthansa Group was the largest by number of employees, FedEx Express by freight ton-kilometers, Turkish Airlines by number of countries served and UPS Airlines by number of destinations served. United Airlines was the largest passenger airline by number of destinations served.

## The Industry's Environmental Impact

Few issues trouble environmentalists as much as air travel. Despite continuing efficiency improvements from the major aircraft manufacturers, the rapid growth in demand for air travel in recent decades has resulted in increasing greenhouse gas (GHG) emissions. Commercial aviation accounts for almost 3 percent of total carbon dioxide (CO<sub>2</sub>) emissions. North America is responsible for nearly 40 percent of global GHG emissions from air travel. Critics argue that unlike heating, other forms of transport and electricity generation, air travel is often not essential. They also complain that air travel has so far been exempt from carbon pricing which covers a quarter of all emissions. After a Covid-induced dip, air travel is growing once again and is returning to pre-pandemic levels in many parts of the world.

The industry's fuel consumption in the five years prior to the pandemic, grew from 81 billion gallons to 96 billion gallons (Table 1). CO<sub>2</sub> emissions from the jet fuel burned per passenger on an average 3,200 kilometers (2,000 mile) flight is about 353 kilograms (776 lbs.). Loss of natural habitat associated with the jet fuel burned per passenger on such a flight is estimated to be 250 square meters (2700 square feet). Critics also fault the airline industry for negative environmental impact from waste generated on commercial flights and noise pollution affecting communities located in the flight path during takeoff and landing at airports.



## Customer Sentiment/Attitudes

A 2022 global survey on air travel by McKinsey & Company found that most passengers recognize that aviation has a significant negative impact on the environment. Emissions were the top concern of respondents in 11 of 13 countries polled, up from four countries in a 2019 survey. More than half the respondents indicated that they are “really worried” about climate change, and that aviation should become carbon neutral in the future. At the same time, travelers indicated that they continued to prioritize price and connections over sustainability in booking decisions. This may partly be due to the fact that no airline has instituted a business system or brand promise on sustainability not withstanding a lot of verbiage on sustainability in their annual reports and on their websites. The survey also found attitudes and preferences vary widely among customer segments and countries. Almost 40 percent of travelers are now willing to pay at least two percent more for carbon-neutral tickets or about \$20 for a \$1,000 round trip, and 36 percent plan to fly less to reduce their climate impact. Around 60 percent of travelers in Spain are willing to pay more for carbon-neutral flights compared to nine percent in India and just two percent in Japan. Younger customers feel more guilty about flying (“flygskam”) and are much more willing to pay for carbon-neutral flights.

## Pathways to Reducing Carbon Footprint

The International Air Travel Association (IATA), the trade group of commercial airlines, has set a goal of reducing net aviation CO<sub>2</sub> emissions by 50 percent by 2050, relative to 2005 levels. It has laid out a four-pillar strategy to achieve this target:

### ***Improved Technology***

Currently, fleet renewal provides the largest impact on reducing emissions through engine design and developments in aerodynamics. Engineering improvement packages for airframes and engines help reduce drag and improve engine efficiency. Each new generation of aircraft is roughly 15-20 percent more fuel-efficient. For example, the Embraer 195 airplane emits 31 percent less CO<sub>2</sub> per seat and is 63 percent quieter than its predecessor, the Embraer 190. Aircraft manufacturers currently invest around \$15 billion per year to improve fuel efficiency.

### ***Sustainable Aviation Fuel (SAF)***

Sustainable aviation fuel (SAF) is central to reducing emissions from air travel. SAF is showing signs of promise as a potential alternative to the kerosene currently used by planes. Airlines have already undertaken some 450,000 flights using SAF as part of the fuel mix. Currently SAF offers the only practical option to achieve the industry’s announced goal to be carbon neutral by 2050. It can potentially reduce carbon emissions by 80 percent compared with fossil fuels without having to change the fuel supply systems or engines of aircraft.

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Much of the SAF developed thus far is derived from discarded cooking oil and animal fats and relies on photosynthesis to do the carbon fixing. Through a variety of research and experimentation, progress is being made towards a technology for making green fuels for aircraft. A milestone was reached in July 2022 when American Airlines took delivery of the first batch of SAF to be verified as green by CORSIA, the Carbon Offsetting and Reduction Scheme for International Aviation, which sets aviation emission standards. IATA suggests that SAF could account for two-thirds of air travel's carbon mitigation. However, that would require 450 billion liters of SAF annually by mid-century – a tall order without governmental carrots and sticks.

## ***Improvements in Aircraft Operations and Infrastructure***

Making aircraft fleets lighter, reducing the weight on planes, eliminating single-use plastics and recycling solid waste can all help reduce fossil fuel consumption in air travel. The use of new air traffic control techniques are additional tools to reduce emissions. For example, landing using a continuous descent into an airport reduces carbon emissions by over 150 kg (330 lbs.) per flight. Adding wingtip devices to an aircraft can reduce fuel use by four percent. Shortening flight times saves 100 kg of CO<sub>2</sub> per minute. Stakeholders in air traffic management are working to improve airspace efficiency incrementally. Electric taxiing of aircraft to and from the gate can also contribute to reducing emissions.

## ***A global market-based measure of emissions***

There is a need for a single globally agreed economic measure to fill the gap in emissions reductions left by the first three pillars. International airlines will eventually need to adopt CORSIA. Under CORSIA, an airline must offset emissions beyond a baseline by purchasing credits based on the airline's share of total industry emissions. For the initial stage, which runs until the end of 2023, the baseline is industry emissions in 2019. From 2024, the baseline will be lowered to 85 percent of emissions in 2019.

Public statements by airlines such as the two examples below proclaim that sustainability is a top priority for them.

*“Air Canada is committed to advancing climate change sustainability throughout its business and reporting on its progress. The ambitious net-zero goal will be realized through a series of five-year climate action plans.”* (Air Canada 2021 Annual Report)

*“Like many other corporates that embraced sustainability as a pillar of their strategy, we did as well position our planet as an important stakeholder and are committed to reduce our impact on the climate and hence reduce carbon emissions.”* (KLM 2021 Annual Report)



## Financial Performance

As with many industries, the airline industry's financial performance has had its ups and downs in the past decade. As laid out in Table 1, its annual revenues grew from \$721 billion in 2015 to a peak of \$838 billion in 2019 the last full year before the onset of Covid-19. Revenues slumped to \$382 billion in 2020. They are starting to recover with IATA forecasting industry revenues of \$779 billion and profits of \$4.7 billion in 2023. The most profitable year pre-pandemic was 2017 when airlines generated a profit of \$37.6 billion. However, the losses of almost \$180 billion in 2020 and 2021, exceeded the industry's combined profits in the prior six years. The return on invested capital, even before the pandemic, was on a declining trend from 7.9 percent in 2015 to 5.8 percent in 2019.

## Looking Ahead

The airline industry is a significant producer of the greenhouse gases that adversely impact the environment and contribute to climate change. According to accounting firm Deloitte, unless there emerges an alternative to using fossil fuels for flying, the airline industry's greenhouse gas emissions are expected to rise from 3 percent to 22 percent of the global total by 2050 as other industries reduce emissions. While airlines tout green credentials, at the same time industry groups continue to fight rules on emissions. According to Jo Dardenne, aviation director at Transport & Environment, an environmental campaign group, "Airlines have trade associations doing their dirty work. The airlines commit to net zero publicly and then lobby behind closed doors". IATA has lobbied for years against climate rules. As recently as October 2022, it fought against strengthening the UN emissions program at an airline industry conference in Montreal.

The much vaunted CORSIA rules exempt some of the biggest polluters such as China and India until 2027. Domestic flights, most private jets and non-carbon greenhouse gases are also excluded. Donna Lee of Calyx Global, which rates the quality of carbon credits, characterized CORSIA's analysis of carbon credits as superficial. She stated, "The way CORSIA decided eligibility was a bit of a blunt tool. You need to go deeper to separate the wheat from the chaff."

Most recently, the Christmas meltdown at Southwest Airlines resulted in the cancellation of more than 16,000 flights that stranded passengers and their luggage for days. This was followed by the system failure at the Federal Aviation Administration (FAA) on January 11 which caused an outage that snarled air traffic and caused a standstill of planes in the US for most of the day. These events did not boost public confidence in an industry just recovering from the dramatic decline in air travel during the pandemic. They will also potentially have a negative impact on the industry's financial performance.



## ASSIGNMENT

Select a major international airline that is publicly listed on a stock exchange.

- Review its most recent annual report and sustainability disclosure.
- Based on your analysis of both its financial and sustainability performance, would you invest in it? Explain.

Table 1

Airline Industry Statistics (2015-2023)

	2015	2016	2017	2018	2019	2020	2021	2022F	2023F
Revenues, \$ billion	721	709	755	812	838	382	506	727	779
Net Profit, \$ billion	36.0	34.2	37.6	27.3	26.4	-137.7	-42.0	-6.9	4.7
Return on Invested Capital, %	7.9	7.2	6.8	6.5	5.8	-19.3	- 8.0	-1.7	0.6
Fuel Consumption, billion gallons	81	85	90	95	96	52	60	73	80

Source: IATA Industry Statistics Fact Sheets

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## INSTRUCTIONS

- You have one week from the time you receive the case to research and develop a Power Point (PPT) presentation for the Milgard Invitational Case Competition on Social Responsibility. Make sure to include your team name (e.g., Team A1, Team A2 etc.) on the PPT and not to include identifying information about your school or location. The PPT presentation should be emailed to [clsr@uw.edu](mailto:clsr@uw.edu) OR if it is too large to email you may send a link to access the PPT.
- The deadline to turn in your presentation is exactly one week from when you receive the case. For example, if you receive the case at 8:00 am your time on February 10, you must return the case by 8 am your time on February 17. We cannot give specific times as they may vary based on geography, but all teams will have exactly one week. During that week, you should not be consulting anybody outside of your team, including your team advisor.
- Do NOT identify your university by name in your presentation and PPT. Identify your team by the number assigned to you (e.g., Team A1, Team A2 etc.)
- While you may (and should) practice your presentation between February 17 - 24, you may not make any changes to the content of your slideshow nor add any research or conclusions after you submit your presentation on February 17.
- Your presentation should be no longer than 15 minutes. During the preliminary round on February 24, the judges will have 10 minutes to ask you questions about your presentation (Q&A) and 5 minutes to provide feedback.
- If your team is selected for the final round, you will present in-person on Friday, February 24 in the afternoon. All team members should plan to be present for this presentation.
- Be prepared to defend your position in a professional manner that is grounded in your own research about the company, the market, and its competitors.

You may use any publicly available information about companies, the airline industry and/or trends in corporate responsibility. You may not contact any other organizations for information nor consult anyone outside of your team. This case provides the opportunity for you to use your knowledge, research, and analytical & communication skills to explore the issues related to corporate social responsibility, social impact, environmental and social sustainability, financial statement analysis, company stock returns and other related topics.