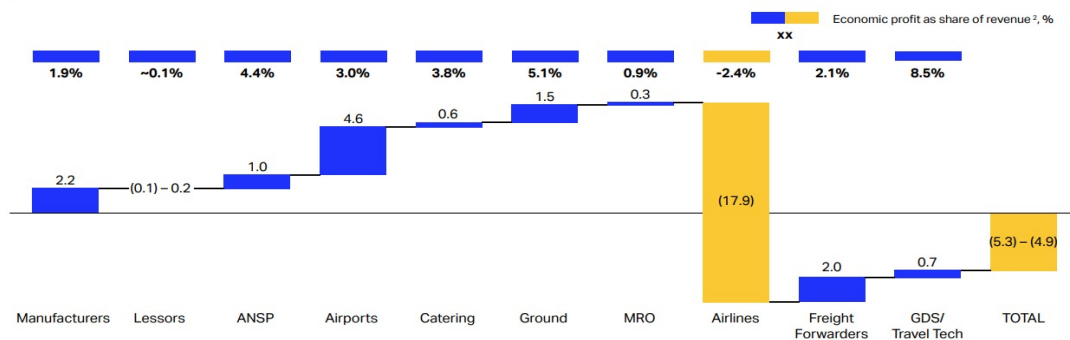


The aviation value chain – a range of different outcomes

Pre-COVID-19, the air transport value chain generated an economic loss of USD ~5 billion p.a. driven by large airlines losses

Average annual economic profit/loss by subsector, 2012-2019, USD Billion¹



1. Based on invested capital excluding goodwill, extrapolated to total industry.
 2. Computed as cumulative economic profit divided by cumulative sector revenue over the period.

Source: "Understanding the Pandemic's Impact on the Aviation Value Chain", IATA and McKinsey, December 2022.

1

6 December 2022

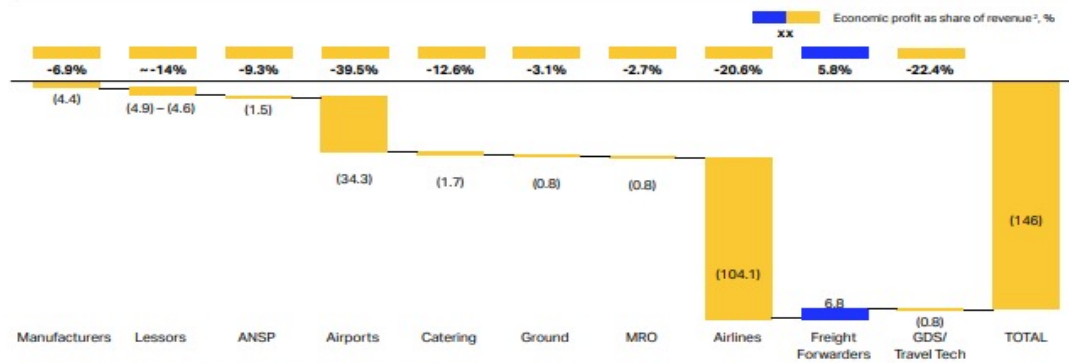


- The aviation value chain is unbalanced.
- Economic profits are unevenly distributed, and airlines stand out as uniquely challenged in this environment.

When planes can't fly

In 2021, all subsectors noted sizable economic losses – air cargo was the only bright spot

Economic profit/loss by subsector, 2021, USD Billion¹



1. Based on invested capital excluding goodwill, extrapolated to total industry.
 2. Computed as cumulative economic profit divided by cumulative sector revenue over the period.

Source: "Understanding the Pandemic's Impact on the Aviation Value Chain", IATA and McKinsey, December 2022.

2

6 December 2022

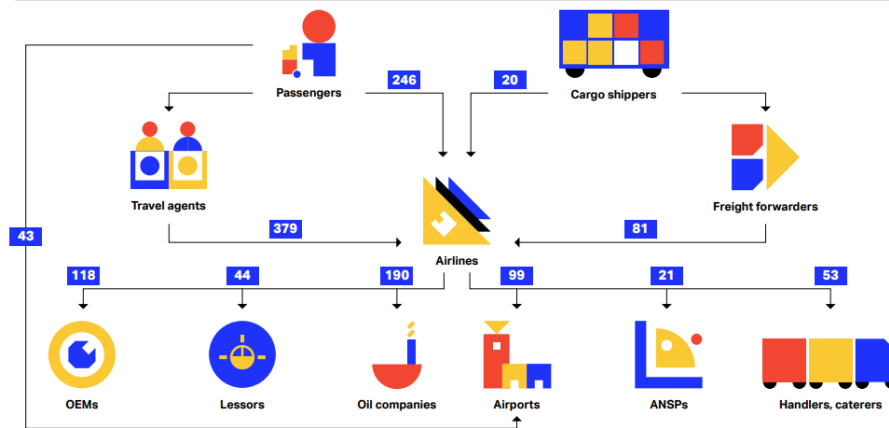


- We can see here that in 2021, and when planes can't fly, the havoc that this can wreak on the whole value chain – with the exception of the freight forwarders in this case.

Revenue flows to and from airlines

Illustrative flow of revenues within the aviation value chain

Indicative revenue flows within the aviation sector, 2019, USD Billions



3 Source: S&P Global, Refinitiv Eikon

6 December 2022



- A way to shine the spotlight on how interdependent the links in the value chain are, is to look at how revenue flows to and from airlines.
- Here we can see too the important share of oil companies in airline “wealth transfer”, if you wish – these were not included in the value chain analysis because of the difficulty in isolating jet fuels specifically.
- The average profit per passenger in our 2023 forecast is USD 1.1 – depending on where you live, this cannot even buy a cup of coffee.

Market structure plays an important role globally

	Market share of top 5
ANSP	NA
GDS and travel tech	100%
OEMs	99%
Catering	63%
Lessors	36%
Freight fwd	35%
Airlines	25%
Ground handlers	19%
MROs	19%
Airports	12%

- Google's share of global search market: 83.8%

Source: "Understanding the Pandemic's Impact on the Aviation Value Chain", IATA and McKinsey, December 2022.

4

6 December 2022



- Clearly, market structure has an influence on these unbalanced outcomes across the aviation value chain.
- The GDSs and the OEMs are perfect oligopolies, comparable to the internet search market where one company, Google, has a near-84% market share.
- At the other end of the value chain, airlines face a hyper-competitive environment with instant price discovery across all markets.
- This situation merits questioning – not only of market structures but also of business models.

The aviation value chain – we all play a vital role

- The whole value chain has an interest in its **strength** and needs to address, together:
 - Achieving **net-zero** emissions by 2050
 - Greater **data-sharing** for insights and improved passenger experience
 - Capturing **efficiency** gains

Source: "Understanding the Pandemic's Impact on the Aviation Value Chain", IATA and McKinsey, December 2022.

5

6 December 2022



- **Beyond market structures and business models, there is also much important work that needs the attention of all the links in the value chain.**
- **These areas of collaboration can only yield the desired results if addressed in a coordinated manner.**
- **They include notably climate change and achieving net-zero emissions in 2050, as well as making appropriate use of the sector's data across industries, and the efficiency gains that can be captured through collaboration.**