



# THE CORONA VIRUS PANDEMIC

## IMPACT ON THE AVIATION MARKET

### EXECUTIVE SUMMARY

- The aviation industry has been impacted by different epidemics in the last 20 years.
- Effects of previous disease outbreaks have peaked after 1-3 months and recovered to pre-outbreak levels within 6-7 months.
- The duration of the corona pandemic will probably be considerably longer and economic consequences will be tremendous, especially for the travel and tourism industry.
- Government aid in form of tax breaks, financial support and temporary changes to regulations will help to significantly reduce the negative economical effects on the industry.
- Airline consolidation of financially weak airlines is inevitable.
- Aircraft values and lease rates are deteriorating in the short term.
- In the medium term, KGAL/GOAL is convinced that the industry will recover and will return to its historical long-term growth path.

KGAL/GOAL will utilise its 40-year experience to proactively manage the current portfolio and try to take advantage of emerging opportunities in this new regime, and in due course, as the aviation industry re-emerges in a period of renewed growth.

We, as KGAL, are convinced that aviation will return to its stable growth in the medium term.

# INTRODUCTION

The effects of the current crisis have gone far beyond the initial starting point of China and have already caused a significant global macroeconomic slowdown. International airlines have been particularly affected by this development due to the dramatic decline in passenger demand and implemented travel restrictions.

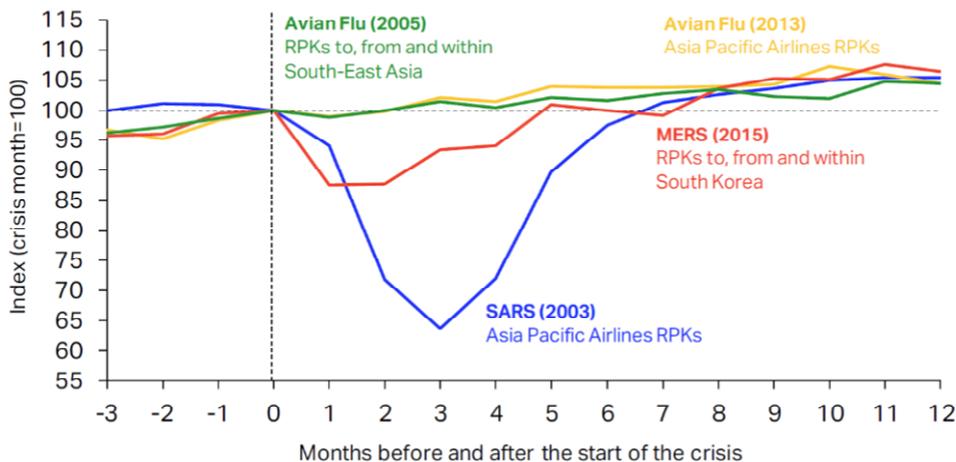
This paper gives an overview of the impact on the airline industry (section 1), an outlook on aircraft lease rates and residual values (section 2) and summarises the reactions so far by airlines and governments (section 3 and 4). In the last two chapters of this paper, we describe the crisis management put in place by KGAL / GOAL (section 5) and give a brief outlook on the aviation sector over the longer-term, beyond the current exceptional period (section 6).

## 1. IMPACT ON AIRLINE INDUSTRY

Looking at the development of commercial aviation since the 1950s, we see a dual pattern – an underlying steady increase in air traffic, measured in Revenue Passenger Kilometres (RPKs), and overlaid on top of this many external short-term negative actors, such as oil crises, recessions, war, terrorist attacks and disease outbreaks.

Chart 1 compares the impact of previous outbreaks on the aviation market and shows that SARS had the greatest impact on air traffic prior to 2020.

CHART 1: IMPACT OF PAST OUTBREAKS ON AVIATION<sup>1</sup>



The impact of previous outbreaks has peaked after 1-3 months and recovered to pre-outbreak levels in 6-7 months

In May 2003, when the SARS crisis was at its peak, monthly RPKs of airlines from the Asian-Pacific region dropped by 35%. In total, Asia-Pacific airlines lost 9% of RPKs p.a. and USD 6 billion of revenues in 2003.<sup>1,2</sup>

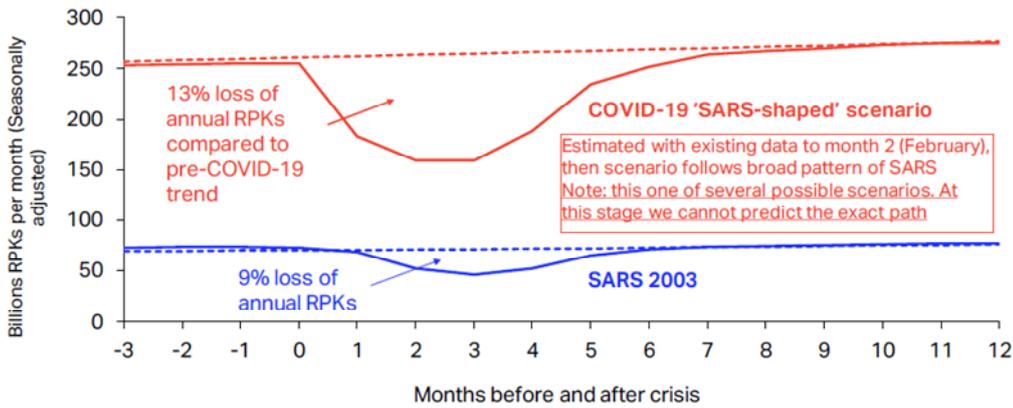
In February of this year, the International Air Transport Association (IATA) was predicting that the impact of the COVID-19 outbreak would be mainly concentrated on airlines with activities primarily in air traffic to and from or within China, similarly to the SARS crisis in 2003. Assuming that COVID-19 behaves similarly to SARS, IATA at that stage assumed a scenario where annual RPKs loss would be of the order 13% (see chart 2).<sup>2</sup>

<sup>1</sup> ICAO, 13/3/2020, Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis

<sup>2</sup> IATA, 5/3/2020: COVID-19, Updated impact assessment of the novel Coronavirus

Since then, the situation has escalated significantly, however such estimates provide a useful 'minimum' estimate for the resulting short-term impact and timeframe of the current situation.

CHART 2: ASIA PACIFIC AIRLINES' REVENUE PASSENGER KM – EXPECTATION AS OF FEB-2020<sup>3</sup>



Even this scenario would already have resulted in at least a 4.7% decline in global passenger traffic and a loss of revenue for the airlines of approximately USD 29.3 billion, compared to IATA's December forecast with a growth forecast for the aviation industry of 4.1%.<sup>3</sup>

Since those estimates were made, the virus has spread outside China. For this reason, IATA has published a scenario to assess the consequences, pointing out that this is not a forecast but merely a scenario based on certain assumptions. In particular, affected countries with more than 10 confirmed cases and the potential loss of passenger confidence in the affected regions are taken into account.<sup>3</sup>

In the "Extensive Spread" scenario the simulation includes countries with at least ten confirmed COVID-19 cases (cut-off date 2 March 2020), i.e. China, Japan, Singapore, South Korea, France, Italy, Germany and Iran and additionally Australia, Malaysia, Thailand, Vietnam, Austria, the Netherlands, Norway, Spain, Switzerland, Sweden, the United Kingdom, Bahrain, Iraq, Kuwait, Lebanon, the United Arab Emirates, North America and Canada. The simulation implies that in these countries, the profile for passenger numbers follows the profile after the COVID-19 outbreak in China and then the pattern of the SARS epidemic.<sup>3</sup>

<sup>3</sup> IATA, 5/3/2020: COVID-19, Updated impact assessment of the novel Coronavirus

TABLE 1: IMPACT OF PREVIOUSLY-MODELLED "EXTENSIVE SPREAD" SCENARIO ON PASSENGER NUMBERS AND REVENUE AS OF 02-MAR-2020<sup>4,5</sup>

Market	Impact on passenger numbers	Impact on passenger revenue (bn USD)
Australia, China, Japan, Malaysia, Singapore, South Korea, Thailand, Vietnam	-23%	-49.7
APAC, excl. the above	-9%	-7.6
Austria, France, Italy, Germany, Netherlands, Norway, Spain, Switzerland, Sweden, UK	-24%	-37.3
Europe, excl. the above	-9%	-6.6
Bahrain, Iran, Iraq, Kuwait, Lebanon, the United Arab Emirates	-23%	-4.9
Middle East, excl. the above	-9%	-2.3
Canada, United States	-10%	-21.1

In this scenario, IATA estimates passenger revenue losses to reach USD 113 billion in 2020. Based on the December 2020 forecast, this would equal approximately 13% of the forecasted total annual passenger revenue.<sup>5</sup>

Airlines attempt to mitigate the immediate strain on liquidity and the simultaneous loss of revenue by means of targeted operating costs' measures (fleet grounding, shorter working hours, immediate cost-cutting programs). Government support programs, decreased oil price and revised slot regulation will provide some relief for airlines.

However, since this analysis has been published, several travel restrictions have been implemented. The U.S. government has cancelled all flights between the Schengen countries and the USA, the EU has closed its outside borders and several other countries have limited immigration from crisis areas. **Therefore, the assumed loss in passenger revenue as assumed by IATA could now be far exceeded.**

<sup>4</sup> Note from IATA: The impact on passenger revenues in this scenario do not add up to their respective total of USD 113 billion due to overlapping routes e.g. China and Japan include revenues from the China-Japan market. IATA has calculated the overlaps to indicate the worldwide decline in revenue.

<sup>5</sup> IATA, 5/3/2020: COVID-19, Updated impact assessment of the novel Coronavirus

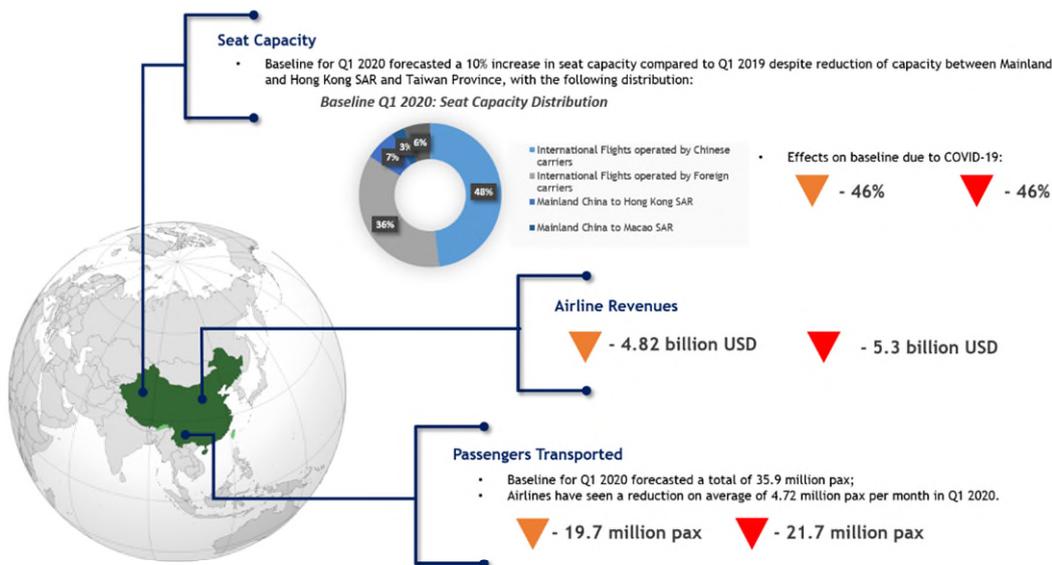
## SPOTLIGHT ON MAINLAND CHINA<sup>6</sup>

Despite the acceleration in COVID-19 in other parts of the world, the situation in China has begun an initial recovery phase, as of March 2020, which means the previous assumptions on passenger revenue do still have relevance for China itself – at least if Chinese authorities can maintain recent progress in fighting the virus.

The chart below from ICAO shows the economic impacts of the spread of the Corona virus on Mainland China. Similarly, to IATA, ICAO differentiates between two scenarios:

1. **Scenario 1 “Mild”**: the same decrease in seat capacity recorded in January and February 2020 is assumed for March 2020. Load factors are indicated with an orange arrow below.
2. **Scenario 2 “Severe”**: ICAO simulates an additional drop in seat capacity of 10 % in March 2020. Load factors, illustrated by red arrows, are assumed to decrease by 22% in February and 17% in March.

CHART 3: SPOTLIGHT ON MAINLAND CHINA<sup>7</sup>



## 2. REACTIONS BY AIRLINES

Since demand for air traffic fell tremendously due to travel warnings, travel restrictions and closed borders, the airline industry has been the industry that has been hit the fastest and probably hardest by COVID-19. The cash position will be the biggest issue airlines are facing, as revenues decline sharply, while costs for staff, aircraft rent, airport slots and others remain.

Therefore, airlines have moved into crisis mode. In order to cut down costs, the industry has started to dramatically reduce capacities, with some airlines even cancelling all flights and parking all aircraft. This effect is at least to some extent offset, as many airlines such as Ryanair and especially U.S. carriers were already short on aircraft due to the ongoing Boeing MAX grounding

<sup>6</sup> ICAO Website (<https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>)

<sup>7</sup> ICAO Website (<https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>)

that has now been taking place for more than a year. Alongside the reduction in capacity, airlines have also laid off some of their staff and have announced mandatory vacations in order to manage the demand for staff and ultimately their cost of staff.

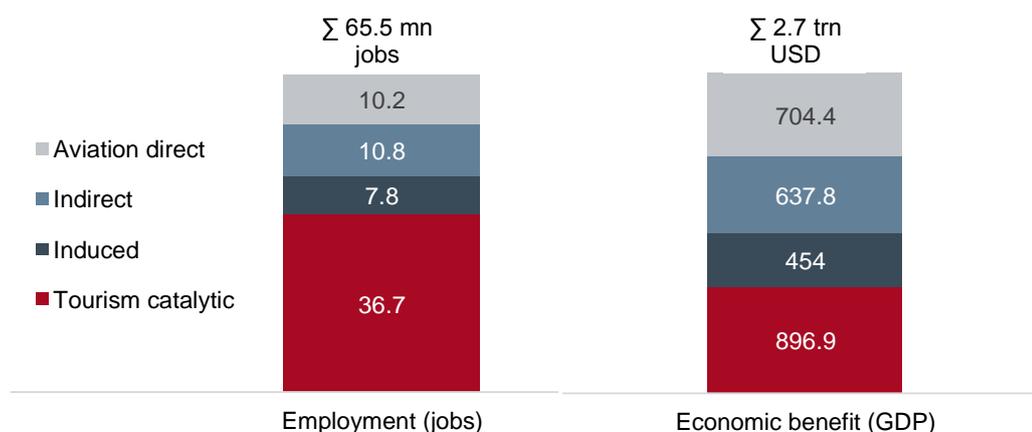
As described above, the industry is capable of reacting very quickly to sudden events such as the current outbreak. Airlines have many different instruments in order to navigate the crisis, which they are utilising in a very professional manner.

In order to manage the shortfall in passenger demand, many airlines with existing aircraft orders have also approached manufacturers in order to reach agreements on deferring delivery slots or to restructure down payments to free additional liquidity. Carriers have also reached out to their respective governments in order to negotiate credit lines, tax aid and other means of support.

### 3. REACTIONS BY GOVERNMENTS

As the aviation sector plays a major role for the global economy, among other things by supporting directly and indirectly around 65.5 million jobs globally and by generating an economic GDP impact of around USD 2.7 trillion, governments around the globe have supported the aviation sector during or after previous crises.<sup>8</sup>

CHART 4: DIRECT AND INDIRECT IMPACT OF THE AVIATION SECTOR <sup>8</sup>



Given the historic support from governments during crises, a large number of airlines have reached out to their respective governments to ask for support in various ways, ranging from monetary support in form of liquidity lines and government backed guarantees to amendments to aviation specific regulations. For instance, the EU has announced that they will suspend their rules on overseeing airport slots, which enables airlines to terminate the operation of “ghost flights” that would have been otherwise necessary to keep airport slots.

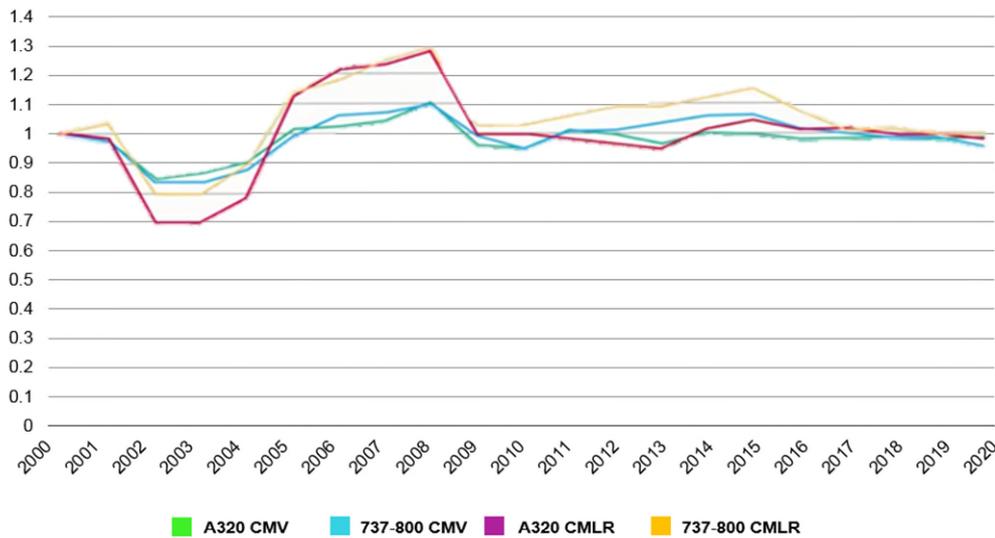
As aviation is a vital industry sector for today’s globalised world, governments will make sure that the necessary support programs will be available.

<sup>8</sup> ICAO Website (<https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>)

## 4. IMPACT ON LEASE RATES AND RESIDUAL VALUES

In the past, during other crises, market values for narrow body aircraft have declined by about 15% while lease rates fell by around 25%. It has usually taken about two years until the market values and lease rates started to rise again. The numbers for wide body aircraft have mostly followed the same pattern, but recovery periods have been longer compared to narrow bodies.

CHART 5: CURRENT MARKET VALUES AND LEASE RATES (1 = BASE VALUE)<sup>9</sup>



A similar timeframe can be expected due to current developments, even if the short-term impact is likely to be greater due to the rapid and eminent developments.

Lease rates and values are very likely to see a notable drop as low demand for travel comes with low demand for aircraft. This impact will be even greater as some airlines default, which would contribute to a further increase in aircraft supply in the market.

## 5. CRISIS MANAGEMENT BY KGAL / GOAL

KGAL with its over 40-year history in the aviation sector and its two Joint Ventures with Deutsche Lufthansa, has gone through a number of crises in the aviation market previously.

In this unique situation, we are aware of the unprecedented short-term impact of recent developments and have established suitable measures to protect our investments.

These include among others:

- Establishing of an internal Aviation task force team to handle all KGAL engagements.
- Keeping ongoing dialogue with airlines to be up to date on their situation and to help meet their needs.
- Direct talks with financing banks in order to restructure repayment schedules if necessary.

**Active  
Asset Management  
since 1979**

<sup>9</sup> Cirium by Ascend

- Reviewing our portfolio analysis of all our funds to include updated risk assessments of all the airlines to which our Funds are exposed.
- Update calls with existing investors.
- Ongoing critical monitoring of the respective aircraft status, documentation status, etc.

Based on our long and deep industry knowledge, as well as our well-structured portfolio approach, we are confident to manage these challenges successfully for our investors.

## 6. OUTLOOK BY KGAL / GOAL

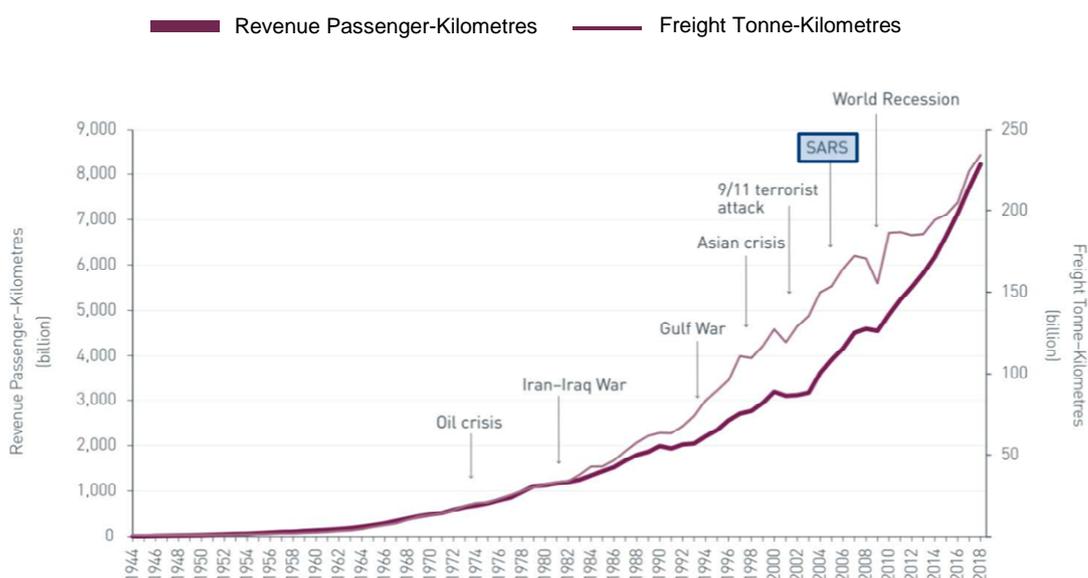
Within our Core fund strategy, in which the investor focus is stable fixed income, we are obviously very cautious in the current environment and are only investing very selectively. Investments in liquid assets with a long-term lease to one of the major reputable airlines are advisable.

KGAL’s Core Plus fund strategy is based on KGAL/GOAL’s profound market knowledge, deep asset management competence as well as our long and successful track-record. We have the capacity and capability to selectively take advantage of the current unique market conditions by sourcing and co-investing alongside our investors in interesting market opportunities.

As successfully demonstrated in the past, and shown in the graph below, the aviation market has the capability to return to the original historical long-term growth path after the epidemic subsides.

We believe, that – after the crisis has been successfully managed – aviation will over a course of many years be a growth market with attractive investment opportunities.

CHART 6: GLOBAL ANNUAL AIR TRAFFIC (TRILLIONS OF SOLD REVENUE PASSENGER KILOMETERS)<sup>10</sup>



<sup>10</sup> ICAO, 13/3/2020, Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis

## Sources:

- International Civil Aviation Organisation (ICAO) Website (<https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>)
- International Civil Aviation Organisation (ICAO), 13/3/2020, Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis
- International Air Transport Association (IATA): <https://www.iata.org/en/iata-repository/publications/economic-reports/coronavirus-initial-impact-assessment/>
- International Air Transport Association (IATA): <https://www.iata.org/en/iata-repository/publications/economic-reports/coronavirus-updated-impact-assessment/>
- Cirium by Ascend: <https://www.youtube.com/watch?v=QsTcbdFAVaA>
- CAPA - Centre for Aviation: <https://centreforaviation.com/analysis/reports/covid-19-by-the-end-of-may-most-world-airlines-will-be-bankrupt-517512>

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## KGAL Group

To date, the aircraft fund investment volume realised by KGAL Group totals more than €7.9 billion. Since the initial aircraft fund in 1979, KGAL has concluded transactions for more than 860 aircraft, 81 private placements and other investment models, as well as 58 retail and three institutional funds. KGAL Group is a leading, independent investment and asset manager with an investment volume of €20.2 billion. The investments focus on long-term capital investments for institutional investors in the real estate, infrastructure and aircraft asset classes.

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