Worst aviation crisis since WW2…

…How will the sector respond in 2021?

December 2020 Review

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Once in FOUR Generations Shock Event

Global impact of COVID-19 was sudden and severe

Analysis by AviaSolutions

- Worst shock to aviation sector since WW2
- 2020 Passenger Kilometres flown have reset to 2001 levels

- Global economy is withstanding the pandemic shock for now
- Air travel has been devasted by quarantine restrictions BUT
  - Cargo Km flown have mostly been impacted by reduced passenger flight capacity
  - Overall reduction of cargo capacity has likely resulted in higher cargo revenues

2021 – Traffic rebound will be shaped by timing/lifting of current global travel restrictions/quarantines, but leisure and domestic traffic levels will likely recover to at least 80% of 2019 levels by Q2

2021 – With increasing capacity, cargo km flown will near 2019 levels and cargo revenue will remain higher per kg flown than 2019 levels

Chart 1: Global Revenue Passenger Kilometres (RPK) vs GDP ($)

Source: ICAO, OEF, AviaSolutions analysis

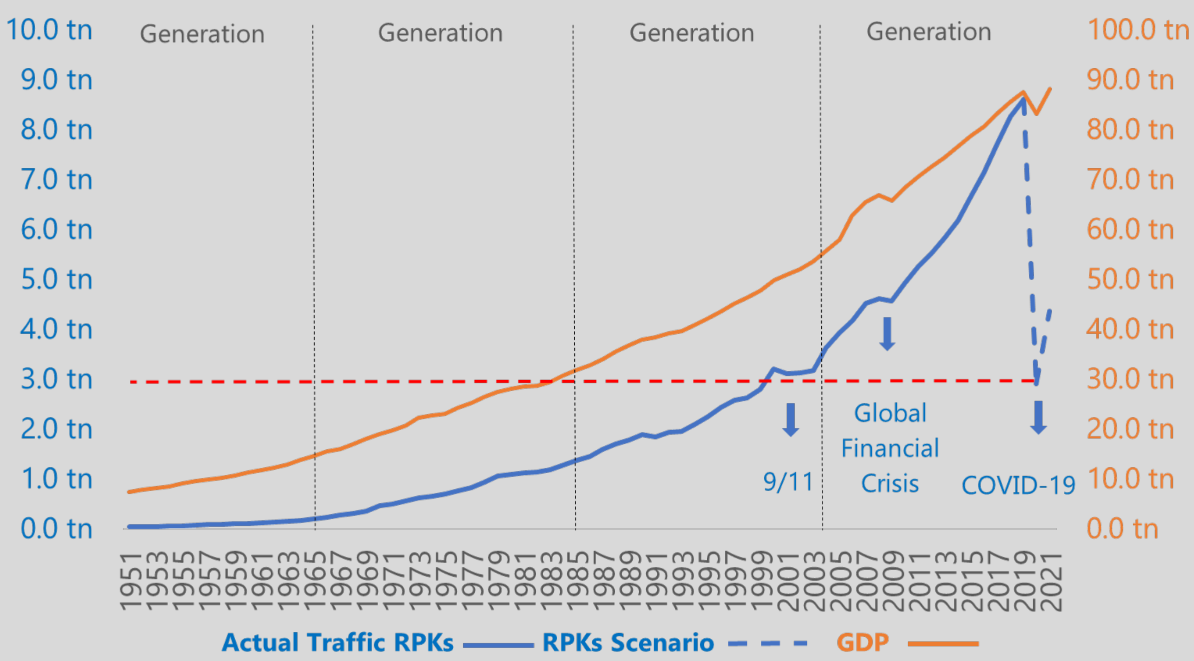
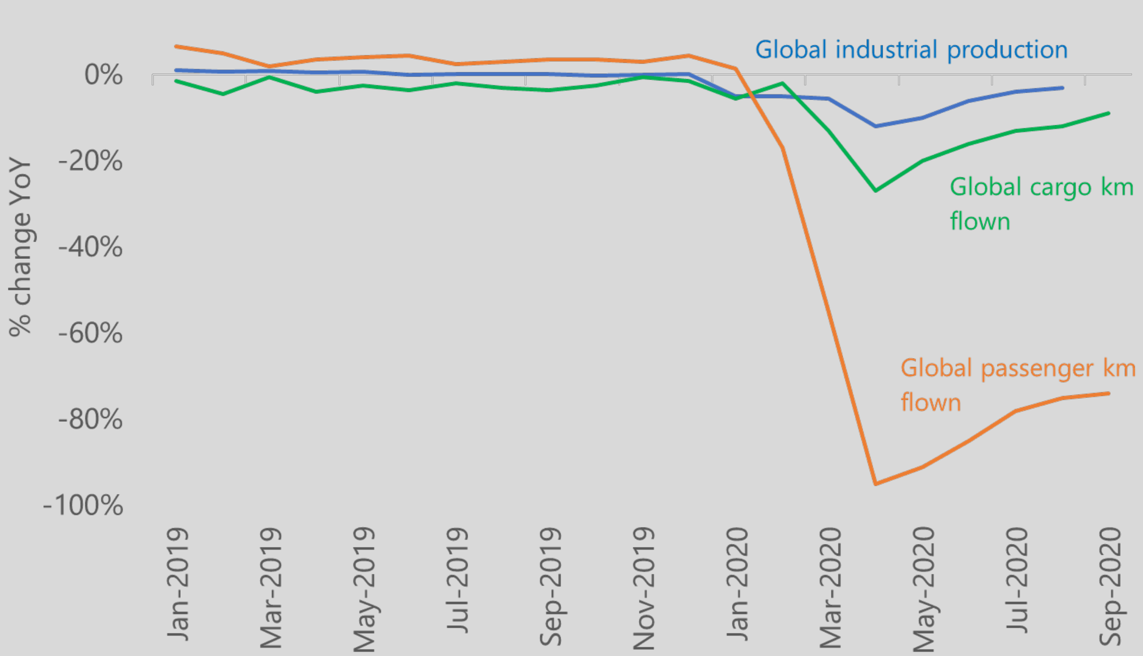


Chart 2: Passenger vs Cargo Km Flown vs Global Economy

Source: IATA, AviaSolutions analysis



COVID-19 Impact on Seat Capacity

South West Pacific and Europe are most impacted

Source: OAG Schedules published 23 Nov 2020; Analysis by AviaSolutions

- Long haul routes are most impacted by COVID-19; short haul routes are least impacted
- Asia and the Americas are least affected; South West Pacific and Europe are most affected
- Low Cost Carriers are faring better than Full Service Carriers; partly due to their focus on short haul routes

2021 – Europe and South West Pacific will remain most affected. Structural importance of long haul to these markets will drive impacts

Chart 3: Change in ASKs by Region (2020 vs 2019)

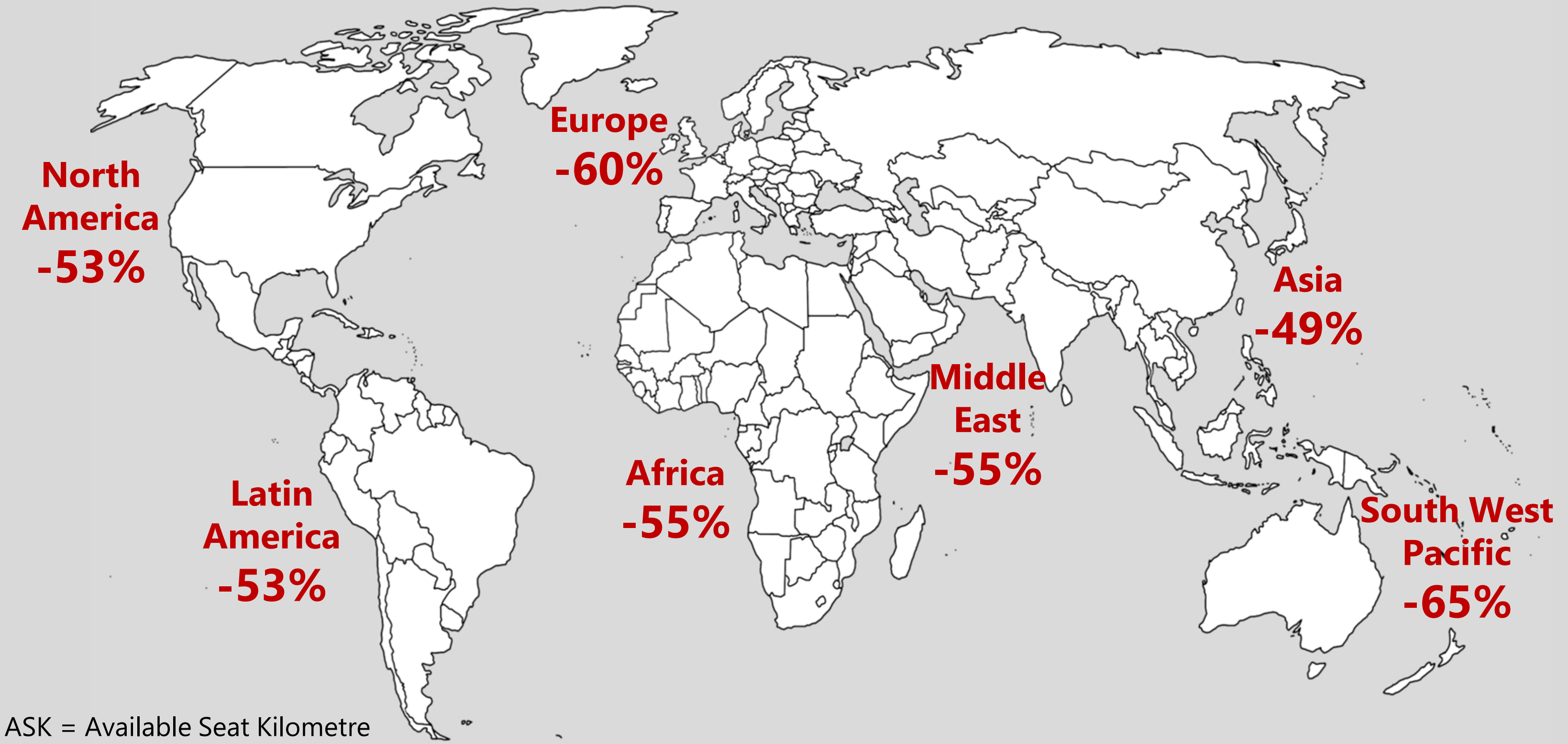
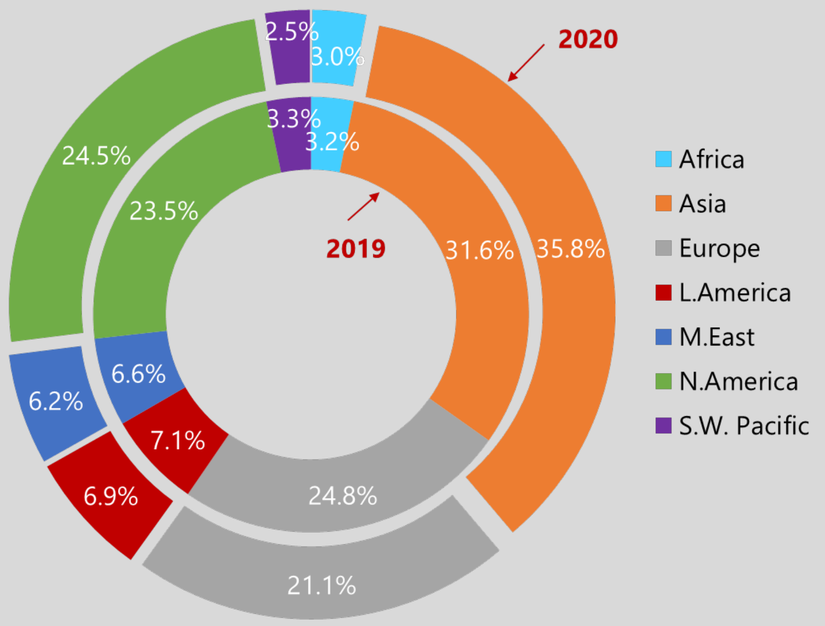


Chart 4: ASK Share by Region (2020 vs 2019)



* ASK = Available Seat Kilometre

International and Long Haul Services are Most Impacted

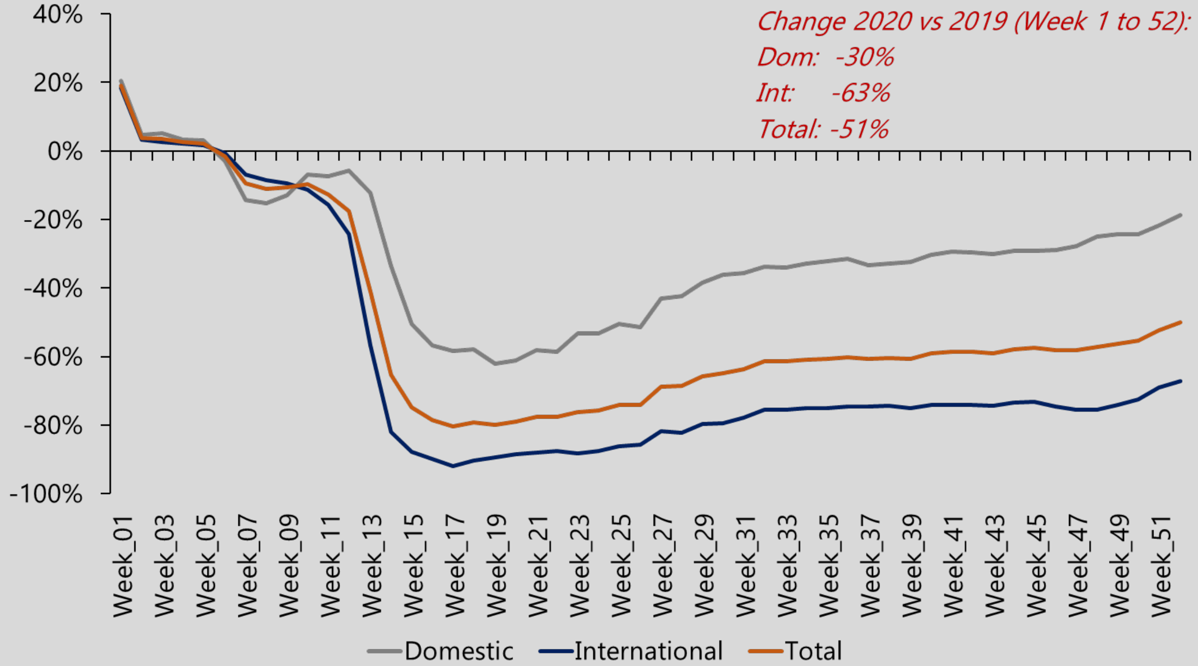
Spring 2020 was the low point for seat capacity decline

Source: OAG Schedules published 23 Nov 2020; Analysis by AviaSolutions

- Domestic travel is less impacted by restrictions and declined by 30% vs International at 63%

2021 – Likely to see near recovery in domestic travel levels from Q2 onwards

Chart 5: Domestic vs International ASK Change (2020 vs 2019)

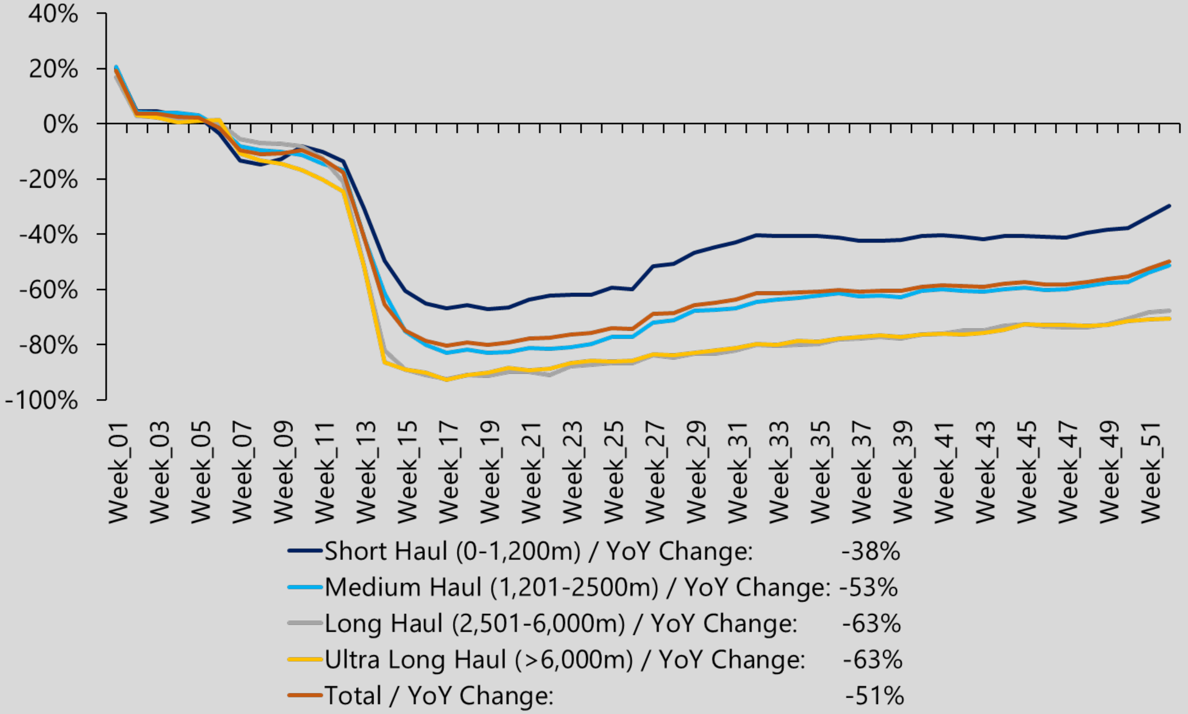


- **In 2020, Domestic ASKs declined by 30% and international ASKs declined by 63%. This led domestic share to increase from 35% to 50% in 2020**
- **This trend is due to domestic routes being less affected by travel restrictions**
- **Most of the ASKs decline took place from Spring 2020**

- Differing timing of COVID-19 spread by region led to significant fall in longer sector capacity and distance flown

2021 – Recovery to be driven by short sector flights, domestic AND leisure markets

Chart 6: ASK Change by Route Length (2020 vs 2019)



- **Overall, longer routes recorded greater ASK decline than shorter routes**
- **Due to the different timing of the pandemic spread across continents, which penalised intercontinental travelling**

Full Service Carriers (FSC) are More Impacted than LCCs

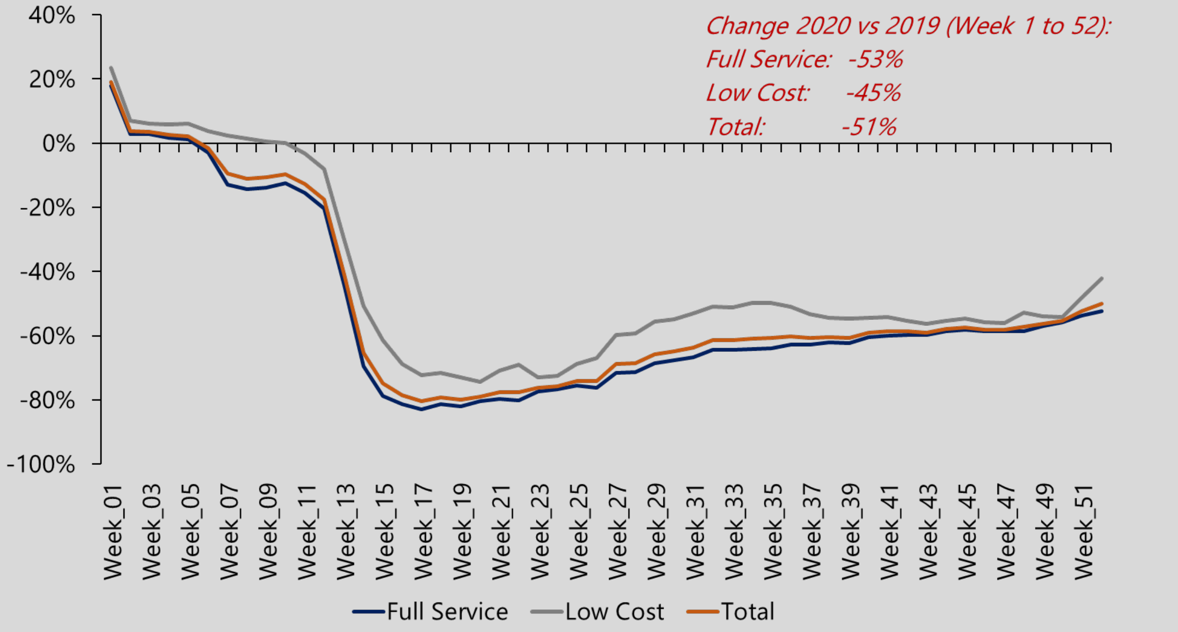
Will also be the slowest to recover

Source: OAG Schedules published 23 Nov 2020; Analysis by AviaSolutions

- Full Service airlines are worst affected
- LCCs suffered less of a decline (but only account for 26% of ASKs)

2021 – LCCs likely to increase market share

Chart 7: Global Full Service vs LCC ASK Change (2020 vs 2019)

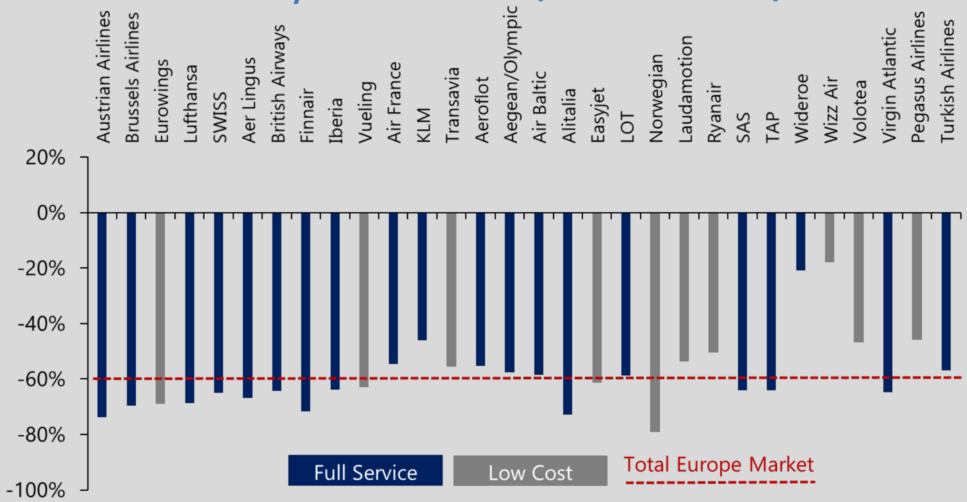


- **FSCs recorded larger ASK decline than LCCs – attributable to higher exposure of FSC to long haul and hub+spoke networks (1 lost transfer passenger = 2 unsold seats)**
- **However, FSCs still accounted for 74% of global ASKs in 2020. Hence overall ASK decline (-51%) is much closer to the figure for FSC decline than for LCC decline**

- Norwegian is the hardest hit airline
- AF/KLM are less impacted than LH and IAG

2021 – In Europe, Wizz Air will increase market share; further consolidation in fragmented European market possible as airlines run low on cash from Q3

Chart 8: Europe-originating ASK Change by Main European Airlines (2020 vs 2019)



- **COVID-19 impacted all European airlines, regardless of business model**
- **Wizz Air (-18%) and Wideroe (-21%) performed best; Norwegian (-79%) worst. Wizz expanded (mostly in W.Europe) with new bases (Italy, UK, Cyprus Norway)**
- **Wideroe provides essential connectivity across Norway, with a significant number of PSO services that were maintained throughout lockdowns**
- **Norwegian had already been struggling before the pandemic. The closure of all North Atlantic routes further impacted its US strategy**
- **Air France/KLM Group posted a much smaller decline in comparison to the other two major airline groups in Europe: Lufthansa Group and IAG**

2021 Outlook Summary

Differing consensus for the medium-term

Analysis by AviaSolutions

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- Forecasts from leading providers have generally become more pessimistic throughout 2020
- Since April 2020, AviaSolutions and Bain&Co have consistently forecast a recovery to 2019 passenger levels by 2023-2024

- Airlines are now focussed on Q2 2021 and beyond.
- Most looking to cover direct costs and maximise contribution to indirect costs.
- Quarantine restrictions permitting a strong summer in Western areas (with vaccine) is possible, Africa and LATAM will be slower with less access to vaccine.
- Europe is likely to be affected by rolling closures over the summer due to differing country approaches.
- During Q2, domestic and short-haul leisure will begin to recover to near 2019 levels, but long-haul traffic recovery is unlikely to be near 2019 until summer 2023.
- Strong leisure demand but revenue will be low given use of airline refund vouchers issued in 2020.
- Business traffic will be limited as employers assess employers duty of care, liability and insurance post pandemic.
- Assumption that hotel and resort capacity can be switched back on.
- Intense competition likely for short-haul traffic between FSCs competing directly with LCCs, likely to drive fares down; passenger growth up but RPKs down.
- Geographic status – China ahead of the game. Remains to be seen if Chinese New Year causes a resurgence in infections.
- SLOTS – Slot waivers decision due in Feb 2021 for summer slots will have a major impact on available capacity.

Chart 9: Forecast Passenger Recovery Range to 2019 Level

Source: AviaSolutions analysis