

IATA

16th MAINTENANCE

COST CONFERENCE

WEBINAR SERIES

Episode 1:
Economic Situation
& Aircraft Parking/Storage
Strategies

Wed. 9 September 2020 - 7:30-9:30am EDT



- This session is **recorded**.
- Your mic is automatically **muted**.
- **Polls:** Click on Submit once you have selected your answer
- Use the **Q&A feature** on the right side of your screen to submit your questions to our panelists



Competition Law Guidelines

IATA's Legal Anti-Trust
Counsel will be screening the
questions



Daniel Kanter

Assistant General
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Opening Remarks

Your host today:



Chris MARKOU

Head, Operational Cost
Management – IATA

markouc@iata.org

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- Role of the MCC
- MCTG Data collection ⇒ iata.org/mctg
- IATA resources about COVID
- Polls and Q&A

Next Episodes

Episode 2 – Sept 16

(7:30am EDT or 1:30pm in GVA or 7:30pm SIN)

- Adapting to exceptional circumstances (transport of cargo in the passenger cabin; aircraft cleaning & disinfecting; fuel testing)

Episode 3 – Sept 23

(7:30am EDT or 1:30pm in GVA or 7:30pm SIN)

- In the medium & long term, how will MROs and lessors reshape their businesses?

Episode 4 – Sept 30

(7:30am EDT or 1:30pm in GVA or 7:30pm SIN)

- The role of used serviceable material (USM) in the industry restart

Visit www.iata.org/mcc to register

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Episode 1 - Agenda

- 00:00 - Opening Remarks & Introductions
- 00:10 - COVID-19, Assessment of Airline Industry Outlook (IATA)
- 00:40 - Aircraft Parking/Storage Strategies
 - ✈ 00:40 - Eurowings
 - ✈ 00:52 - Virgin Australia
 - ✈ 01:04 - Ellinair
 - ✈ 01:16 - easyJet
 - ✈ 01:28 - Southwest
- 01:40 - Q&A
- 02:00 - Episode 1 Wrap-up

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Introductions



Brian PEARCE

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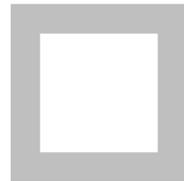
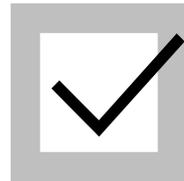
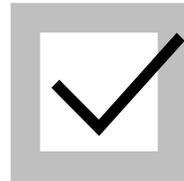
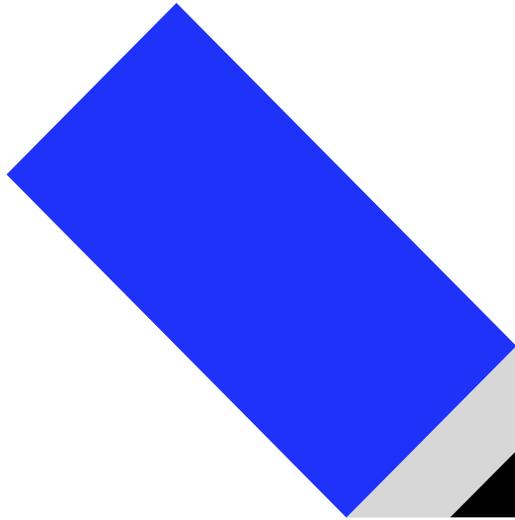


Michael HANSEN

Manager, Fleet Strategy –
Southwest Airlines

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Poll #1



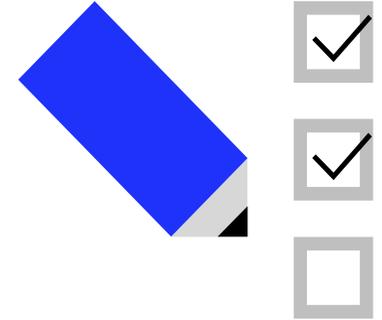
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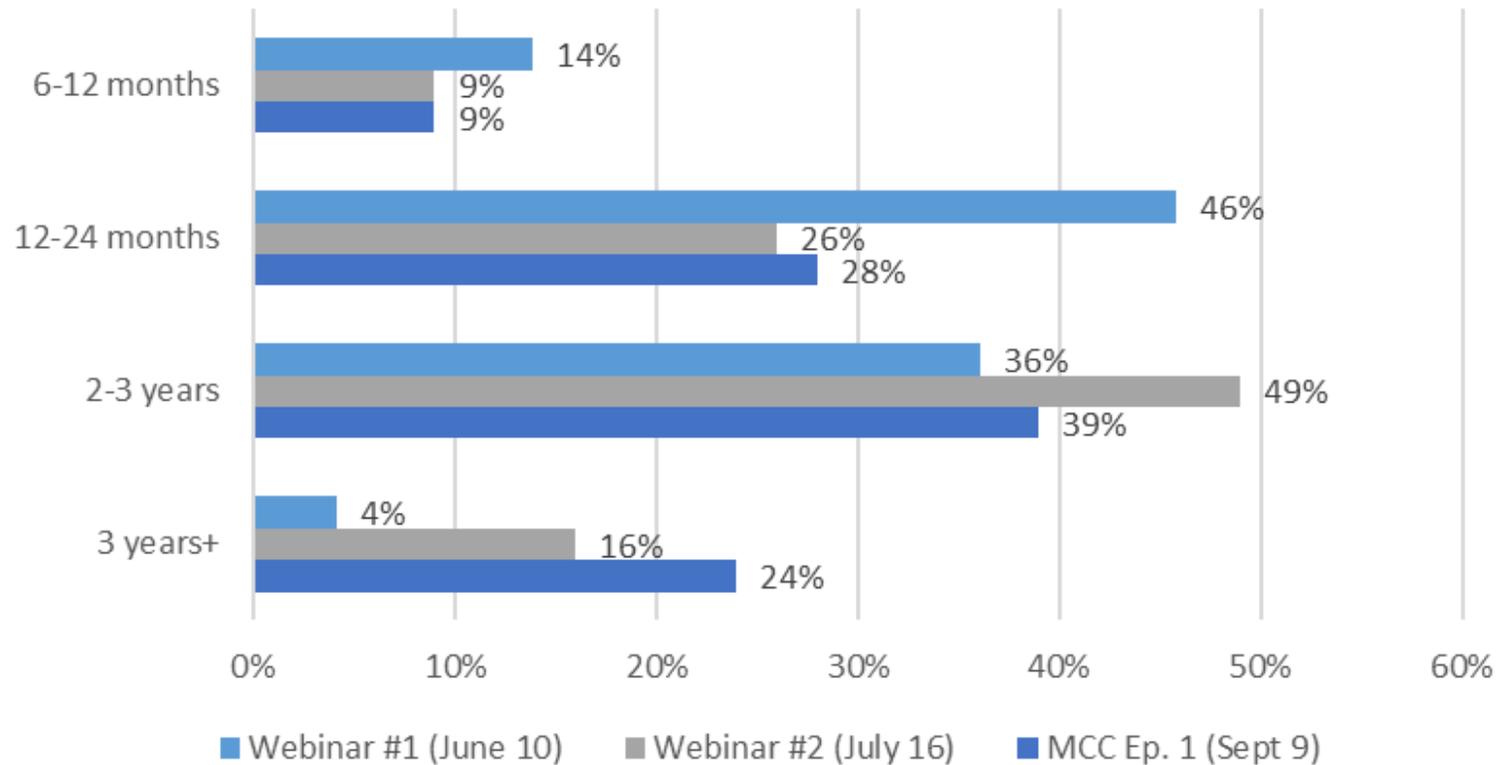
WEBINAR SERIES

Poll #1



When will demand for travel be back to 2019 levels?

Results from previous webinars



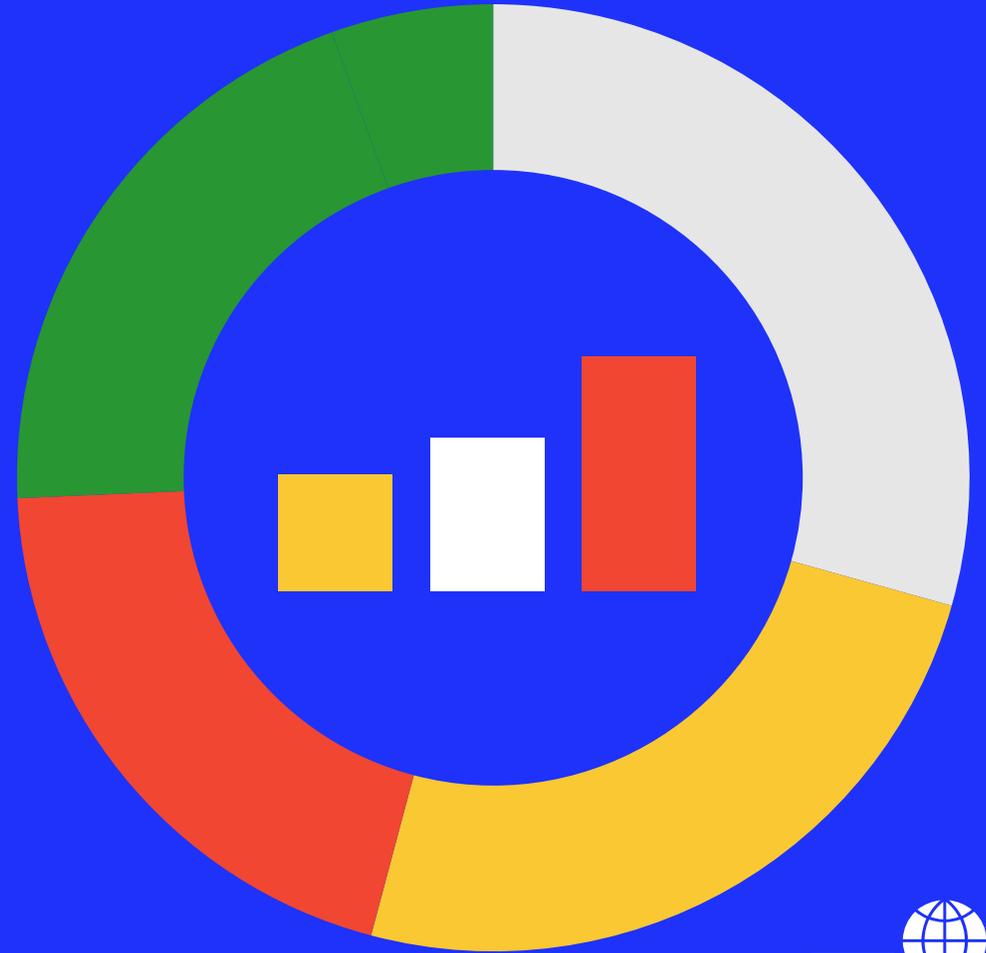
COVID-19

Assessment of airline industry outlook

Brian Pearce

Chief Economist

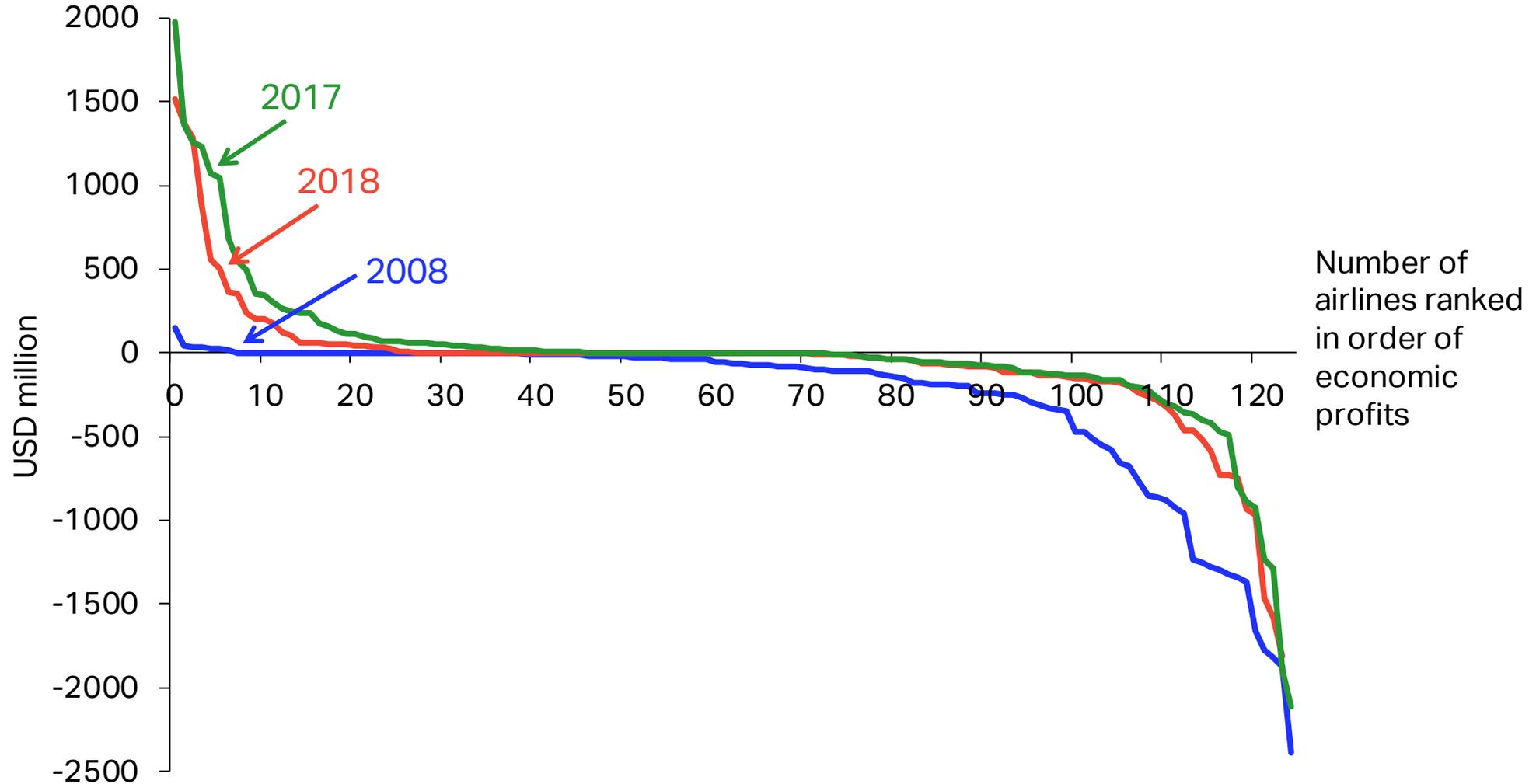
9th September 2020



Risk of airline failures as Government aid withdrawn

Only 30 airlines drove pre-crisis improvement. Long tail of weaker airlines

World's airlines ranked by economic profits

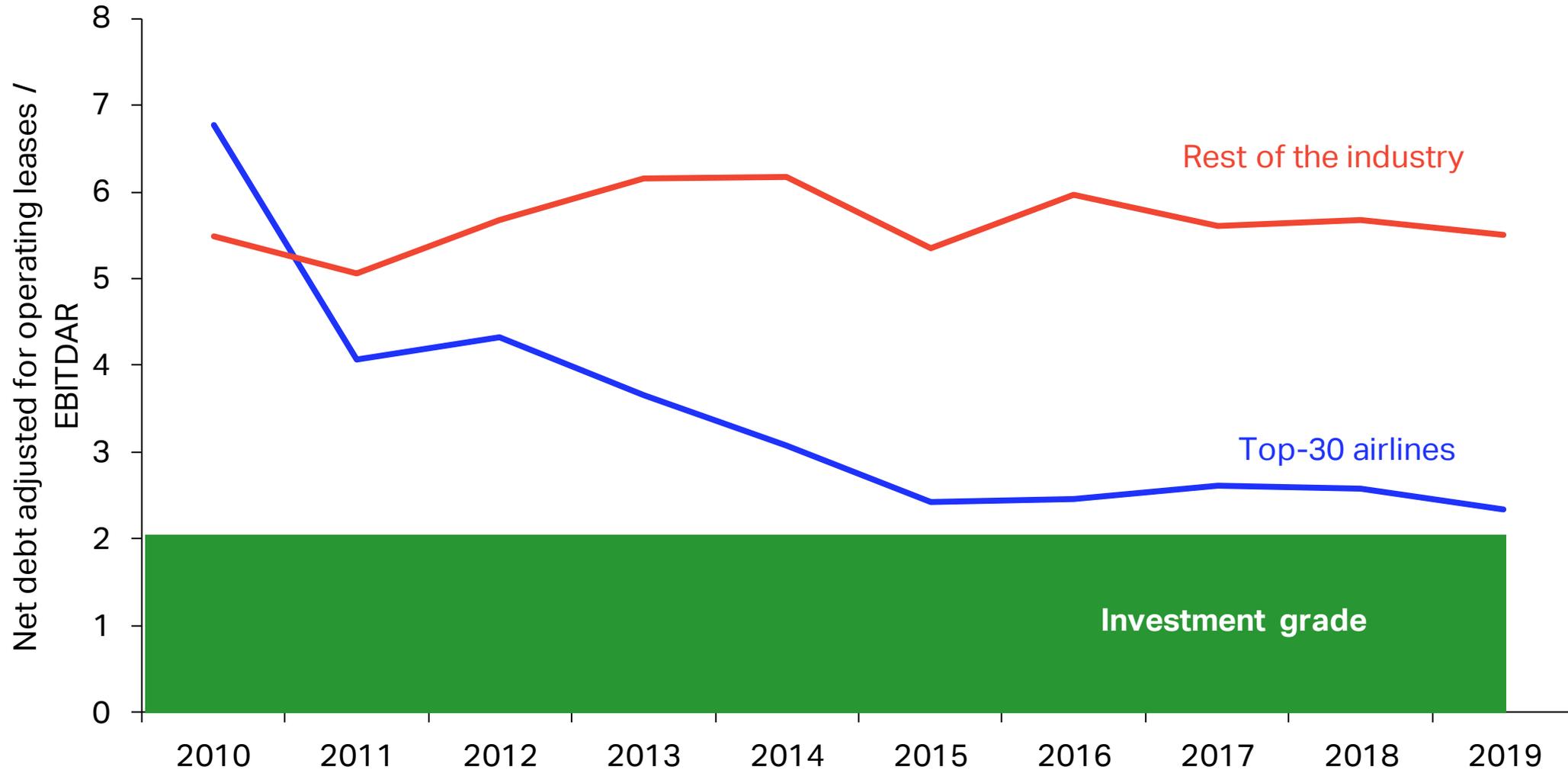


Number of airlines ranked in order of economic profits

Outside the top-30 debt levels were high before COVID

Priority will have to be generate cash flow to reduce leverage

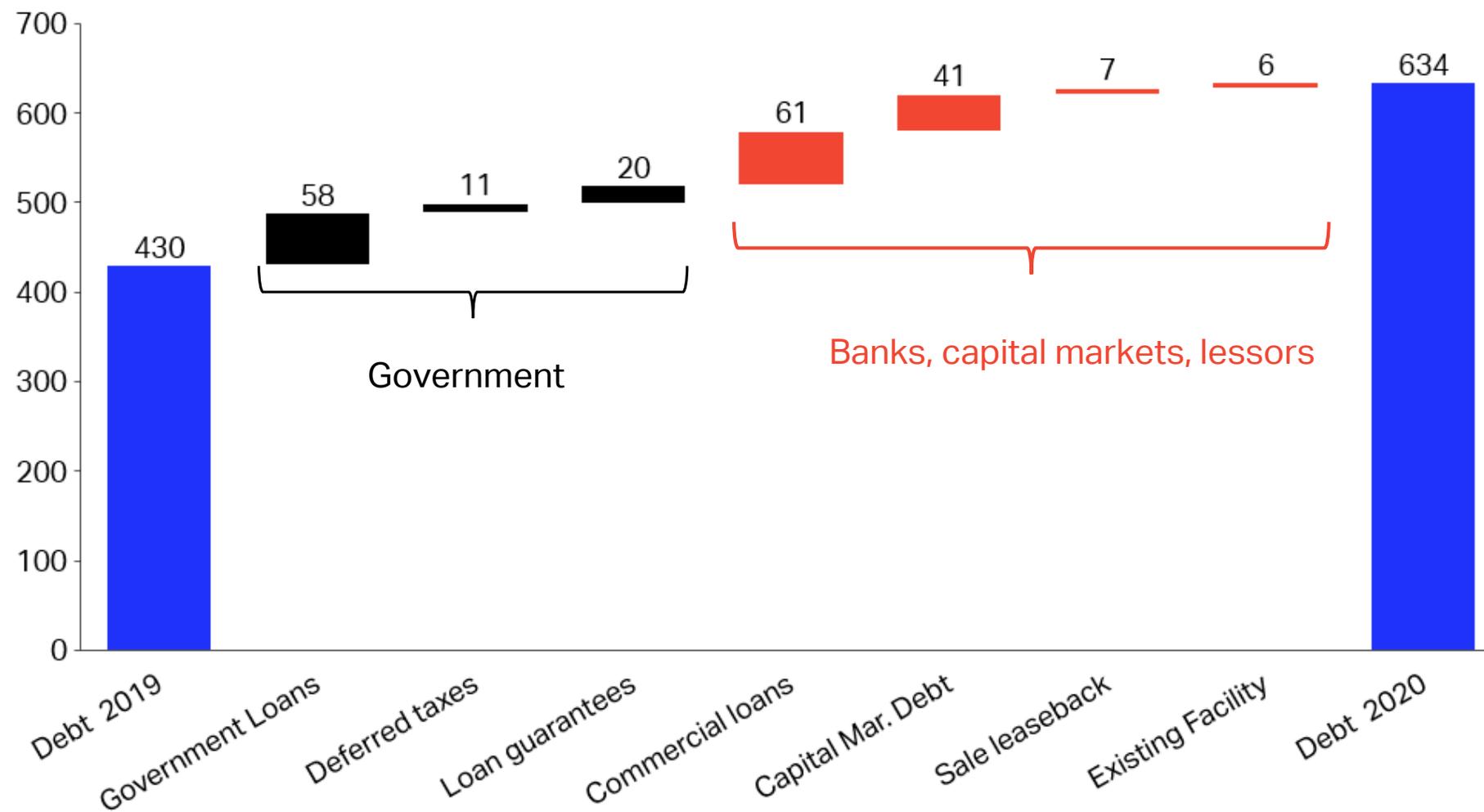
Net debt adjusted for operating leases / EBITDAR



Source: IATA Economics using data from the Airline Analyst, own estimates

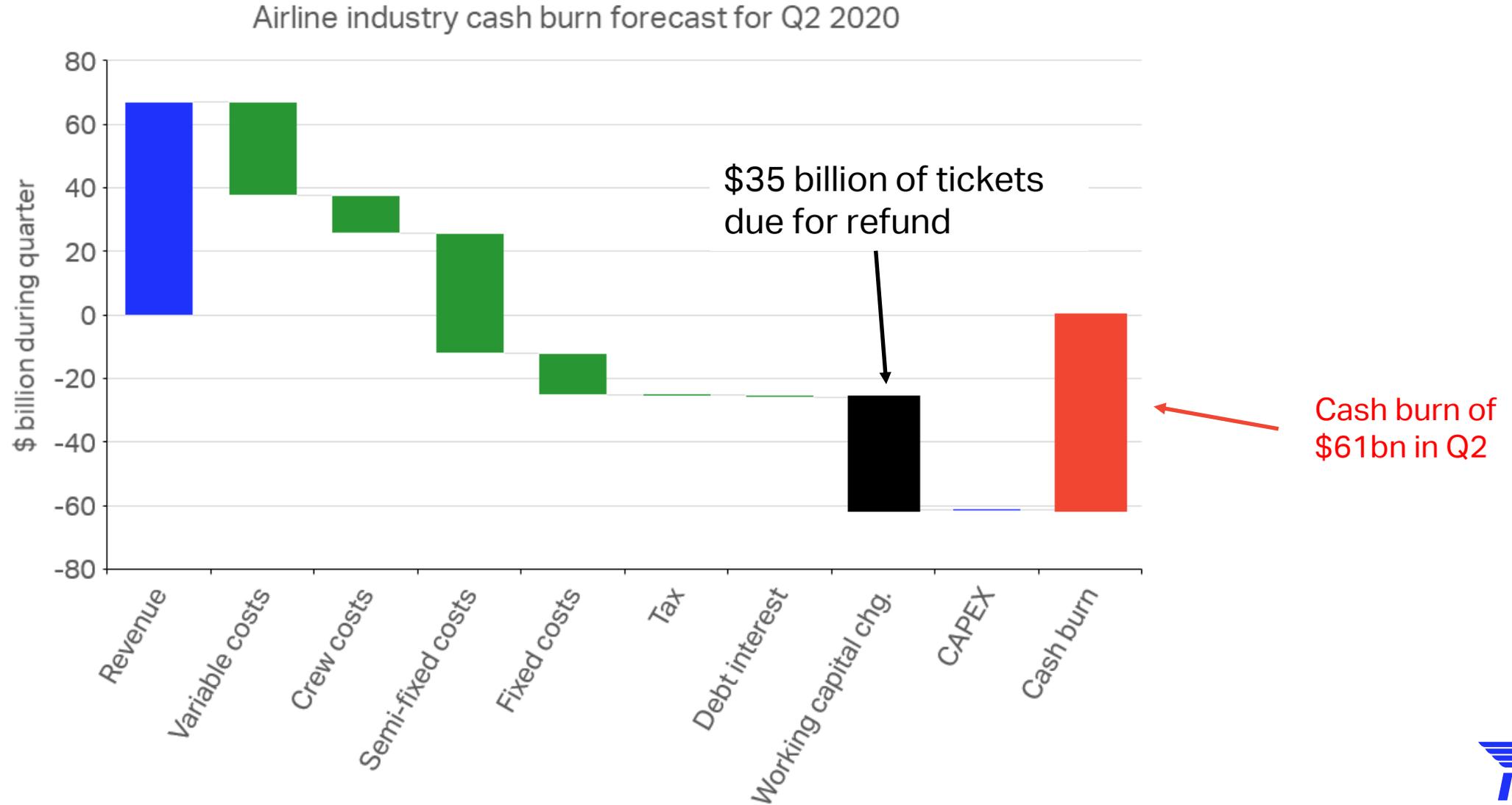
Airlines on life support but debt looks unsustainable

June: \$204 bn rise in debt but <\$30bn new equity (\$11bn from Govt)



Cash burn slowed from Q2 but far from breakeven

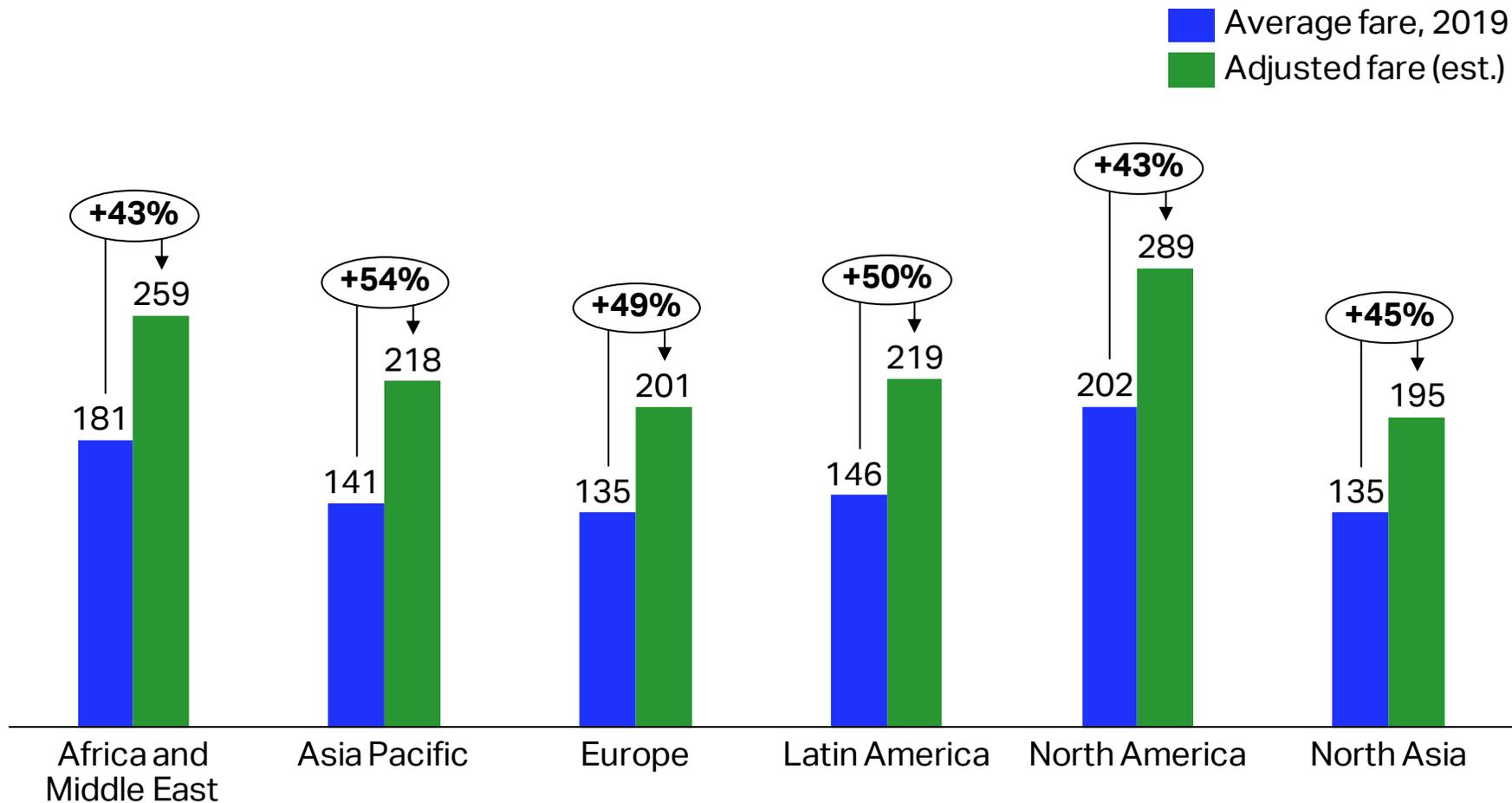
On top of unavoidable cost, ticket refunds burning cash in 2020 Q2



Air travel may get more costly if utilization remains low

Health measures could increase unit costs unless processes improved

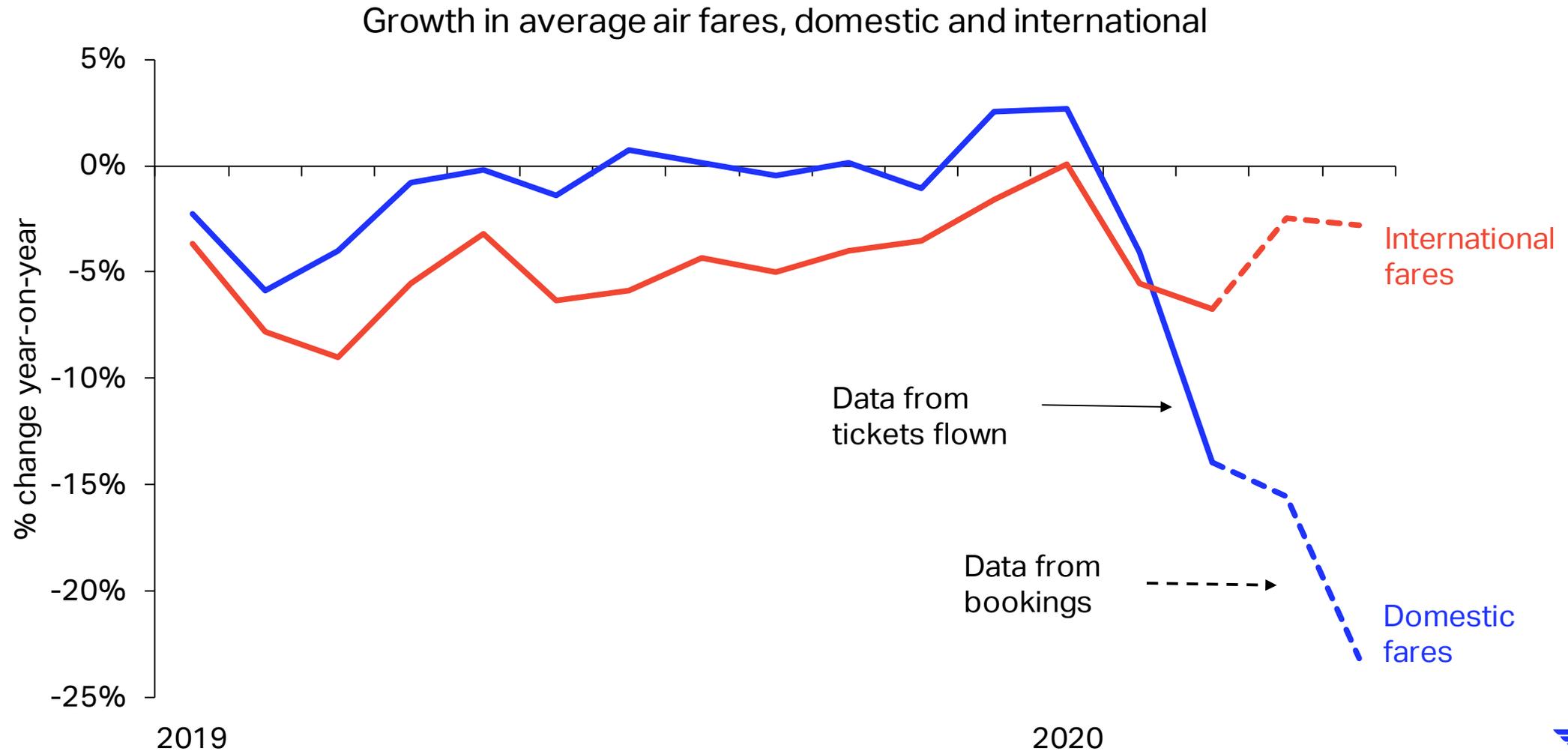
2019 average base fares vs. estimated minimum average base fares if max. 62% of seats available and airlines only break even at EBIT level (i.e. make no operating profits)



- **To break even** while selling fewer seats, airlines would need to increase fares
- Depending on the region and its baseline average achieved load factor, we estimate **the fare increase to be between 43-54%**
- This is based on estimated achieved **load factors of 53%** (62% weighted average cap on seats times an 85% assumed load factor, to account for benefits of capacity optimization with current oversupply in market)

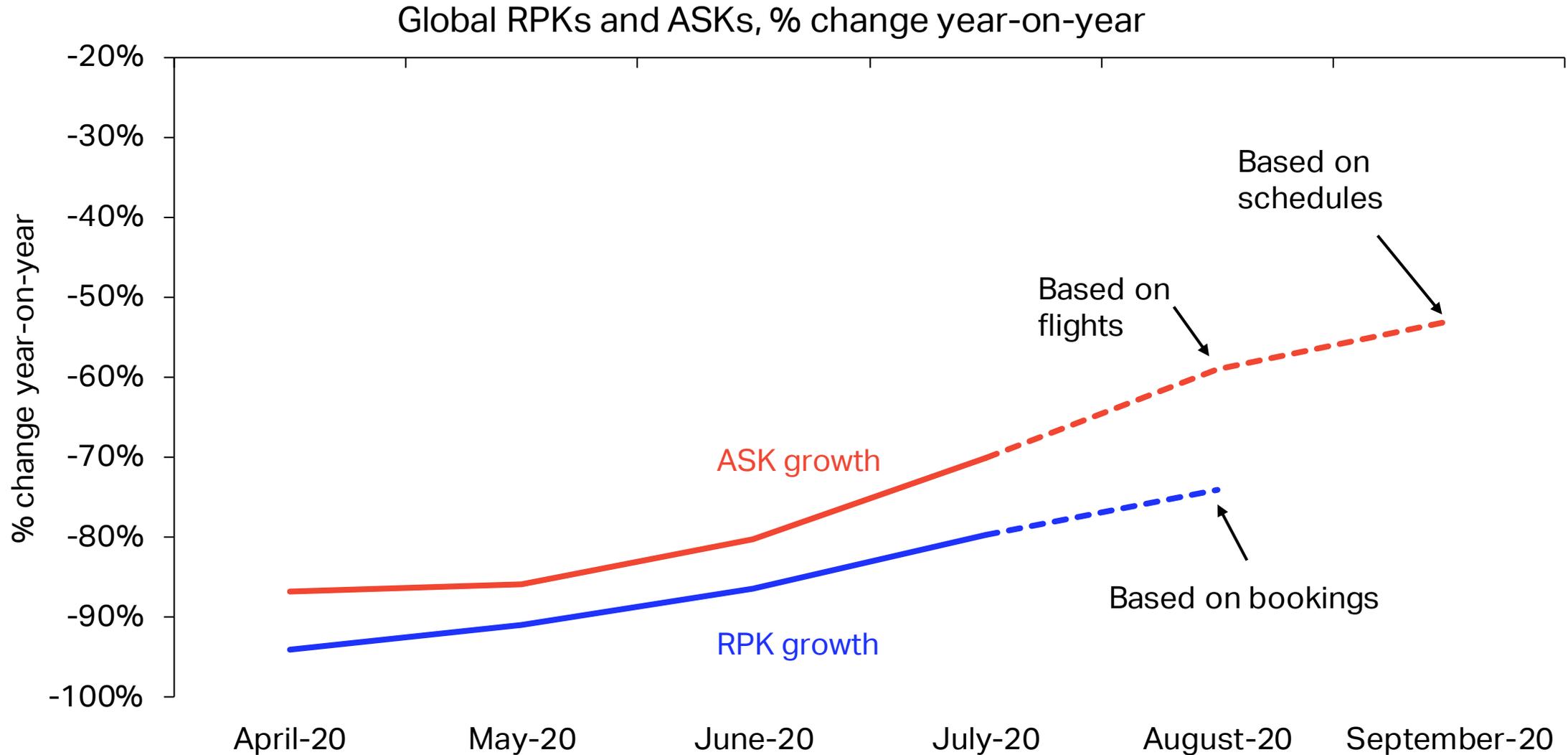
Airlines mostly pricing to stimulate demand

Domestic fares are a lot lower. International markets very limited supply



Demand continues to disappoint airline expectations

Airlines still adding schedules and capacity at faster rate than demand

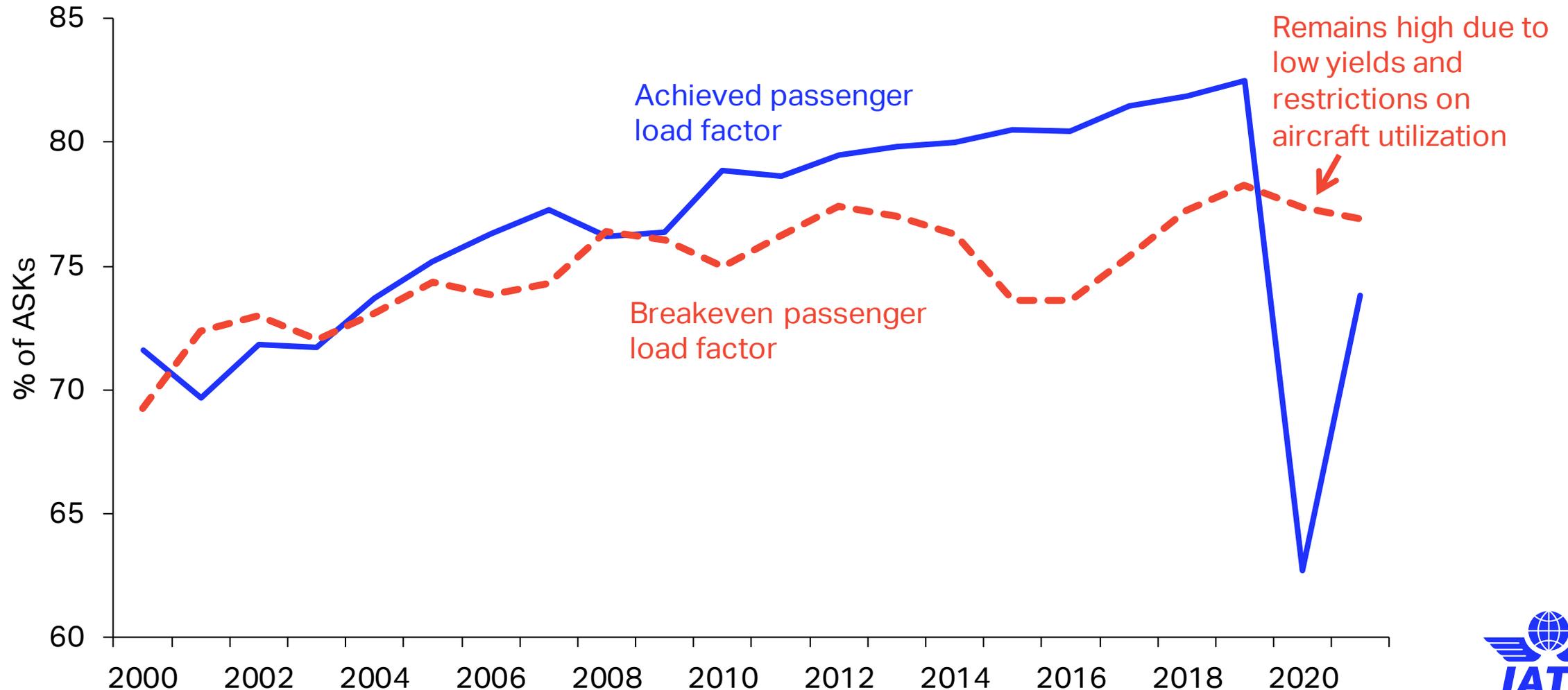


Source: IATA Economics using data from IATA Statistics, DDS, FR24 and SRS Analyser

Consequently breakeven may remain above load factors

This will depend on airlines' success in downsizing their operations

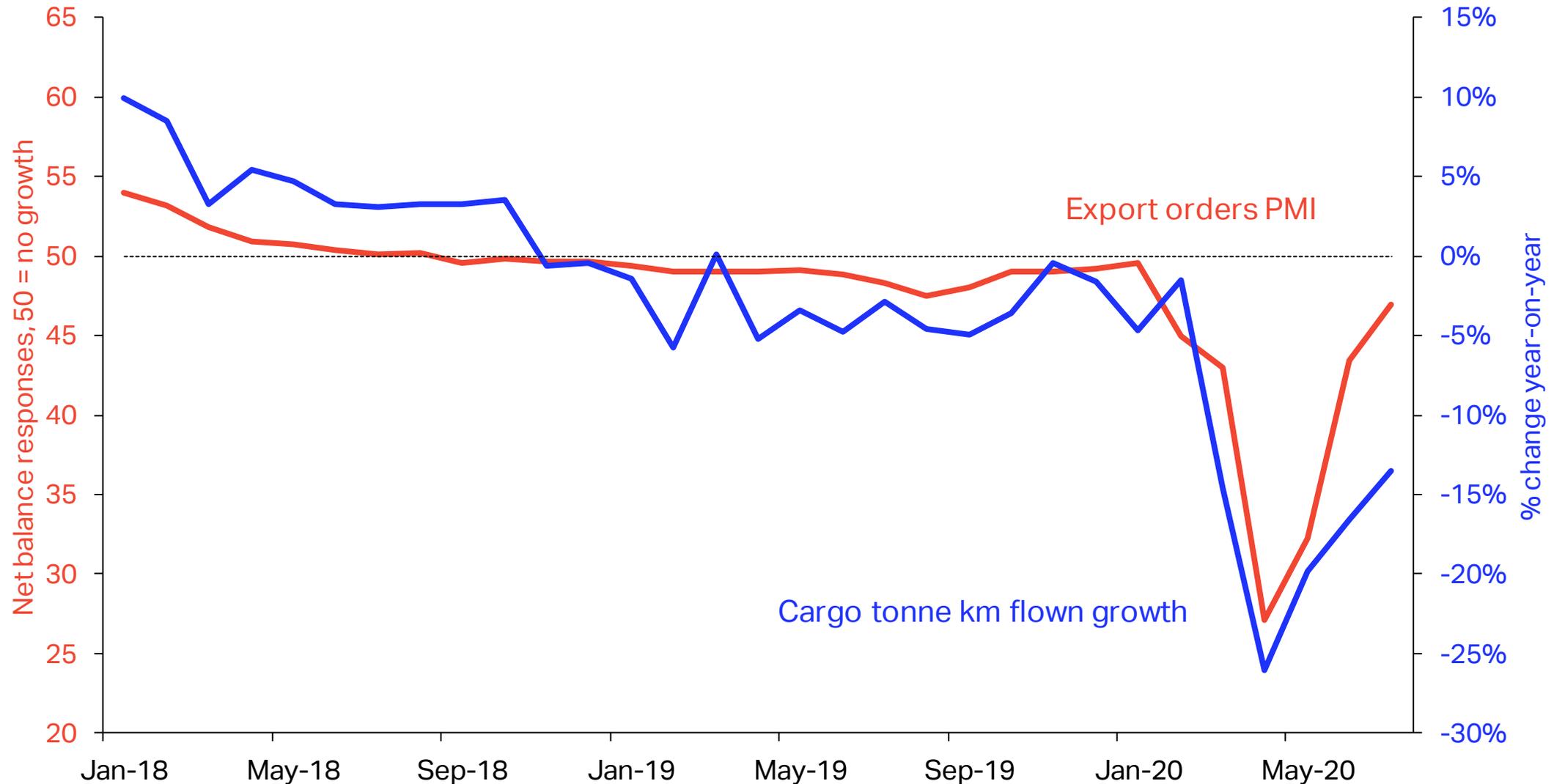
Industry average breakeven and achieved passenger load factors, % ASKs



Source: IATA Economic Performance of the Airline Industry, Mid Year 2020

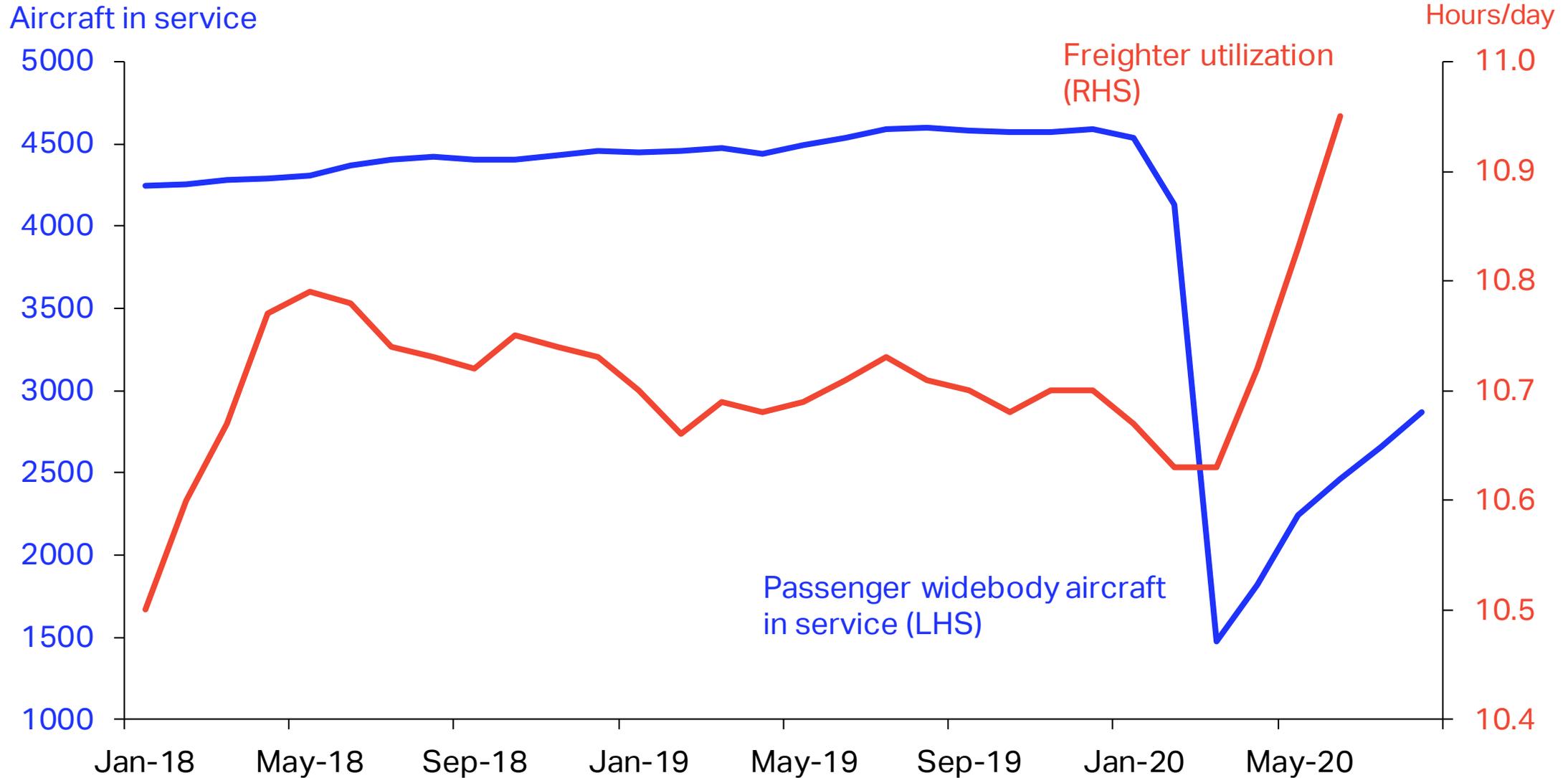
The cargo business looks much stronger for airlines

Volumes look like recovering soon and yields are very strong



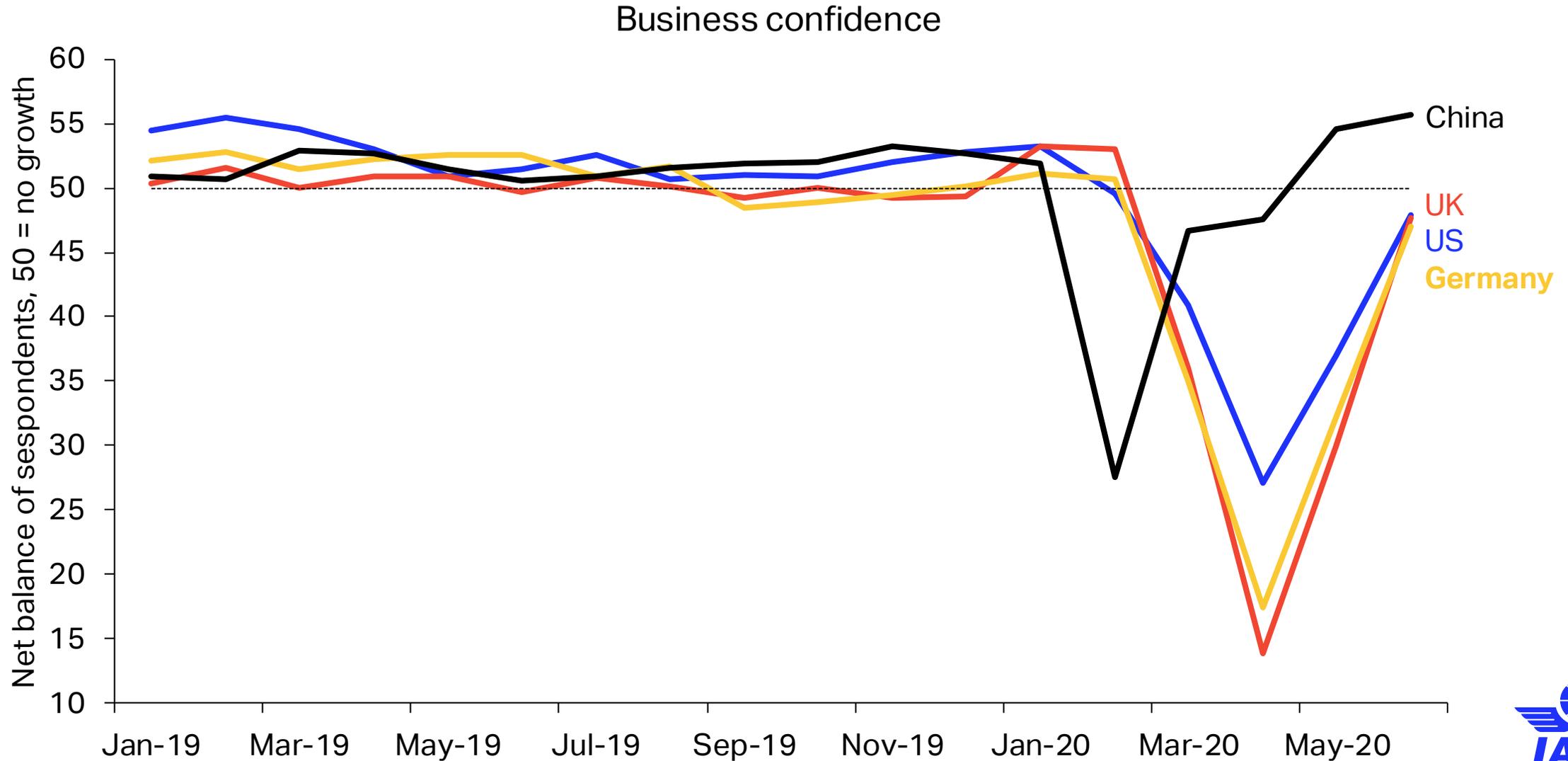
Cargo's capacity shortage will not reverse quickly

Freighter utilization high and widebody passenger aircraft slow to return



But a 'V-shaped' recovery is evident for wider economy

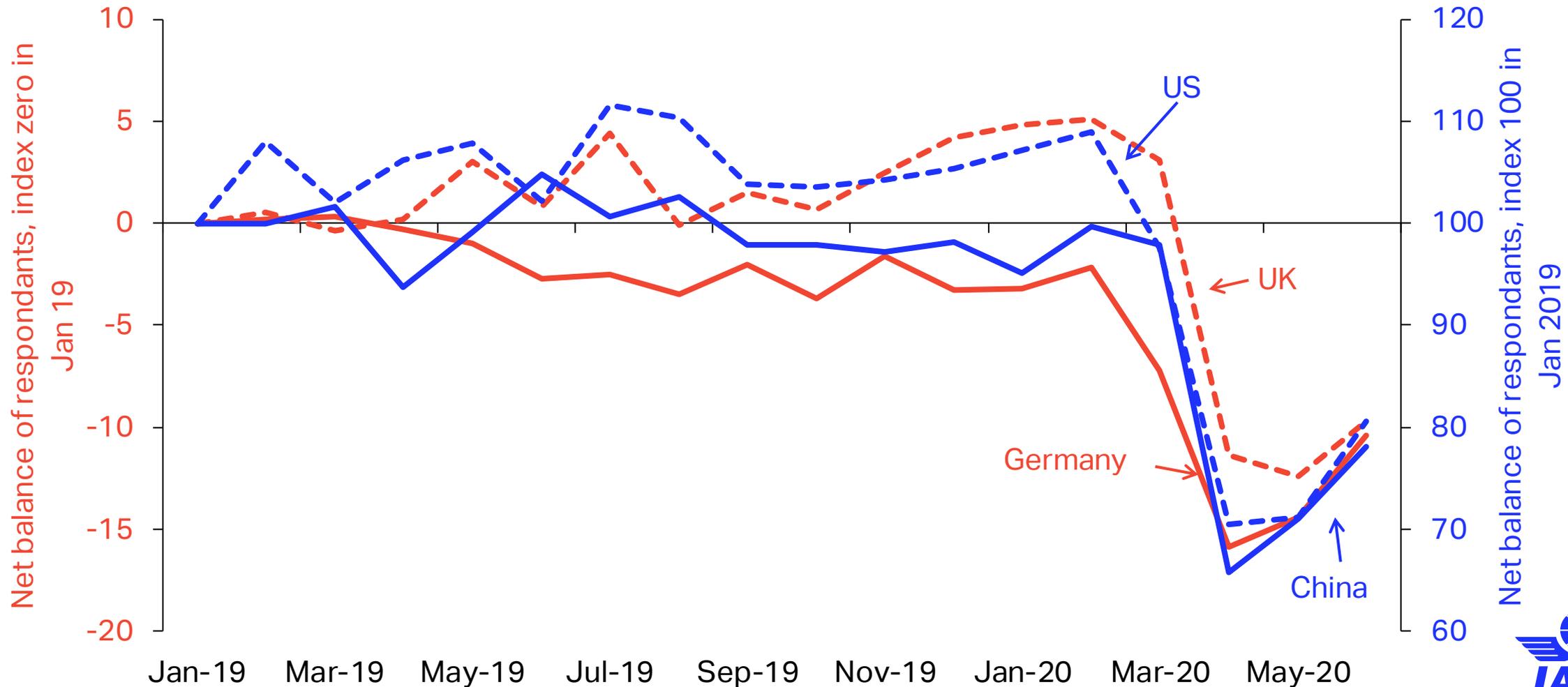
Business confidence highly correlated with GDP growth



Consumers not as confident

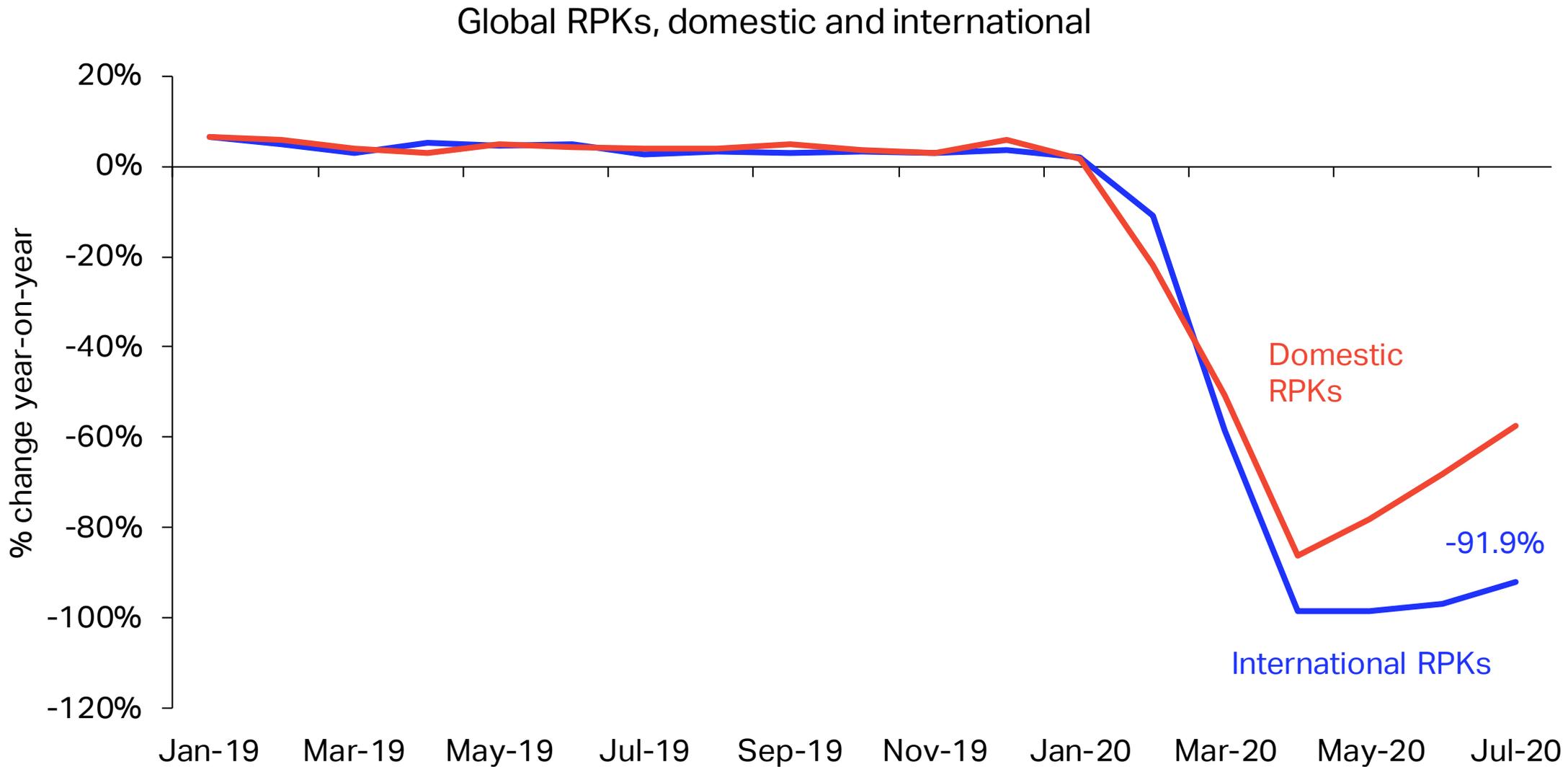
Usual lagged response lengthened by restructuring/job losses

Consumer confidence



The problem is international not domestic air travel

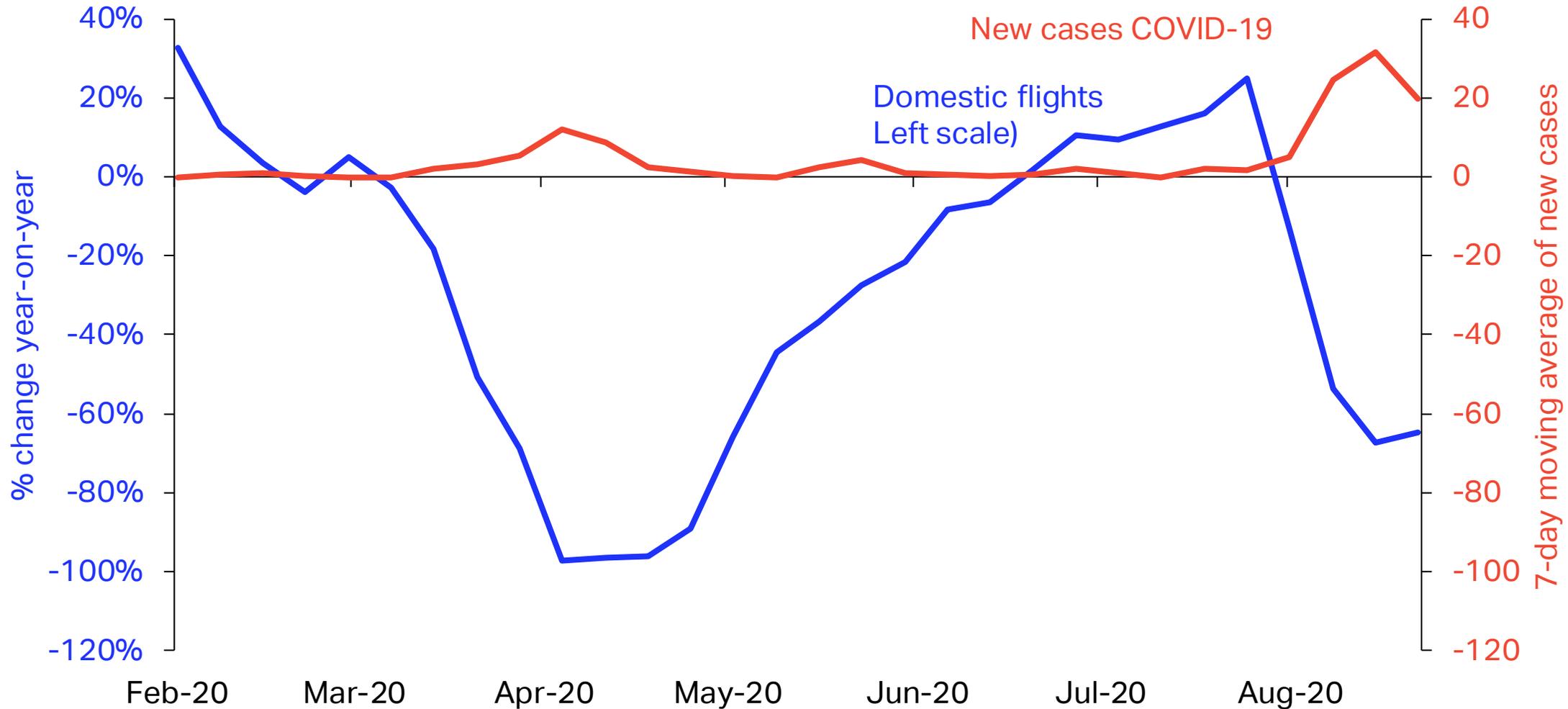
Domestic RPKs back to -57.5% yoy showing demand to travel by air



But domestic not insulated from 2nd waves of COVID-19

Vietnam's domestic market had recovered pre-crisis levels in July

Vietnam domestic flights and new cases of COVID-19



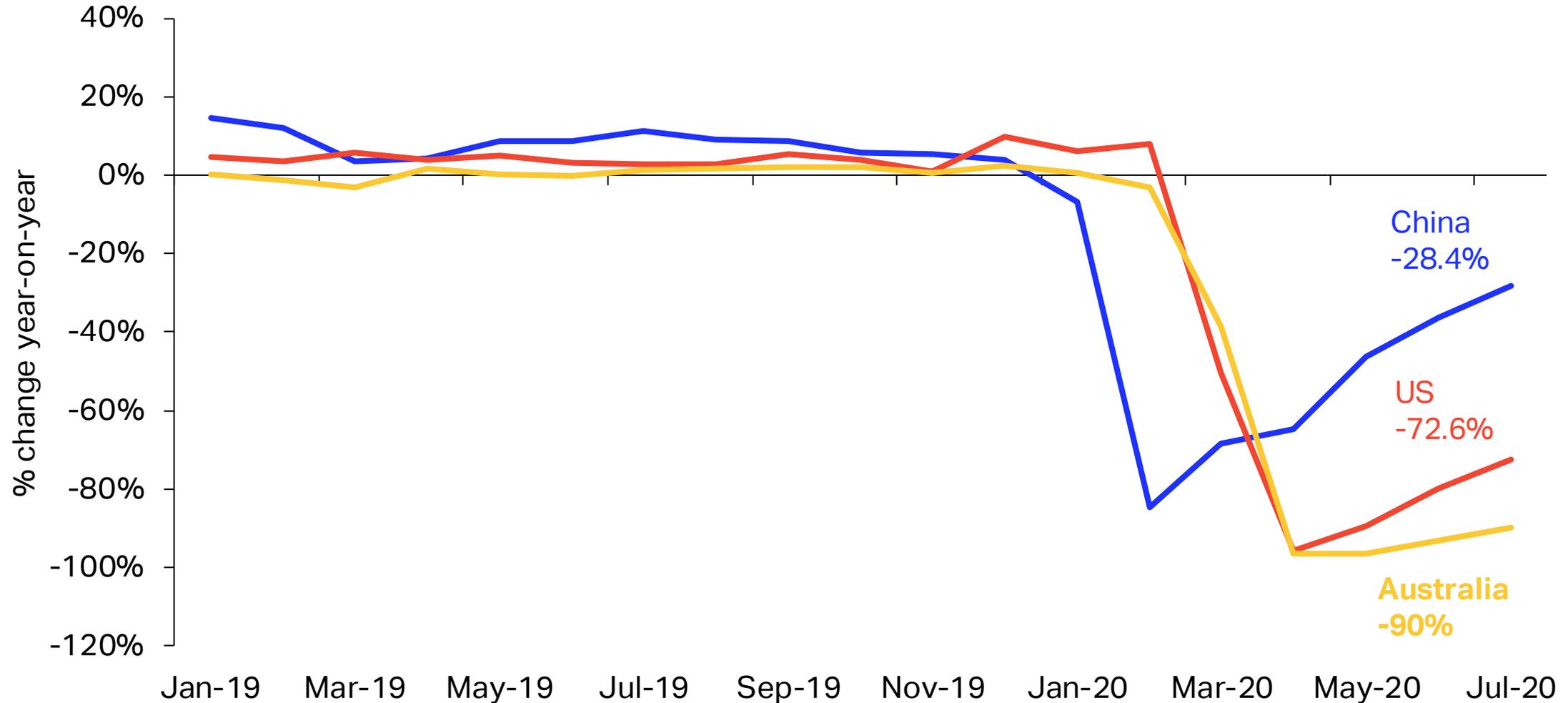
Source: IATA Economics using data from IATA Statistics and Markit Purchasing Managers Index



Domestic variance due to COVID-19 and pricing

Strong recovery in some Asia markets but others still slow to rise

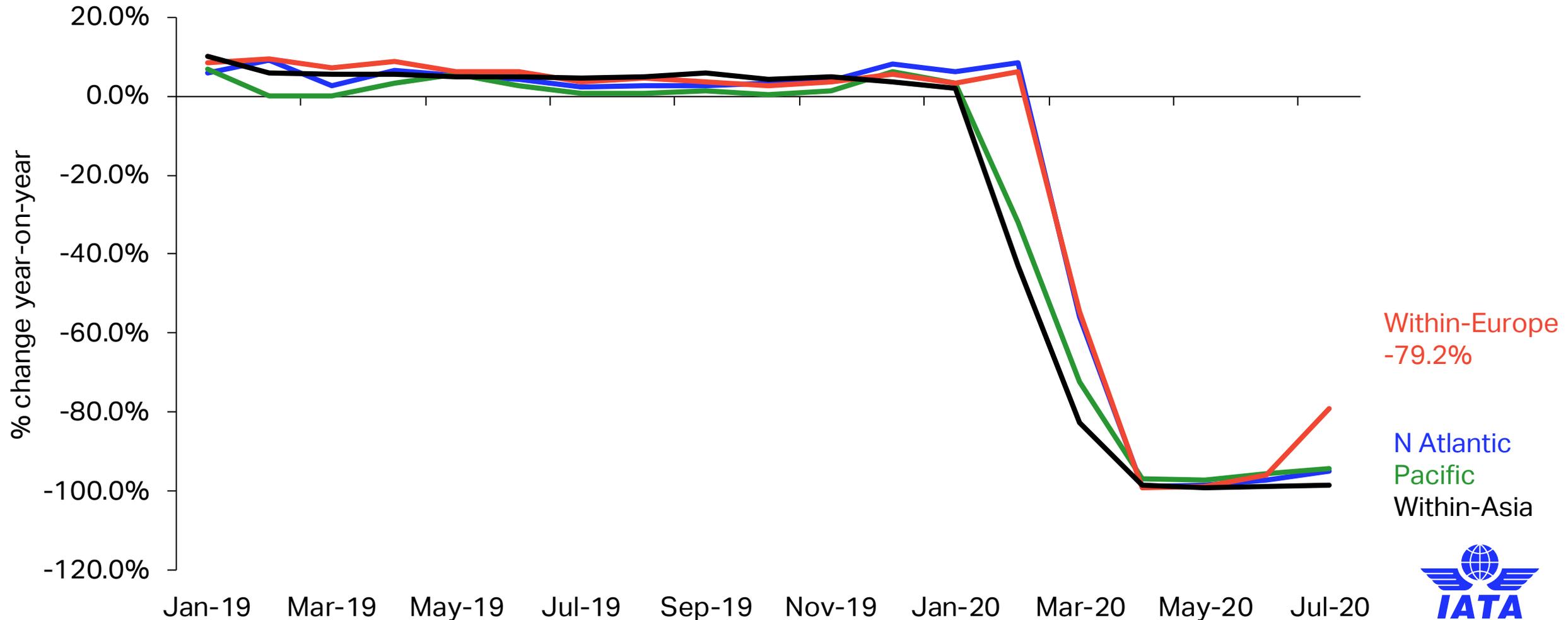
RPKs on domestic markets



Within-Europe only international market showing growth

European travel bubble has encouraged some travel to -79.2% in July

RPKs by route area, segment-basis



Source: IATA Economics using data from IATA Statistics

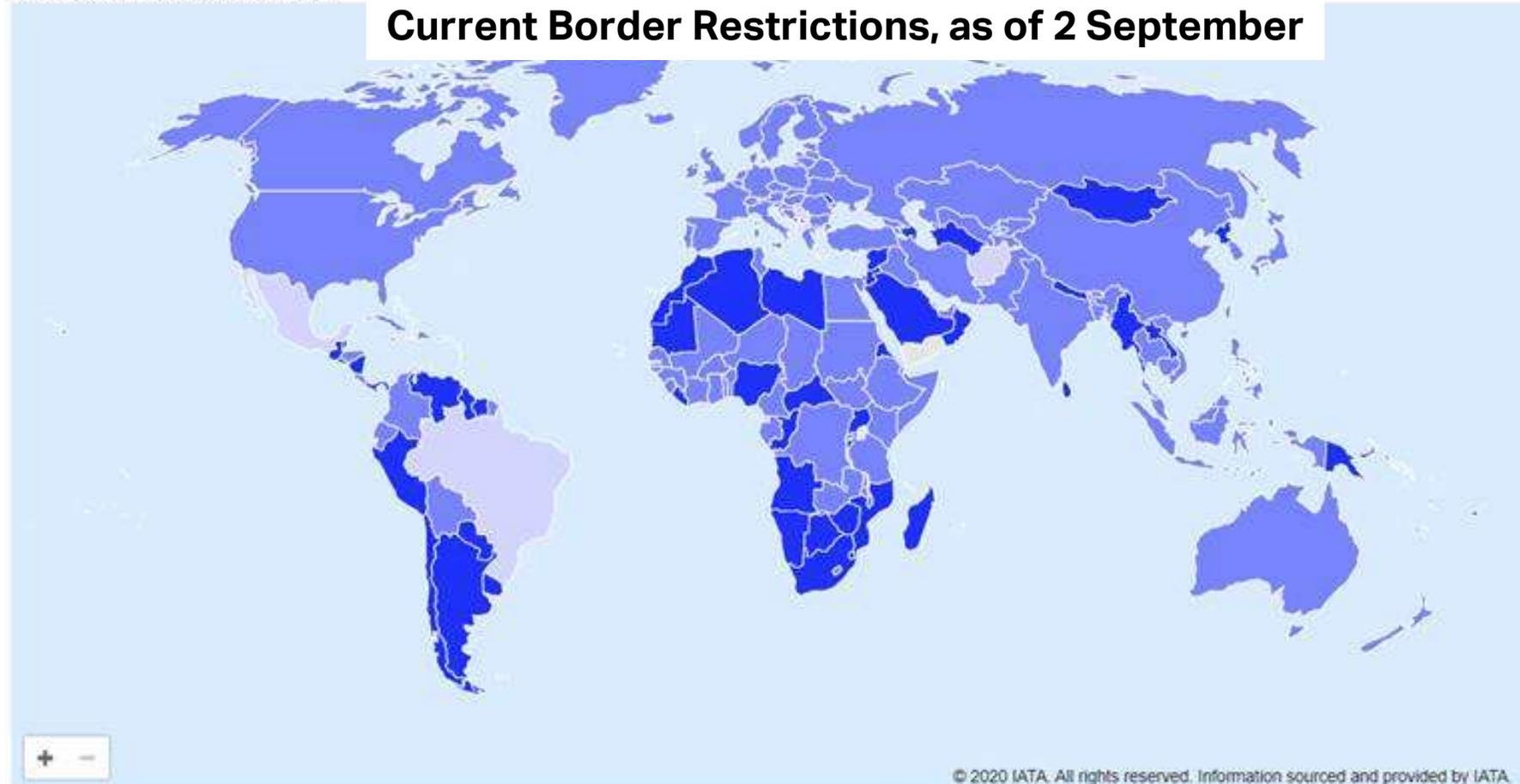


Border restrictions have not yet been widely relaxed

The few travel corridors (e.g. EU) only source of international air travel

02 September 2020 06:45:06 UTC

Current Border Restrictions, as of 2 September



- Totally Restrictive
- Partially Restrictive
- Not Restrictive
- Latest updates currently under review

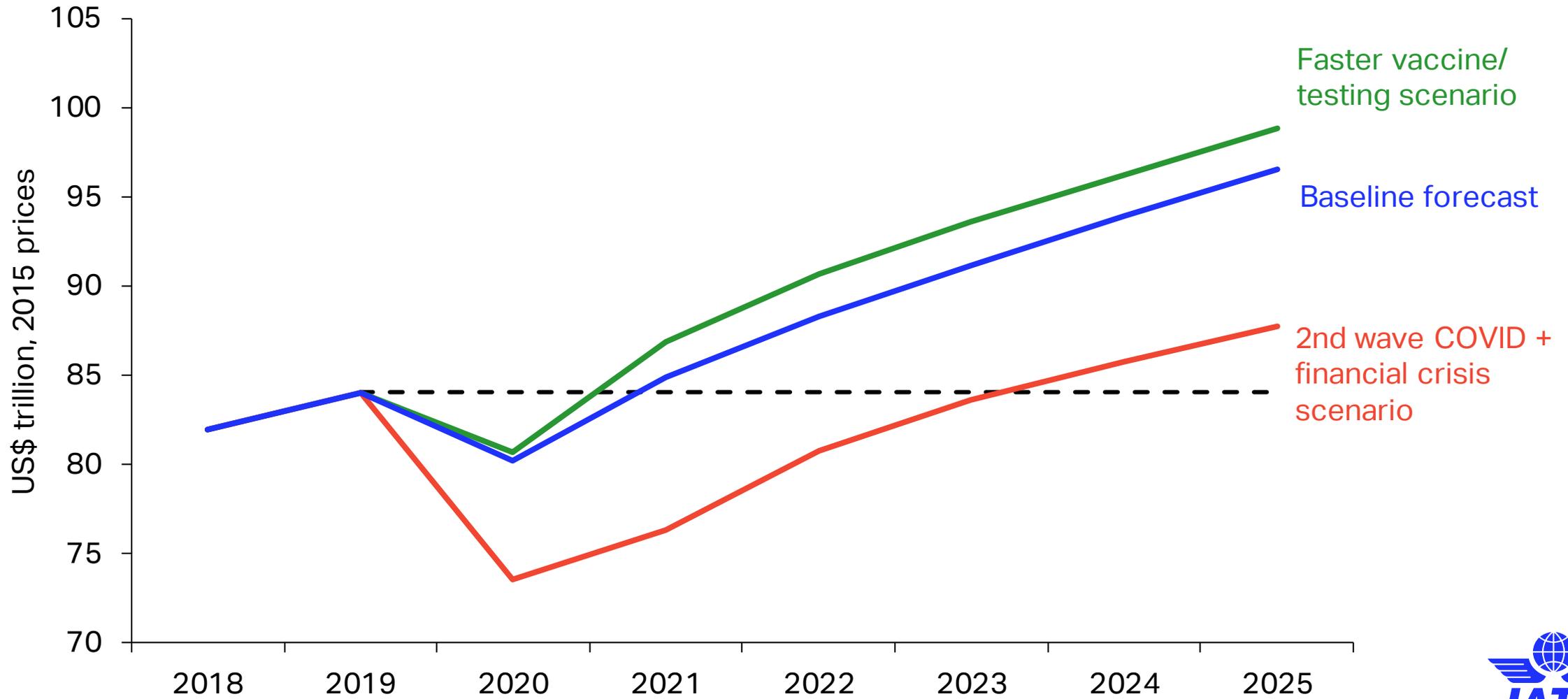
Do you want to get notified when the travel restrictions change, or would you like to make use of this information as part of your business? [Learn More](#)



The outlook for global GDP could take different paths

We've explored optimistic and a pessimistic scenarios for the economy

Global GDP, US\$ trillion, 2015 prices

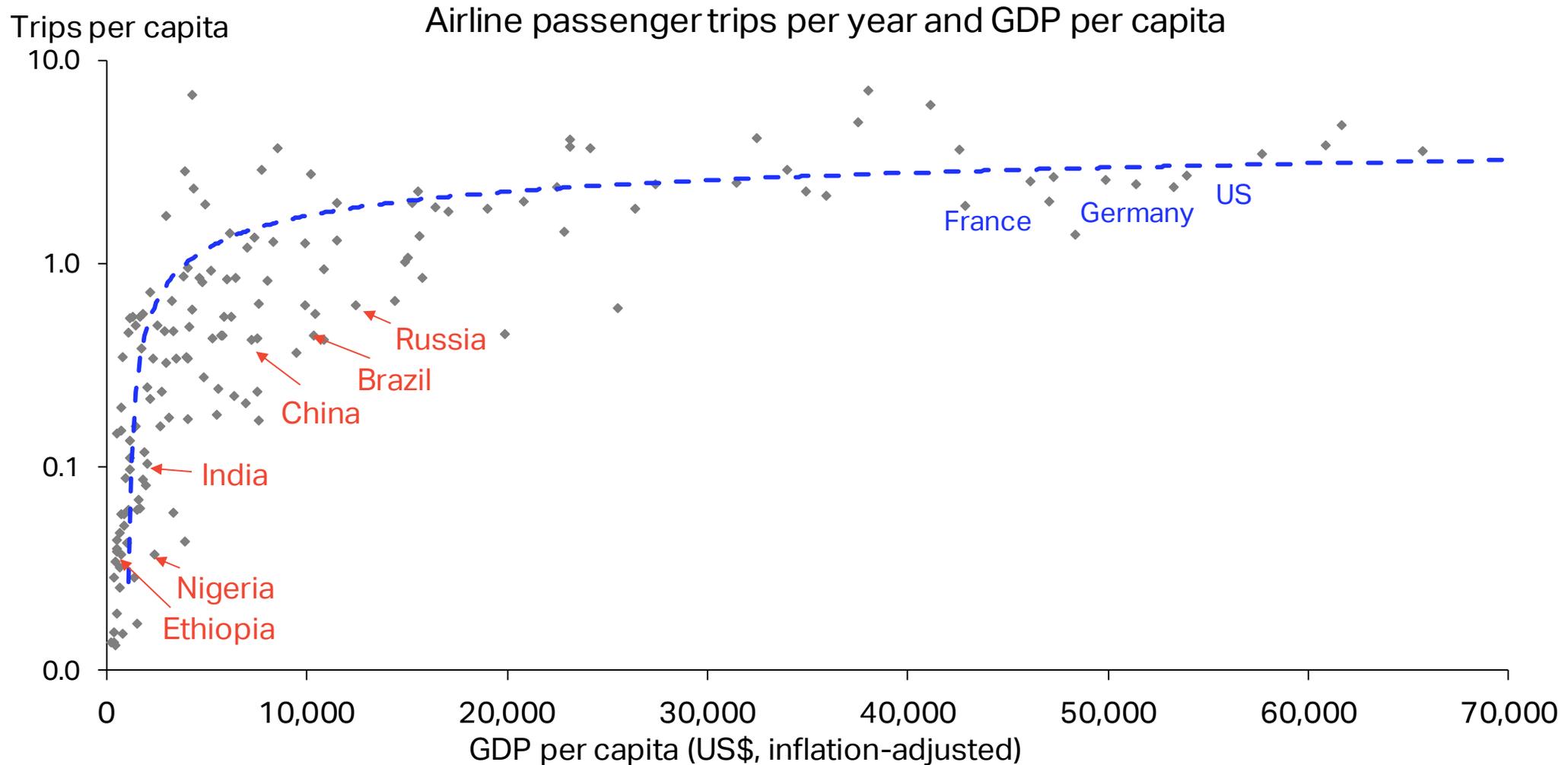


Source: IATA Economics using data from Oxford Economics Q2 Global Scenarios Service



Long-term drivers for expanded demand remain

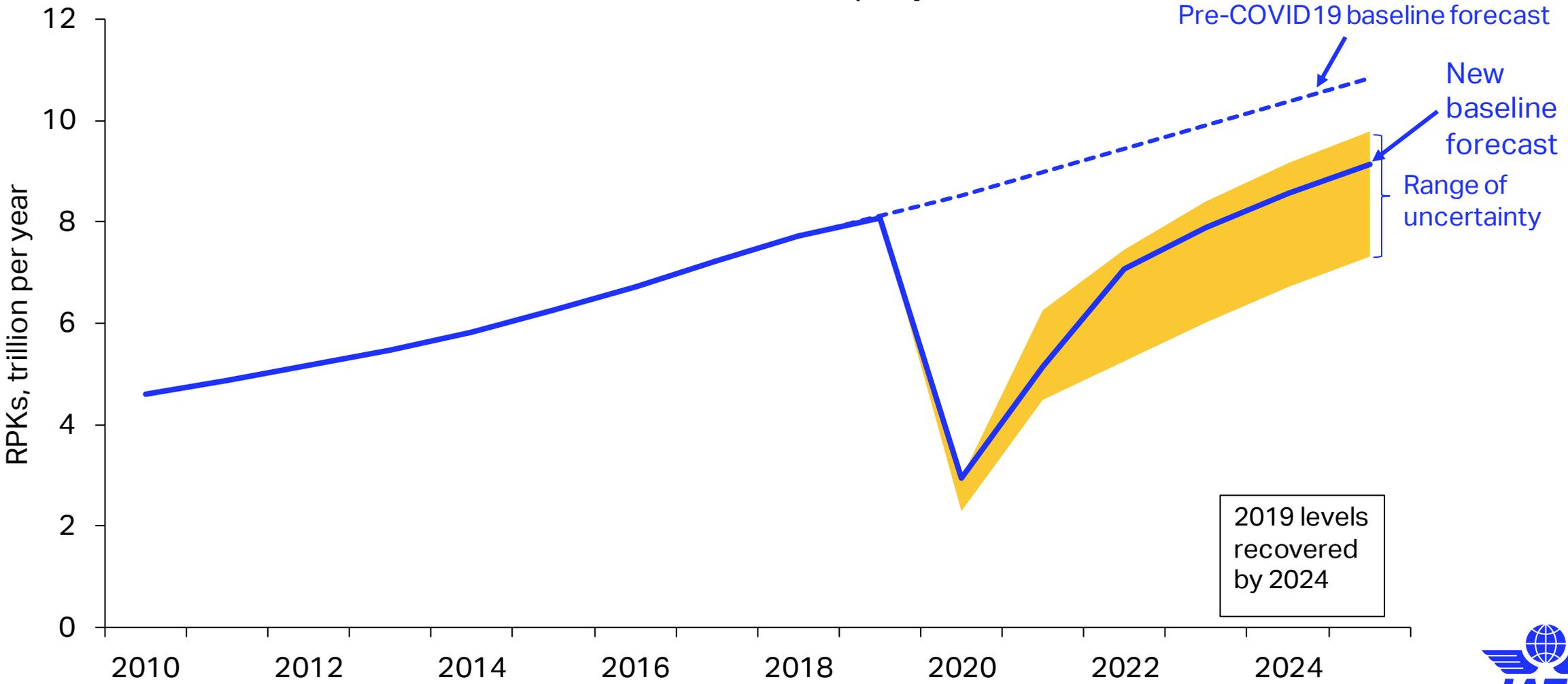
Populous emerging markets are still likely to want more air services



We've assumed a vaccine in 2021H2 in baseline

Upside earlier vaccine, downside ineffective vaccine, deeper recession

Global RPKs, trillion per year



Source: IATA/Tourism Economics 'Air Passenger Forecasts' July 2020

Contacts

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www.iata.org/economics



COVID 19 AND ITS IMPLICATION ON EW TECHNIK

MCC webinar Sep 9th 2020

Hannes Pferdekaemper



MCTG

Who we are and what we do...

- Maintenance Cost Technical Group
- Group consisting of Airlines, OEMs and other delegates supported by IATA
- Mission: to be the focal point on commercial airline maintenance cost for the purpose of cost management & benchmarking
- The only annually updated worldwide database on maintenance costs



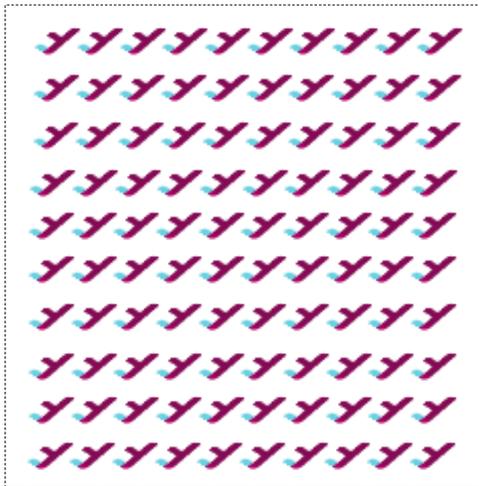
Support us!

Eurowings

Who we are...

- European point-to-point airline
- Subsidiary of Lufthansa Group
- Operating Fleet of 100 AC (A320 Family)
- 28 Mio. passenger in 2019
- Around 3.000 employees

Pre-Crisis
100 AC (AC in OPS)



- 89%

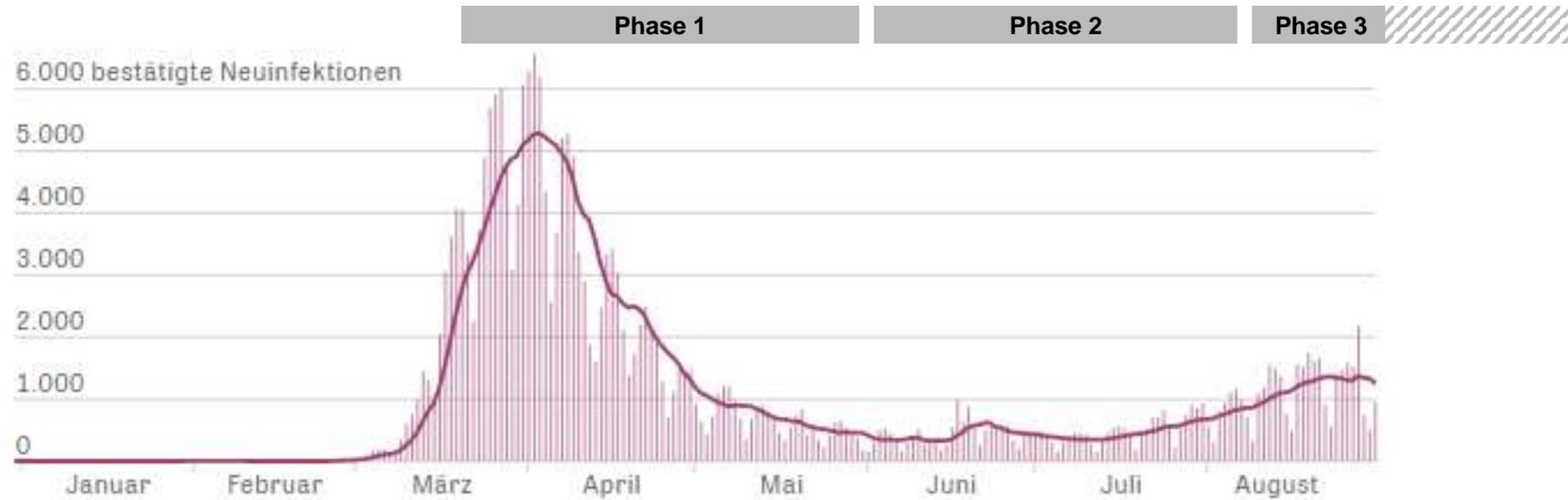


Peak-Crisis
11 AC (AC in OPS)



Covid 19 – development of infections in Germany

Eurowings Fleet development to be clustered in 3 phases



Source: German newspaper „Die Zeit“, snapshot 01.09.2020

Situation in Germany

- **Phase 1:** So called „Lockdown“, closures of shops and limitation of group gatherings, closure of all borders
- **Phase 2:** Recovery, summer holiday possible, no quarantine regulation in most countries in Europe (especially: Italy, Spain)
- **Phase 3:** „Second wave“, travel warning for Croatia and Spain, travellers as sources of new infections

Phase I: „Lockdown“

Implications on EW and the maintenance department

- Parking vs Storage: what's the right option? Cost vs. flexibility
- Shutdown of operation: Which aircraft to park and where? Maintenance cost as a key factor
- Closure of Germanwings brand
- Cost estimation: how to collect parking related cost, how to predict cost for the future?
- Short-time work: save cost and keep the jobs
- From EBIT to Cash Management (incl. Government funding)



Phase II: „Recovery“

Implications on EW and the maintenance department

- Re-activation: Which aircraft to re-activate first? Response times?
- Commercial vs. Operations: What's the right balance between market chances and cost
- Stable operation: How to secure stability?



Phase III: „Second wave“

Implications on EW and the maintenance department

- Parking vs Storage: Here we are again, Base Maintenance is waiting
- Post Crisis: How to prepare in times of uncertainty
- Right-Sizing fleet: How to proceed?



Lessons Learnt

What did we learn so far

- „Short-time work“: Strong tool to secure jobs and to control cost
- Quick responses essential (3 months parking in first wave)
- Our industry knows how to handle crisis
- Maintenance cost: a key success factor and MCTG should help to lead the industry



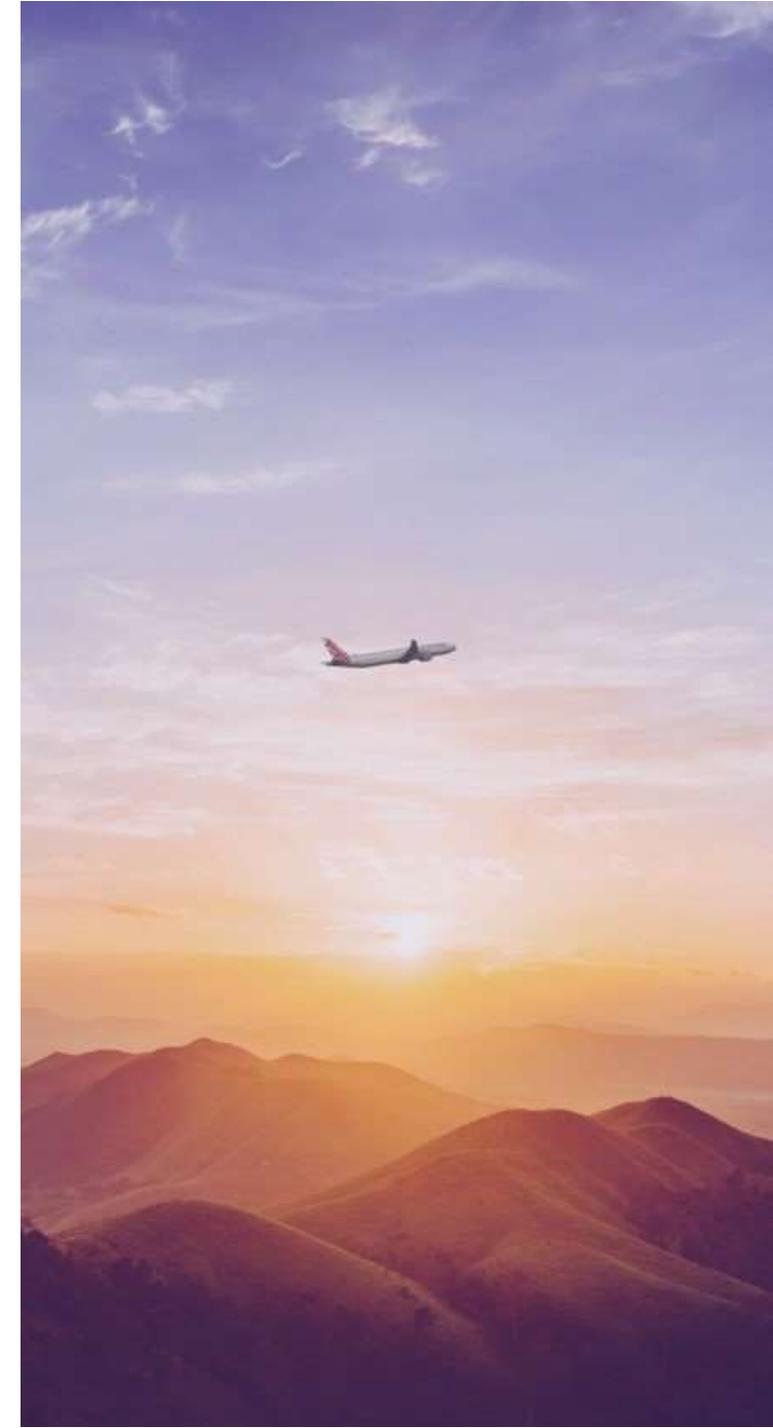


AIRCRAFT PARKING

OPTIMIZING THE ROADMAP

KEITH FERNANDES
MANAGER FLEET ENGINEERING
Keith.Fernandes@virginaustralia.com

SEPTEMBER 9, 2020



Australia COVID 19 – At a Glance



Australian Government
Department of Health

BE COVIDSAFE

CURRENT STATUS OF CONFIRMED CASES

25,819 **657** **21,498**

Total cases Total deaths Cases recovered

26



CURRENT CASES
INTENSIVE CARE UNITS (ICU)

| ACT | NSW | NT | QLD | SA | TAS | VIC | WA |
|-----|-----|----|-----|----|-----|-----|----|
| 0 | 6 | 0 | 0 | 0 | 0 | 20 | 0 |

450



CURRENT CASES
ADMITTED TO HOSPITALS

| ACT | NSW | NT | QLD | SA | TAS | VIC | WA |
|-----|-----|----|-----|----|-----|-----|----|
| 0 | 10 | 0 | 18 | 0 | 1 | 421 | 0 |

6,255,797

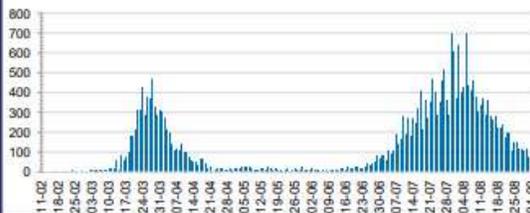
0.4% POSITIVE



TOTAL TESTS
CONDUCTED

| ACT | NSW | NT | QLD |
|----------|-----------|-----------|----------|
| 77,563 | 2,186,302 | 35,987 | 903,278 |
| POSITIVE | POSITIVE | POSITIVE | POSITIVE |
| 0.1% | 0.2% | 0.1% | 0.1% |
| SA | TAS | VIC | WA |
| 381,219 | 88,073 | 2,235,040 | 348,335 |
| POSITIVE | POSITIVE | POSITIVE | POSITIVE |
| 0.1% | 0.3% | 0.9% | 0.2% |

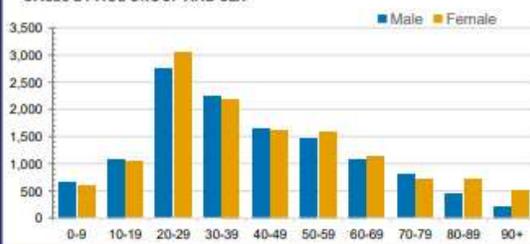
DAILY NUMBER OF REPORTED CASES



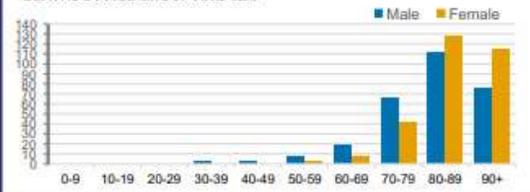
CASES IN AGED CARE SERVICES

| Confirmed Cases | Australia | ACT | NSW | NT | QLD | SA | TAS | VIC | WA |
|---|------------|-----|---------|----|-------|-------|-------|------------|-------|
| Residential Care Recipients | 1894 (563) | 0 | 81 (32) | 0 | 1 (1) | 0 | 1 (1) | 1831 (531) | 0 |
| In Home Care Recipients | 79 (53) | 0 | 13 (13) | 0 | 8 (8) | 1 (1) | 5 (3) | 51 (28) | 1 (1) |
| Cases in care recipients [recovered] (deaths) | | | | | | | | | |

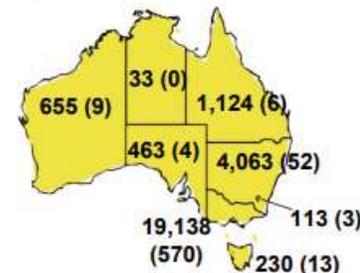
CASES BY AGE GROUP AND SEX



DEATHS BY AGE GROUP AND SEX

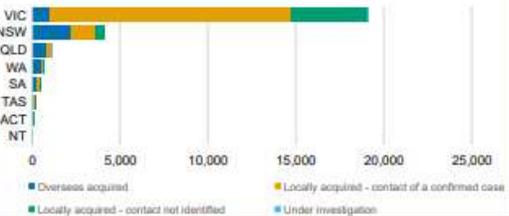


CASES (DEATHS) BY STATE AND TERRITORIES



CASES BY SOURCE OF INFECTION

Australia (% of all confirmed cases)



PUBLIC HEALTH RESPONSE MEASURE

Proportion of total cases under investigation



Last updated 1 September 2020

This infographic is updated every afternoon based on the data we receive by 3.00pm from states and territories

COVID 19 IMPACTS



☐ Government Actions to Suppress spread of COVID-19

- Feb 2020: Early decision to restrict travel to Australia from certain countries
- March 2020:
 - International travel restrictions: Non-citizens and non-residents bans from entering Australia while incoming citizens/residents must self quarantine for 14 days
 - Lock downs - bars, clubs, cinemas, places of worship, casinos, gyms, schools
- States and Territories closed their borders to non-essential travel

☐ Aviation Industry Impacts

- Significant reduction in passenger traffic
- Resulting reduction in aircraft operational requirements
- International flights suspended
- Domestic operations supporting essential services



Source: <https://www.traveller.com.au/grounded-planes-due-to-coronavirus-photos>

PARKING VS STORAGE

Active Storage

- Uncertainty on the Parking duration
- Unknown COVID-19 conditions and impacts
- Aircraft into Active Storage program (90 Day)
- Program extended to 180 Days with bridging tasks

| + PARKING | - |
|-----------|---|
| STORAGE | |

PARKING

- Estimated less MH for Parking
- Estimated less MH for RTS
- Material/alternate availability
- OEM Supported Deviations
- Retains the aircraft & Engine/APU in near flight ready condition

STORAGE

- Lower frequency repeat inspections
- Less MH requirements in Storage
- Facilitates storage with/without engines or APU

PARKING

- High frequency of repeat inspections
- Skills requirements for repeated Engine/APU runs
- Fuel costs -Engine/APU runs

STORAGE

- Engine/APU requires preservation
- High qty of desiccants for humidity control
- Humidity monitoring systems

PROTECTING THE ASSET



- ❑ **Risk Management** - Assessment & Controls
- ❑ **Customise to local conditions** - Environmental deterioration, damage, corrosion
- ❑ **Continuing Airworthiness**
 - Instructions for Continuing Airworthiness & OEM approved deviations to maintenance instructions
 - Continual monitoring for ICA changes – AMM, Temp Revisions, Service Letters, TA, etc.
 - Effective Tracking Controls – Inspection consistency, Transitions in/out, Repeat intervals
- ❑ **Program Adjustments**
 - Optimise maintenance frequencies – Engine/APU runs; Fuel Testing
 - Efficient Defect Management – early identification and rectification => impedes deterioration
- ❑ **Regulatory Authority Communications**
 - Consistent updates on parking program status including deviations
 - Identified program issues and adjustments, RTS optimizations

MAINTENANCE COST IMPACTS



1

Parking Maintenance

- Labour Intensive for entering/exiting parking program
- Repeat inspections, Engine & APU runs
- ICA Changes: Temp revisions, AMM changes, Airworthiness Directives, Technical Adaptations
- Defect Arising - Corrosion reports, additional protections

2

Bridging Maintenance

- Program extensions & bridging between programs
 - Additional Maintenance tasks
 - Main battery replacement 737 NG
 - Wheel Overhaul (A320/A330)

3

Materials & Components

- Fuel Testing kits due to increased testing for microbiological growth
- Unscheduled component failures and associated repair costs
- 5th Stage Bleed Valve Failures
- Material lead times – high shipping costs

Analysis & Optimizing



| PROGRAM | INTRODUCED MAINTENANCE ACTION |
|-------------------------------|--|
| Corrosion, Damage, Protection | <ul style="list-style-type: none">○ Lip Skin Chemical Wash program○ CIC Applications – unprotected bare metal○ Bird/Insect Nesting detailed Inspections (unsealed cavities) |
| Engine/APU/Fuel Systems | <ul style="list-style-type: none">○ Higher frequency Engine/APU runs○ Increased Fuel testing – microbiological growth containment |
| Flight Deck (RTS) | <ul style="list-style-type: none">○ Intensive OPS checks – Avionics/Elect/Standby/Alternate○ Systems integrity – NCTAI, Pack Valves, Bleeds○ Flight Controls - Spoilers, Speed Brakes○ Lights – Emergency, Cockpit panels, Internal, External○ Loadable Software updates (NDB, Terrain DB) |
| Cabin & Galley (RTS) | <ul style="list-style-type: none">○ OPS checks - Ovens, Water Boilers, Faucets, Coffee Machines○ Door Sill drains cleaning |

THE TOP MODEL



- ❑ **Transfer Out of Parking** - Model leverages the “stop-the-clock” calendar extensions
- ❑ Continuing Airworthiness methodology supported by OEM justification and Engineering assessment
- ❑ Optimised approach to re-positioning aircraft to a maintenance facility

| START | OPTION | TASK TYPE | ASSESSED BY | JUSTIFICATION | APPROX # TASKS (%) | APPROVAL | END |
|---|-----------------------------|-------------------------------------|---------------------------|--|--------------------|--|------------------------------|
| Maint Due print (Tasks Overdue in Storage) | DO LATER | MRB | ENGINEERING MAINT PROG | BOEING SL 737-SL-10-004 | 70% | Regulatory Approval or Special Flight Permit | RE- POSITIONING FLIGHT |
| | | MPD | | AIRBUS AMPES | | | |
| | | | | ATR OIM 2020/004 | | | |
| | DO | AWL | ENGINEERING TECH SVCS | Mandatory tasks | 10% | | |
| | | CMR | | | | | |
| | | AD | | | | | |
| | | LLPs | | | | | |
| | | MRB FEC 5/8 Out of Storage Tasks | | | | | |
| | DO NOT | OPTIONAL (Operator) | ENGINEERING TECH SVCS | Operator tasks | | | |
| | | MANDATED (Operator) | | | | | |
| | DO or DO NOT or DO LATER | Engineering Orders | ENGINEERING TECH SVCS | Subject to Engineering (Tech Services) assessment | 20% | | |
| | | Damage (Inspections/repairs) | | | | | |
| STC | | | | | | | |
| SB/SL | | | | | | | |

SUMMARY



❑ **Australia COVID-19 impact**

- Early Govt. actions – strict travel restrictions, International & State border closures
- Country-wide fleet grounding – International ops ceased, restricted to minimum domestic operations

❑ **Protect the Asset**

- Risk Management & Continuing Airworthiness Controls
- Customise to local conditions & program adjustments
- Effectively manage defects to restrict deterioration and associated repair costs

❑ **Substantial impact to Maintenance Costs**

- Parking, Bridging & Component Costs

❑ **Analysing program – optimizing for efficient Return to Service**

❑ **TOP Model – methodology to re-positioning aircraft safely to a maintenance base**



Thank you.



COVID: Regional Airline Response

Thanos Pascalis

CEO, Ellinair

RYANAIR



FLIGHTS CAR HIRE HOTELS EVENTS AND ACTIVITIES

THE BIGGEST SEAT SALE OF 2020

**MEGA
PRICE DROP
1 MILLION
SEATS**


**HAVE A TRAVEL
VOUCHER?
USE IT TODAY**

**ONLY
€5**

**COVID update
World Greece**



If 2020 was
an emergency exit



COVID update
World Greece

A/C ID DATE GMT FLTN CITY PAIR
.SX-EMB 31AUG 0848 ELB124P LGAL LGAL

MAINTENANCE
POST FLIGHT REPORT

A/C ID DATE GMT FLTN CITY PAIR
.SX-EMB 31AUG 0853/0948 ELB124P LGAL LGAL

WARNING/MAINT. STATUS MESSAGES

GMT PH ATA
0853 02 28-00 FUEL AUTO FEED FAULT
0853 02 46-20 DATALINK COMPANY FAULT
0853 02 23-12 COM VHF 3 DATA FAULT
0853 02 49-00 APU
0900 06 77-11 ENG 1 FADEC
0900 06 77-00 ENG COMPRESSOR VANE
0900 06 77-11 ENG 1 COMPRESSOR VANE
0900 06 77-11 ENG 2 FADEC
0900 06 77-11 ENG 2 COMPRESSOR VANE
0907 06 77-11 ENG 1 COMPRESSOR VANE
0931 06 28-00 FUEL R TK PUMP 1+2 LO PR
0947 09 77-11 ENG 1 COMPRESSOR VANE
0947 09 77-11 ENG 2 COMPRESSOR VANE

FAILURE MESSAGES

GMT PH ATA
0853 00 31-21-21 CLOCK
0854 02 23-12-33 NO VHF 3 DATA
0900 06 75-31-00 CHB 2.5 BLD ACT/HC/EEC1
0900 06 75-31-00 CHA 2.5 BLD ACT/HC/EEC1
0901 06 75-31-00 CHB 2.5 BLD ACT/HC/EEC2
0901 06 75-31-00 CHA 2.5 BLD ACT/HC/EEC2
0905 07 34-42-33 RA1(2SA1)

SOURCE I
CFDS
CFDS
EIU1FADEC
EIU1FADEC
EIU2FADEC
EIU2FADEC
RA 1



Fleet issues & actions

ENG 2 COMPRESSOR VANE
AVOID THR CHANGES

— The Quiz - What to do next —

— Short/ Long Storage —

— Cost-Benefit Analysis —

— Issues to be Tackled —



Thank you



Navigating through this pandemic

Swaran Sidhu
Head Of Fleet Technical Management

europa by
easyJet

something about us...

> Our model

We are a low-cost, European point-to-point short-haul airline.

> Our network

Intra-European short-haul network.

> Our ambition:

Is to be Europe's preferred short-haul airline, delivering market leading returns.

> Our cause:

Seamlessly connecting Europe with the warmest welcome in the sky

> Our Fleet:

A321 NEO, A320 NEO, A320 CEO, A319

330+
aircraft

90m+
passengers

1,000+
routes

40+
bases



> Entry 2018



> Entry 2017



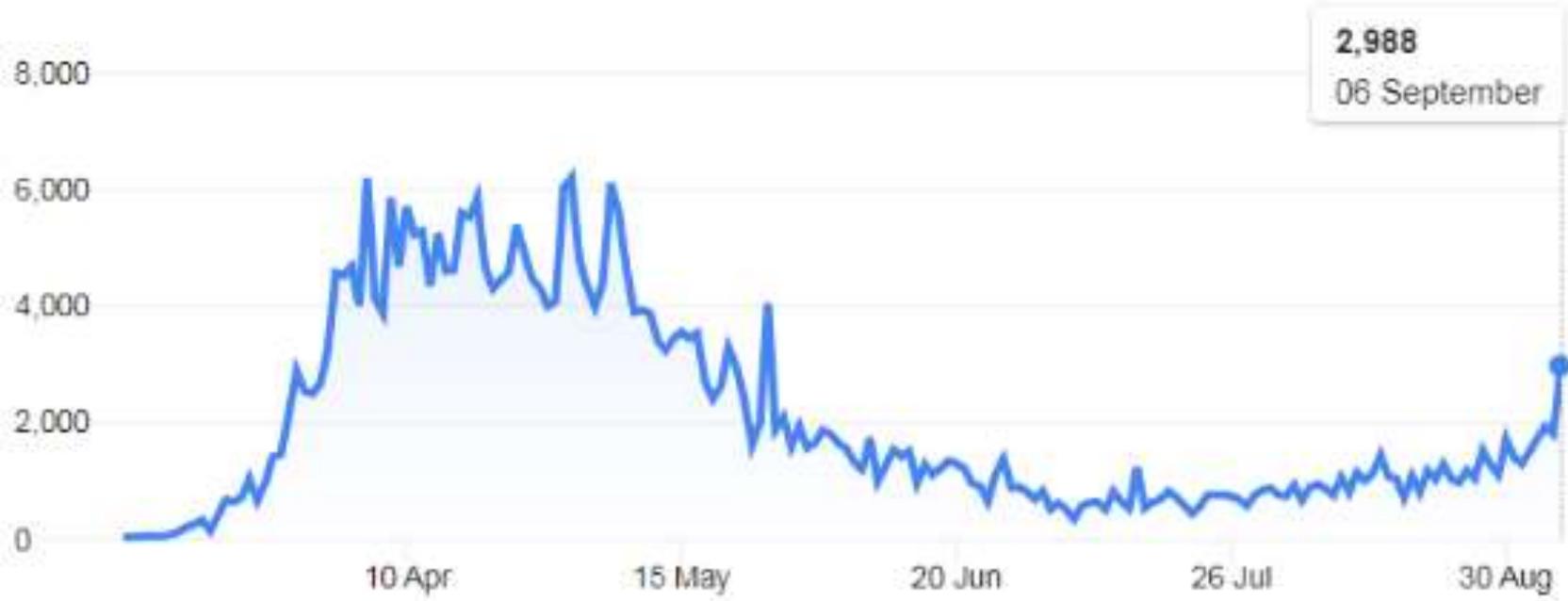
> Entry 2009



> Entry 2003

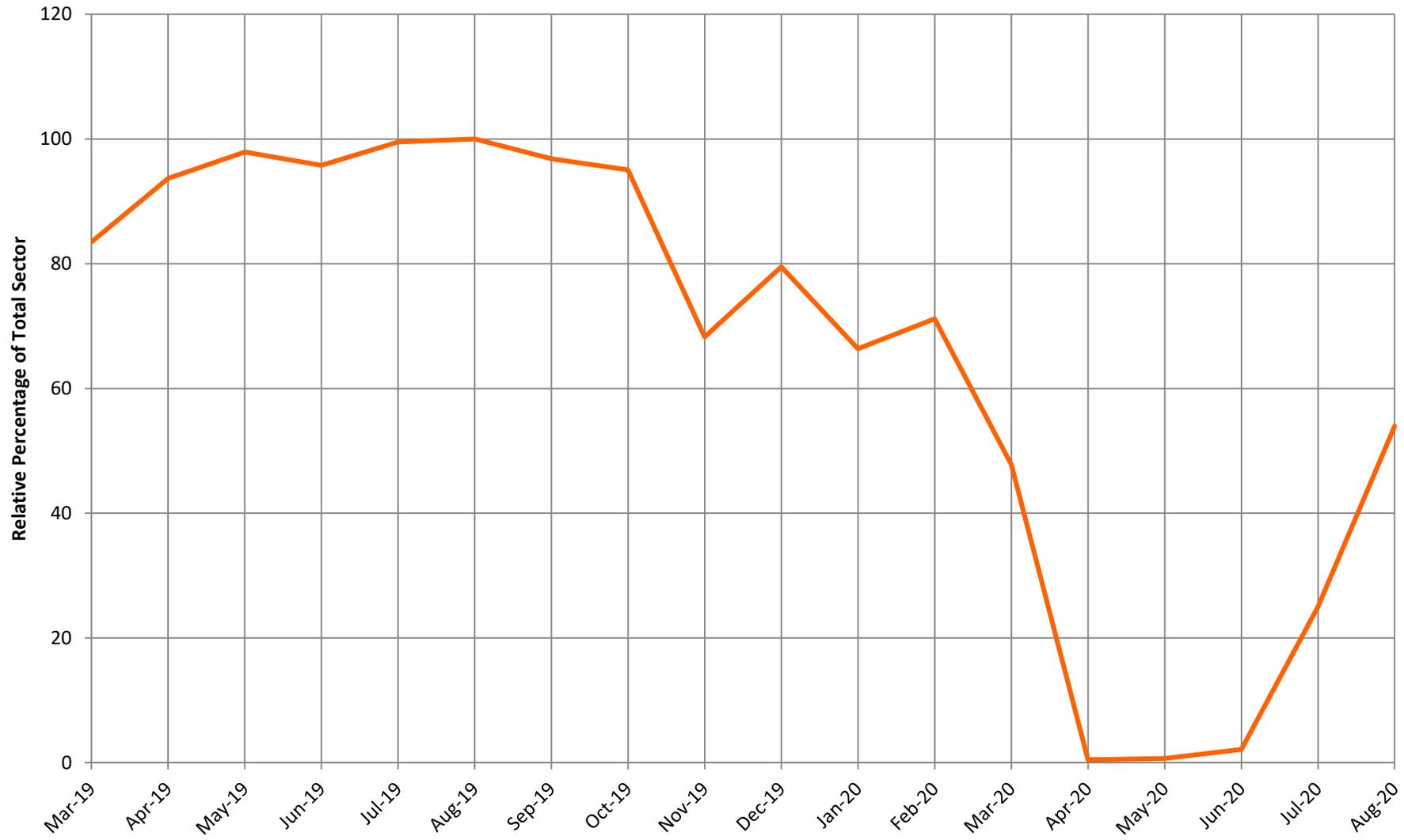


New cases ▾  United Kingdom ▾ All time ▾

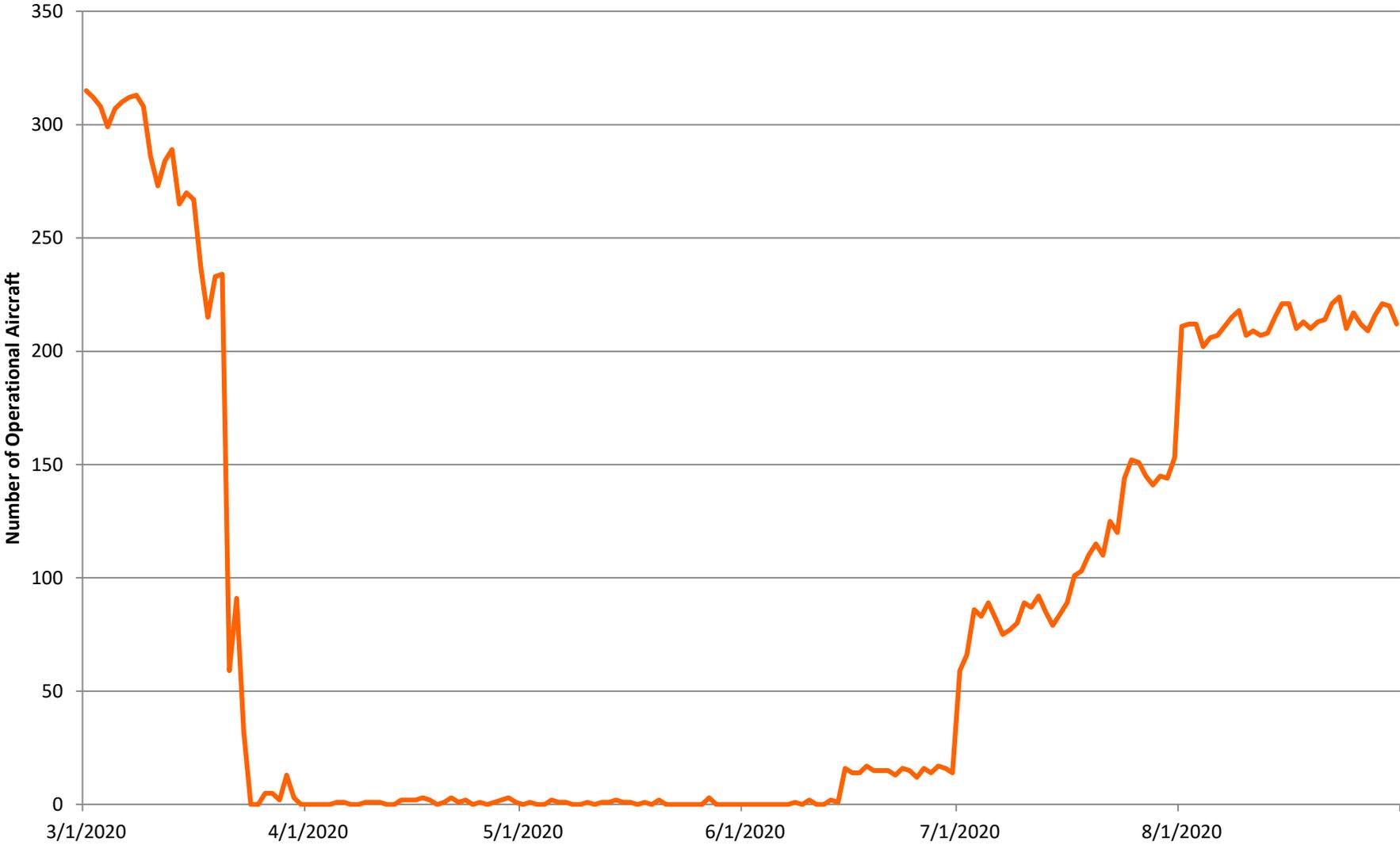


Each day shows new cases reported since the previous day · Updated less than 20 mins ago · Source: [Wikipedia](#) · [About this data](#)

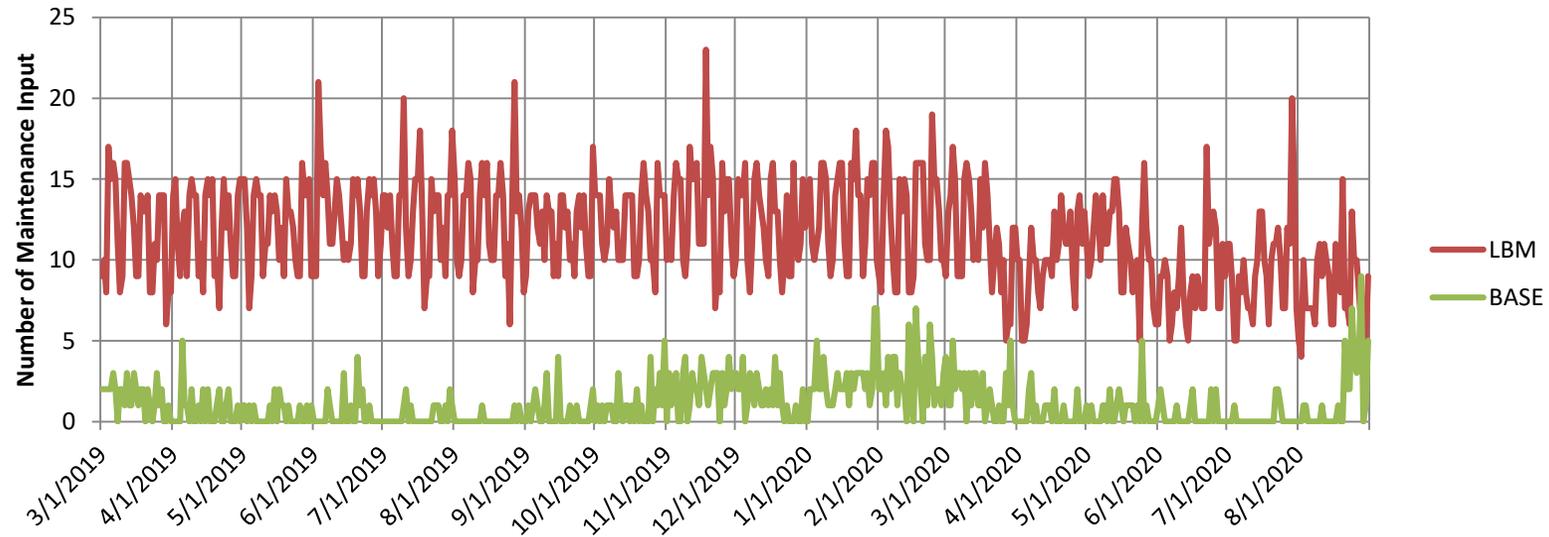
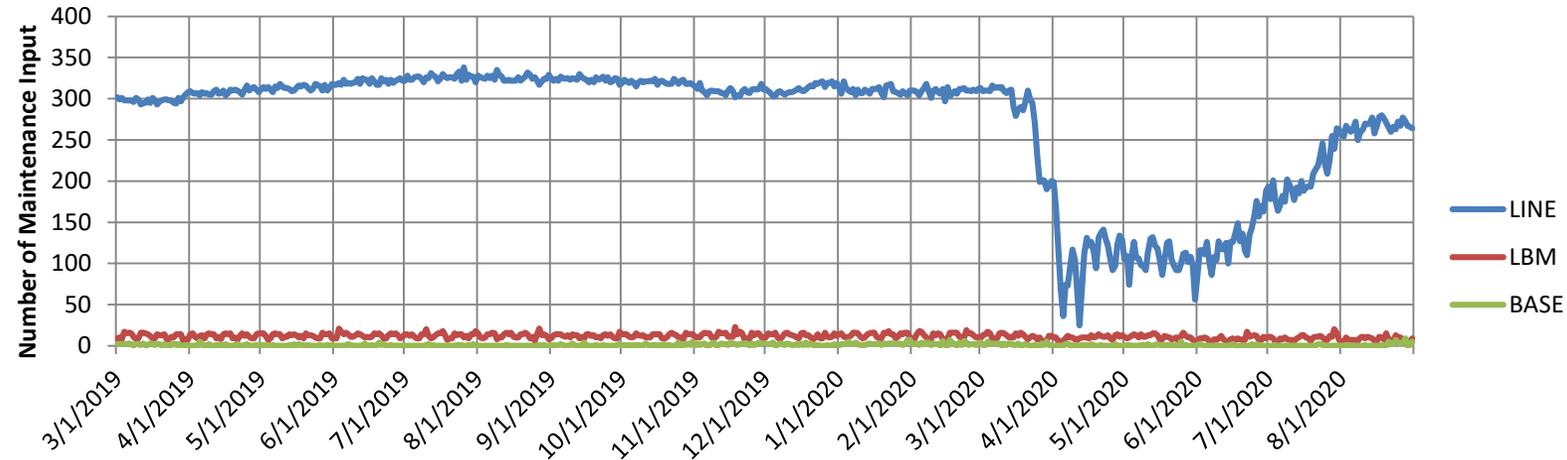
Sector Comparator Since Covid-19



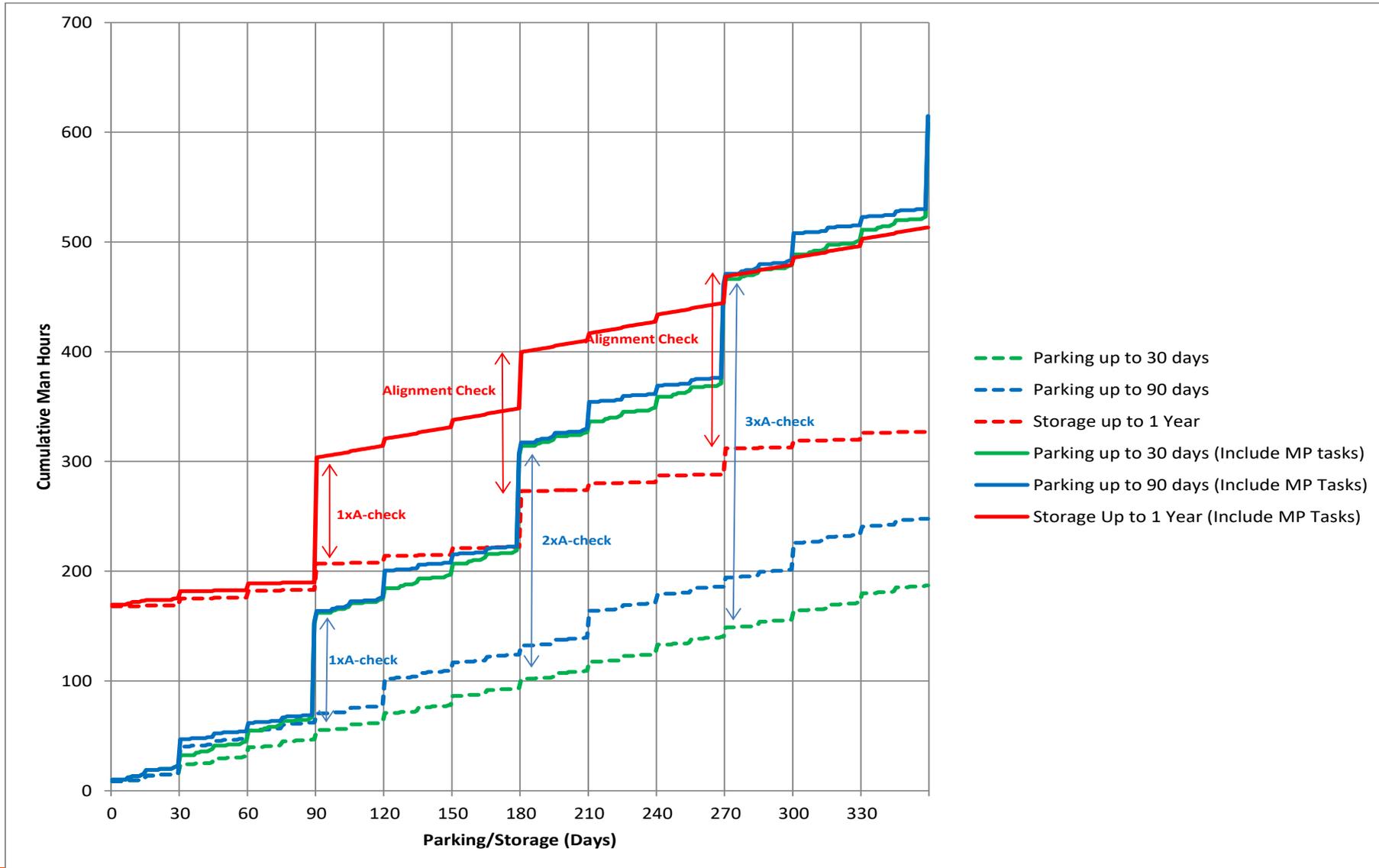
Operational Aircraft



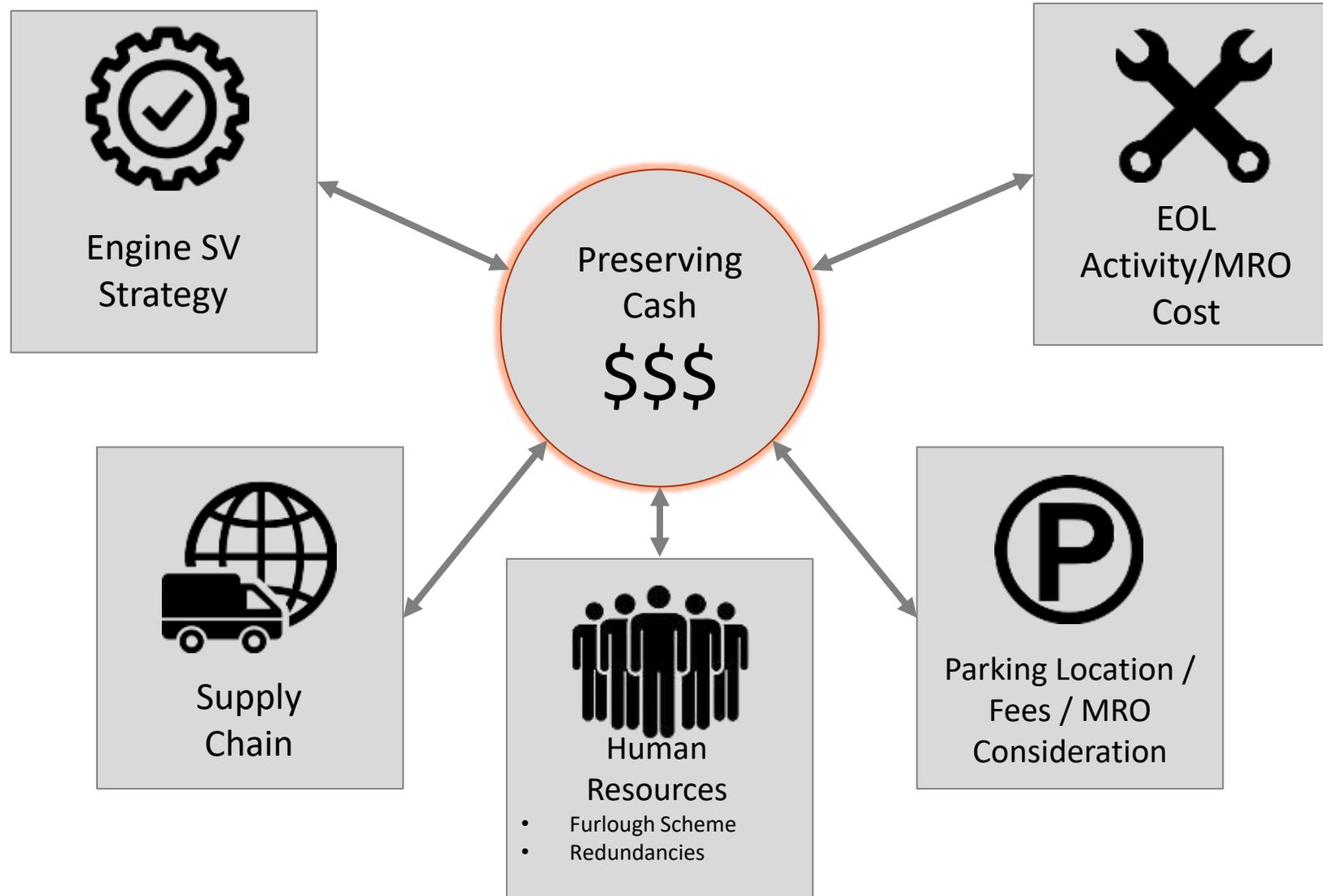
Daily Maintenance Inputs



Parking Versus Storage Analysis



Cost Consideration



Recovery In Sight?



We may need Aladdin and his magic lamp to rescue us



Government quarantine decisions making it difficult to build a stable flying programme



Thank you

europa by
easyJet



IATA 2020 MCC

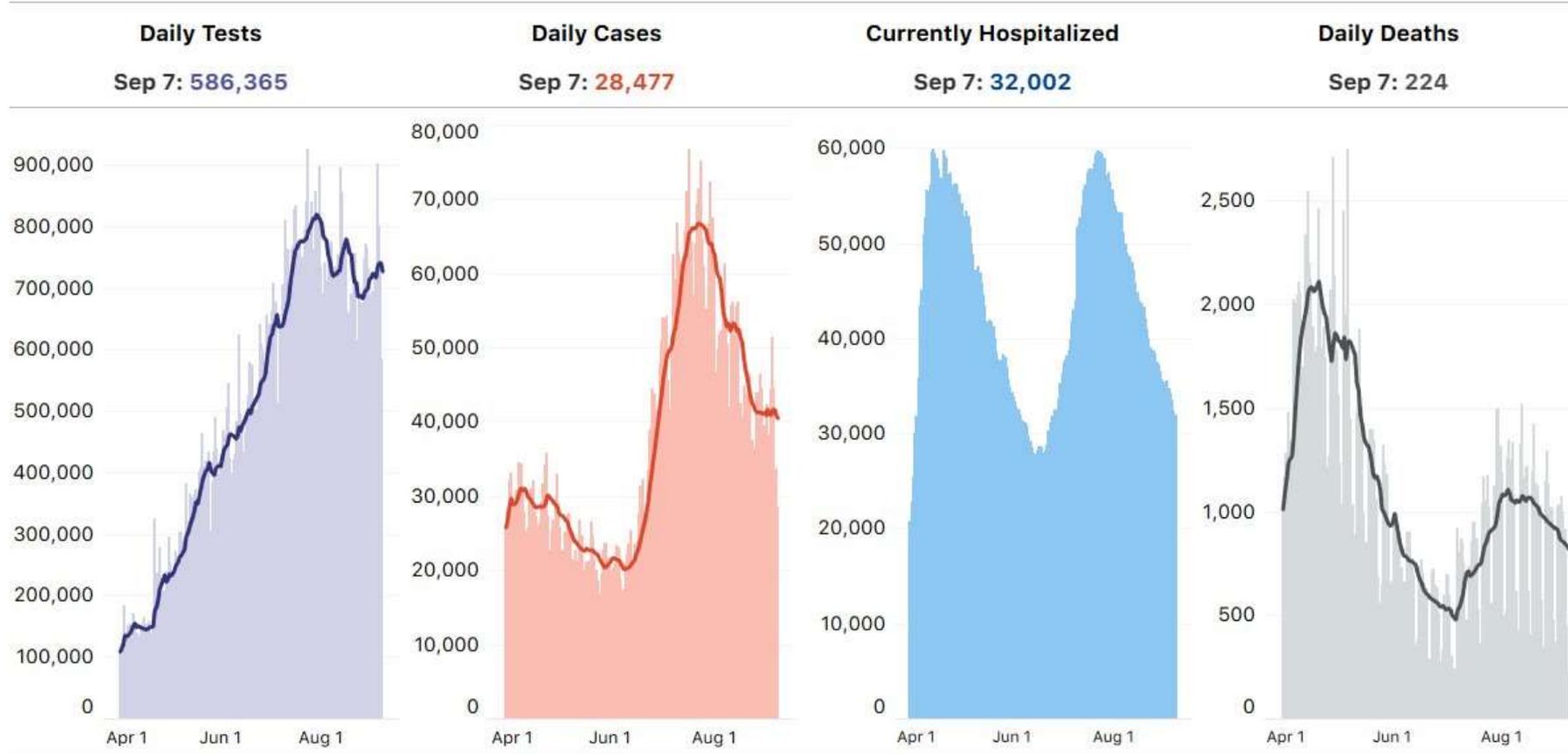
09 September 2020

Michael Hansen, Manager Fleet Strategy & Analysis

COVID-19 Metrics | United States Second Wave Trends

NATIONWIDE COVID-19 METRICS. 7-DAY AVERAGE LINES

Apr 1 - Sep 7



Initial wave concentrated largely in the New York City MSA

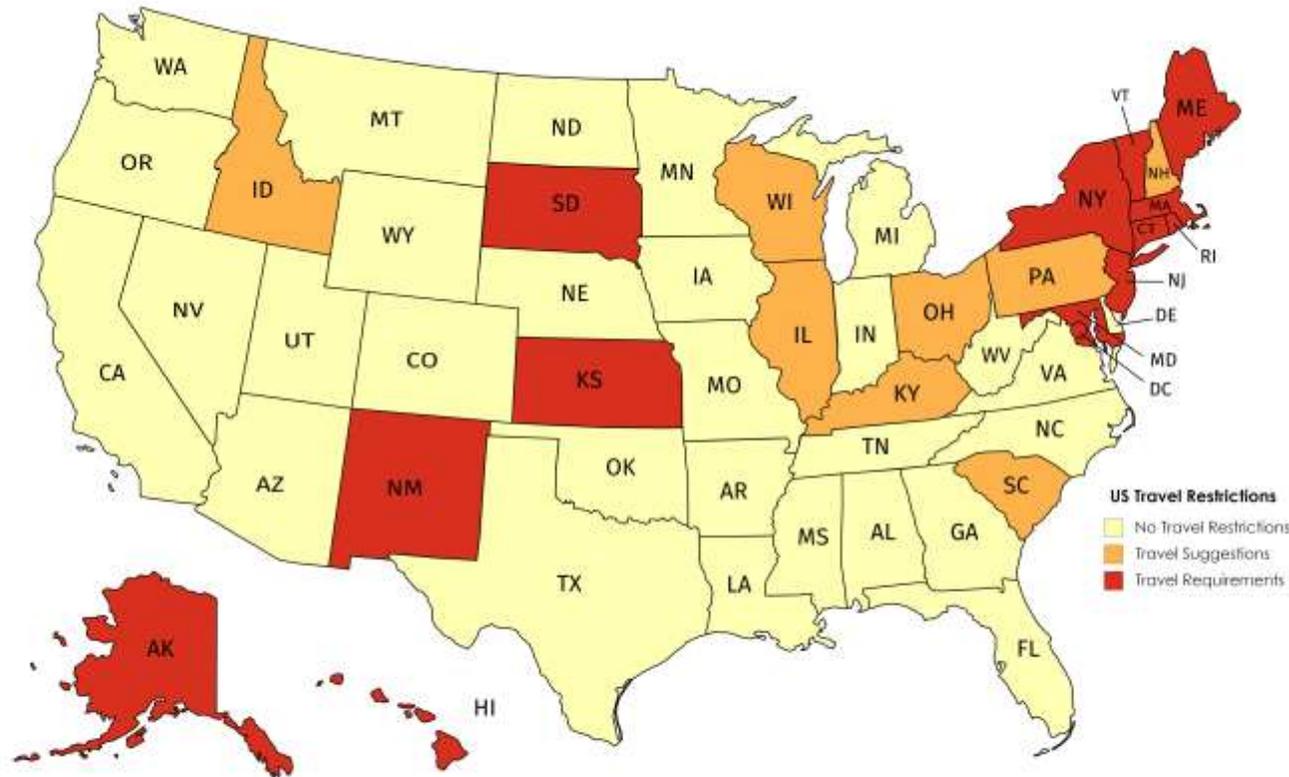
Second wave more widespread and included California and Sunbelt states – Texas, Arizona, Florida, and states in the deep south

Similar to other countries, second wave deaths have not been proportional to the case spikes

Source: The COVID Tracking Project

COVID Travel Restriction | US Interstate Travel

No unfired response at a state level; some regionalization in the north east; non contiguous states have much tighter controls



New York/New Jersey/Connecticut:

- Anyone from a state that has a 10% or higher positivity rate for coronavirus must quarantine for 14 days.
- Visitors must fill out a form online regarding their travel information as well or face a \$2,000 fine (NY only)
- Visitors who enter the state(s) for less than 24 hours are exempt.

Hawaii

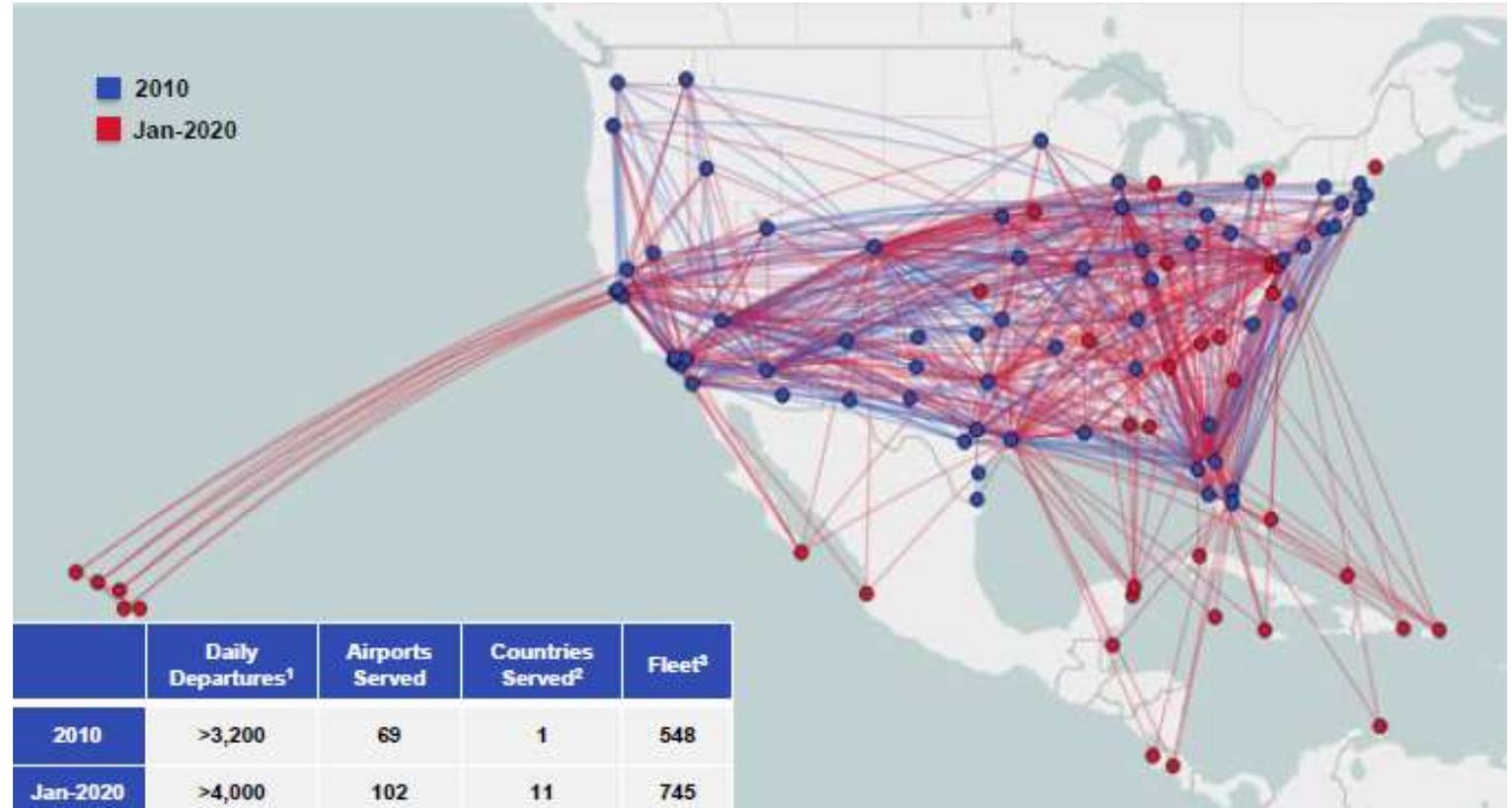
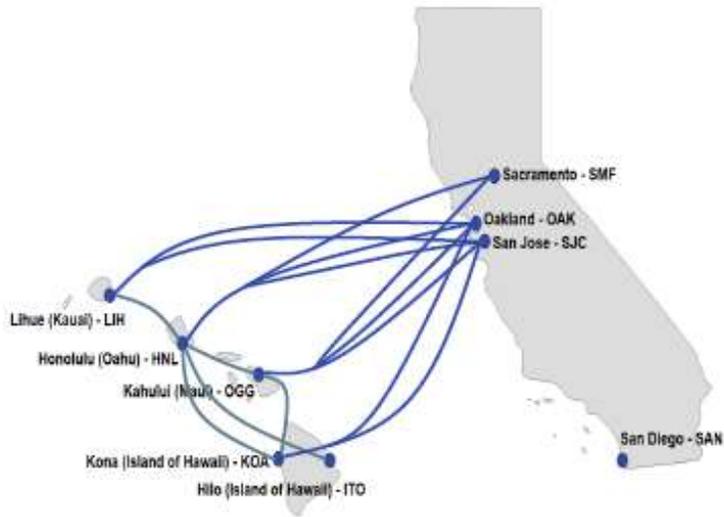
- Must quarantine for 14 days.
- Beginning on September 1st travelers can be exempt from quarantine by providing proof of a negative test.

Alaska

- Must have a negative coronavirus test within 72 hours of departure.
- Travelers can get tested on arrival in for \$250 or quarantine for 14 days.

Southwest Airlines | Route Overview

United States' most robust point-to-point, non-stop network; Successful Hawaii service (mainland & interisland launched in 2019); methodical expansion of near international routes

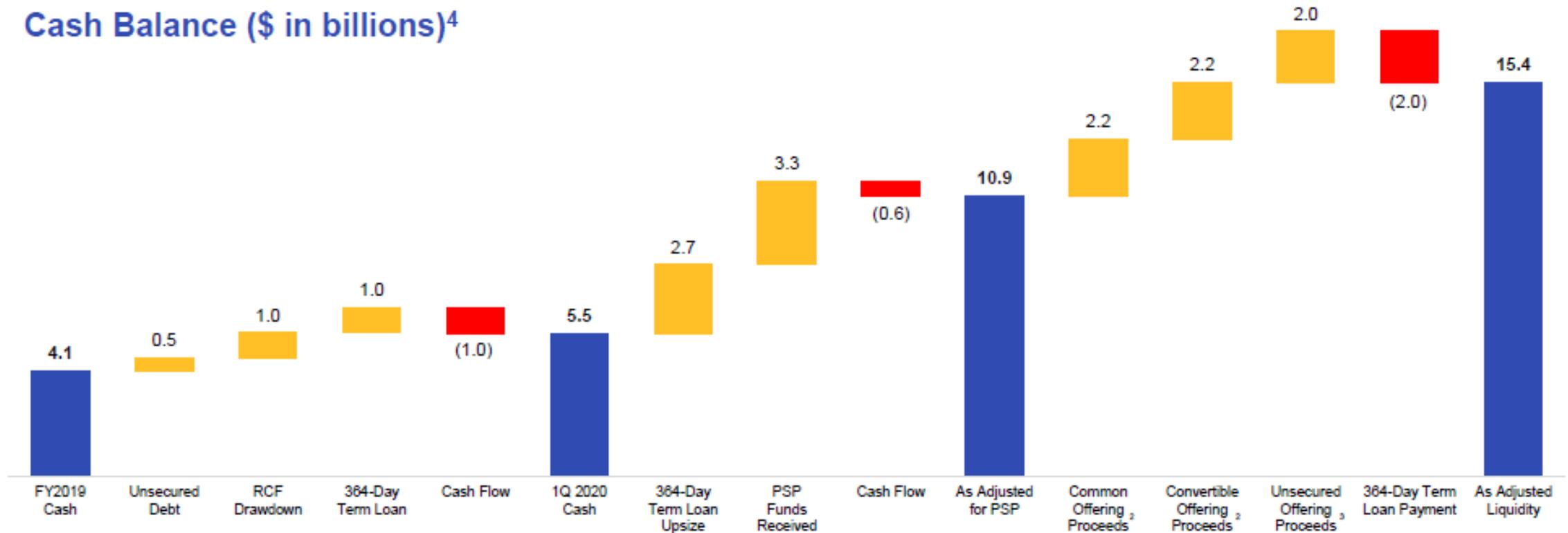


Recently announced offensive moves include additional service to Palm Springs, CA (PSP), Miami, FL (MIA) and expansion of our LA Basin footprint by taking over 17 slots vacated by JetBlue

Southwest Airlines | Financial Health & Liquidity

Successfully entered the market – equity and treasury – to enhance the company’s cash position; opting out of additional government support at this time

Cash Balance (\$ in billions)⁴



➤ The Company’s total liquidity is ~\$15.4 billion adjusted for the common stock, convertible notes and unsecured notes offerings and expected PSP receipts^{1,2}

¹Represents the total as adjusted liquidity, inclusive of the full ~\$3.250 billion amount from the Payroll Support Program expected to be received from the U.S. Treasury Department.

²Net Proceeds from 80.5MM shares (post-greenhoe) of Common Stock issuance offered at \$28.50 per share on April 28th, 2020, and from the \$2.3Bn Convertible Notes issuance (post-greenhoe) after associated fees and expenses.

³Net Proceeds from the \$2.0Bn unsecured notes offering after associated fees and expenses.

⁴Represents the amount of cash, cash equivalents, and short-term investments.

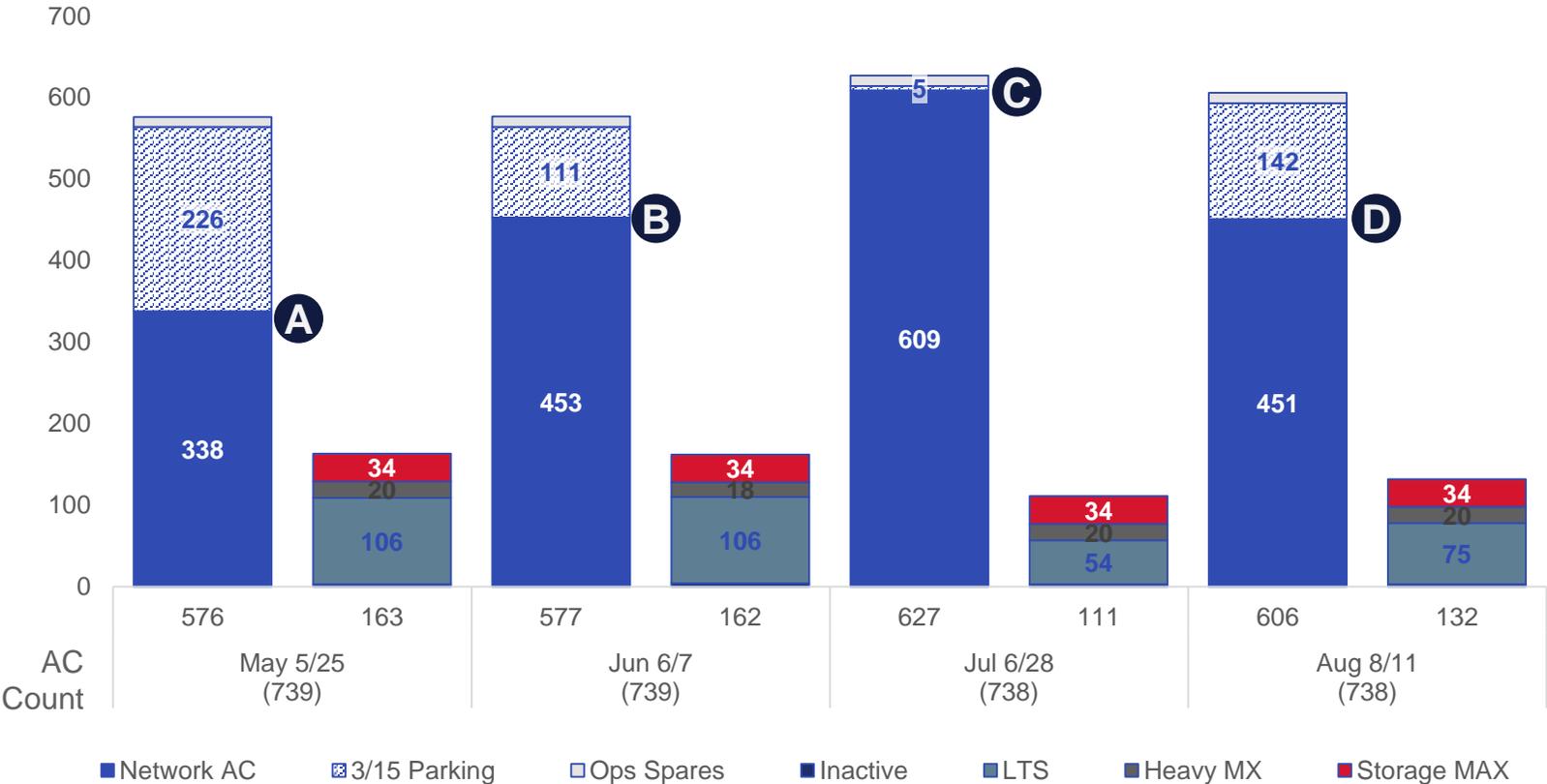
Fleet Partitioning | Storage vs. Parking

Parking rotation to support responsiveness to demand fluctuations; storage to provide immediate cost savings and prepositioning of potential retirement aircraft

| Program | Key Features | Maintenance Required |
|--|--|---|
| Short-term Parking (3 Day Rotation) | <ul style="list-style-type: none">• Can be used for aircraft not flown for up to 72 hours• Defined number of aircraft not assigned flight lines• Aircraft remain at unused gates or ramp throughout day• Can be parked at MX and non-MX Stations• No work required to return equivalent aircraft to Network | <ul style="list-style-type: none">• No incremental maintenance required• Routine maintenance continues on normal schedule |
| Long-term Parking (15 Day Rotation) | <ul style="list-style-type: none">• Can be used for aircraft not flown for up to 15 days• Less logistical complexity than short-term parking Able to leverage more remote parking areas• Intended to be done at MX Stations• Minor work required to return aircraft to Network | <ul style="list-style-type: none">• Initialize Long-term parking task card within first 3 days on ground• Parking re-activation task card before return to service• Accomplish any overdue maintenance before return to service |
| Storage | <ul style="list-style-type: none">• Intended for aircraft on ground for greater than 15 days• Removes from daily operations management (MOC/NOC)• Defers routine maintenance until return to service• ~1 week to ~1 month of work required (depending on overdue maintenance) to return aircraft to Network | <ul style="list-style-type: none">• Initialize Storage task card within first 3 days on ground• Storage activities required at 15 day intervals• Storage re-activation task card before return to service• Accomplish overdue maintenance before return to service |

Fleet Partitioning | Storage and Parking

Commercially we are preparing for a 'saw-toothed' recovery; effective partitioning provides that flexibility and also helps control costs



Key notes and callouts

- A** State of the fleet after initial COVID drawdown
 - Main focus was shedding costs across multiple dimensions
- B** Reintroduction of aircraft from the parking rotation to capture early summer demand
 - RTS work of LTS aircraft begins in mid-June
- C** Provide extra sections to capture over-booking demand and maximize revenue
- D** Response to post summer demand calcification
 - Additional LTS aircraft to alleviate utilization-based maintenance
 - Higher proportion into parking rotation to be more responsive to emergent demand

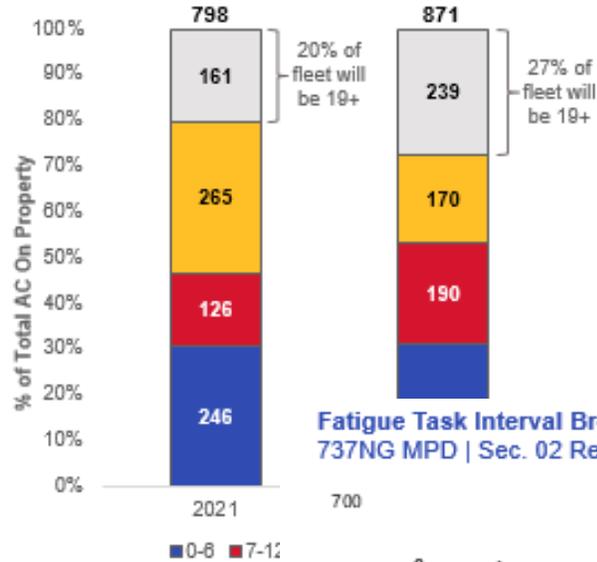
Fleet Partitioning | Retirement Attributes and Selection

Analysis across multiple dimensions and attributes to support commercial determinations on fleet size

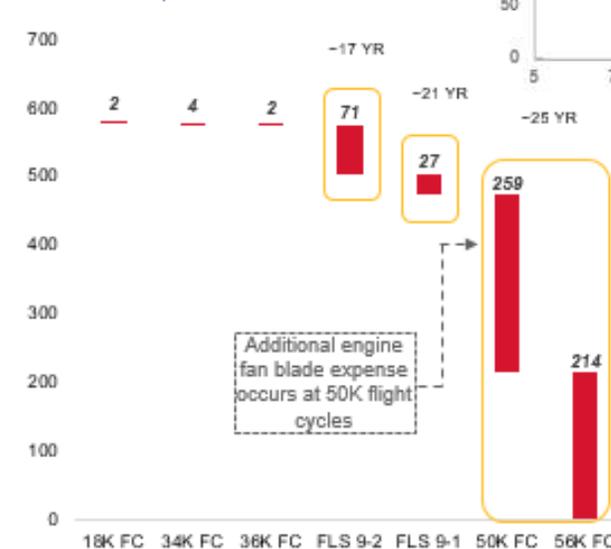
Examples of attributes analyzed to determine retirement candidates includes:

- Aircraft Age
- Reliability
- Major/Minor Damage
- Corrosion History
- PBH Related
- Operating Costs
- Fatigue/Structural (SSIP) Program forecast

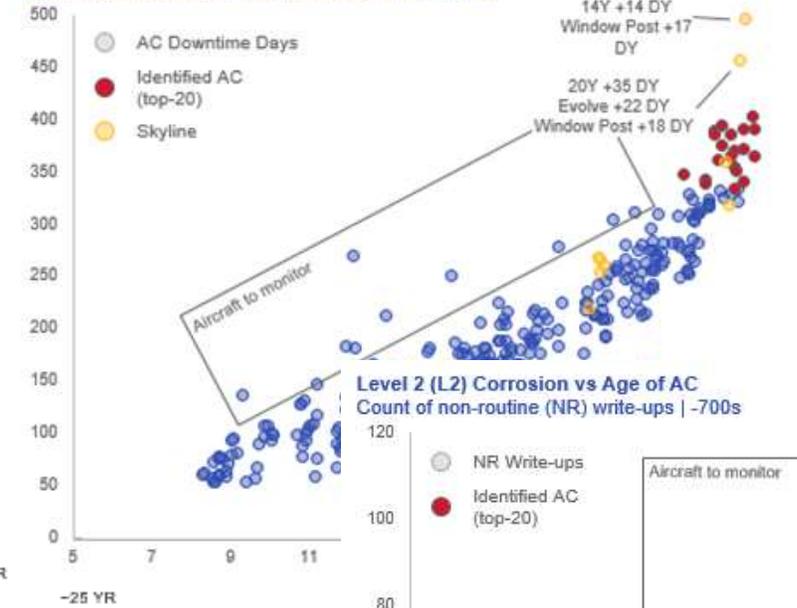
Total active aircraft on property by age 2021 versus 2024 forecast



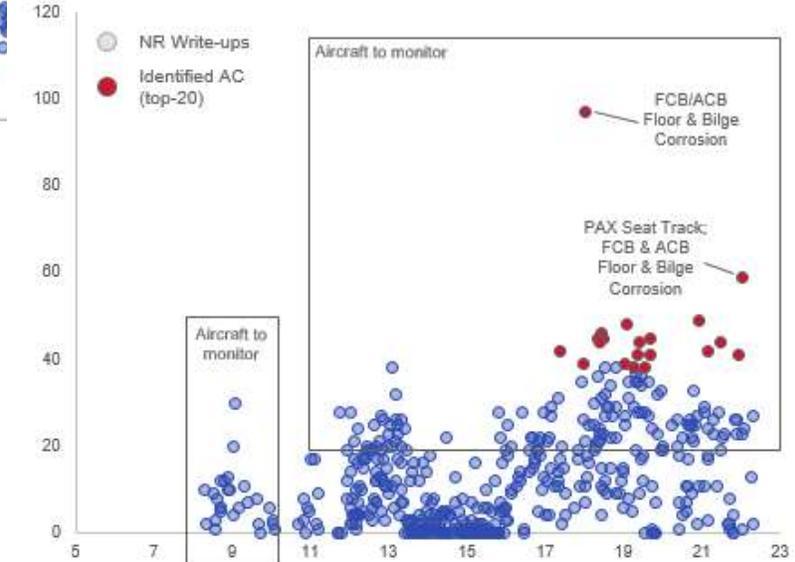
Fatigue Task Interval Breakdown 737NG MPD | Sec. 02 Rev. 15 Feb 2020



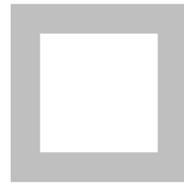
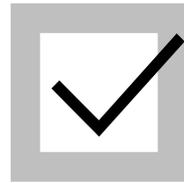
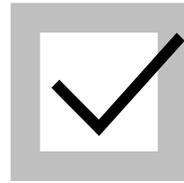
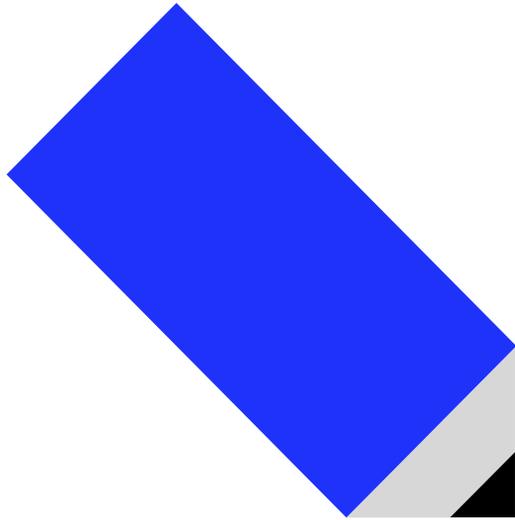
Lifetime AC days out of service (UAD/SAD) vs Age of AC Total of events where >= 3 days not in service | -700s



Level 2 (L2) Corrosion vs Age of AC Count of non-routine (NR) write-ups | -700s



Poll #2



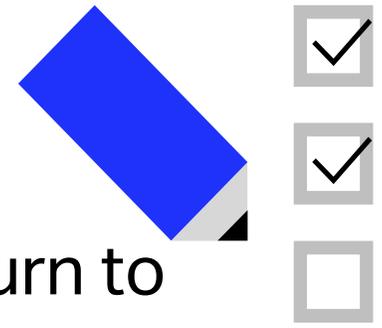
IATA

16th MAINTENANCE

COST CONFERENCE

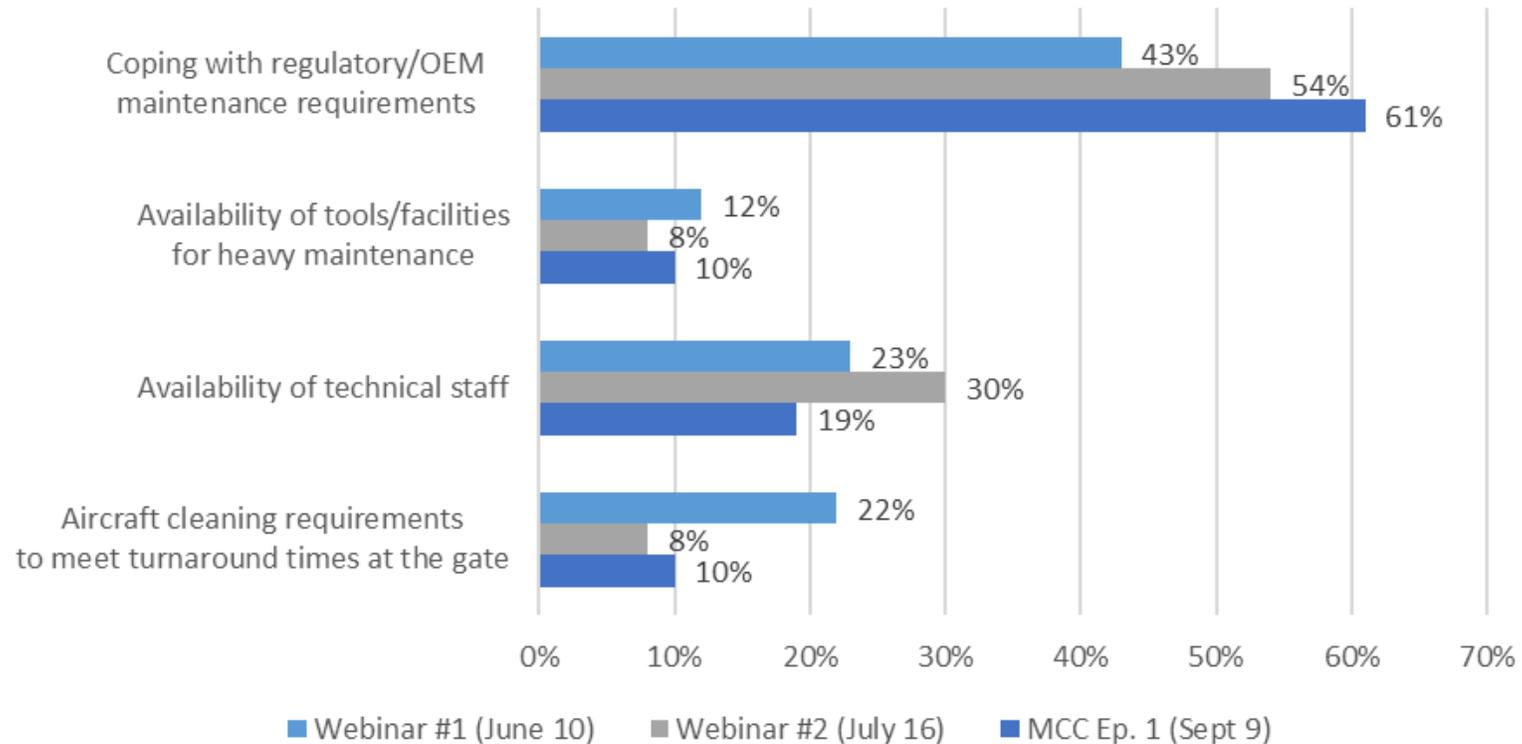
WEBINAR SERIES

Poll #2



What is your main maintenance-related issue preparing for return to service?

Results from previous webinars



Q&A



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IATA COVID-19 resources

The screenshot shows the IATA website header with navigation links: ABOUT US, CAREERS, CONTACT & SUPPORT, PROGRAMS, POLICY, PUBLICATIONS, SERVICES, TRAINING, EVENTS, PRESSROOM, and You & IATA. A search bar is also present. Below the header, there is a quote from Alexandre de Juniac, IATA's DG & CEO: "Stay strong. We will get through this crisis and keep the world connected." Below the quote is a link to "See latest media briefing".

The main content area features several COVID-19 resource cards:

- COVID-19 Resources for airlines and air transport professionals**: Incl. CART/IATA guidance. A mouse cursor is pointing at this card.
- COVID-19 Action Air Cargo**
- COVID-19 Recommendations for passengers**

Financial data cards are also visible:

- TOTAL LOSSES (EST. 2020 US\$)**: \$84.3 billion (down 54% from 2019), 7.5 million flights cancelled (JAN - JUL).
- TOTAL REVENUE LOSSES (EST. 2020 US\$)**: \$419 billion (down 50% from 2019). A link for "More financial developments" is provided.

www.iata.org

www.iata.org/en/programs/covid-19-resources-guidelines

www.iata.org/en/pressroom/covid-19-news

airlines.iata.org/topic/covid-19



IATA

16th MAINTENANCE

COST CONFERENCE

WEBINAR SERIES

Episode 1:
Economic Situation
& Aircraft Parking/Storage
Strategies

Thank you for attending!

Any further questions?

Please email Geraldine Cros (crosg@iata.org)



IATA

16th MAINTENANCE

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WEBINAR SERIES

Episode 2:
Adapting to New Circumstances
TCPC; Aircraft Disinfecting;
Fuel Testing & Biocide

Wed. 16 September 2020 - 7:30-9:30am EDT

