



# ishkya

**THE LOOK AND FEEL OF A  
MIXED MARKET RECOVERY**  
**Aircraft Values and Lease Rate Trends**

Tuesday 13<sup>th</sup> September 2022

# Presenters



Eddy Pieniazek  
Head of Advisory  
ISHKA



Stuart Flaye  
Senior Consultant  
ISHKA



Paul O'Driscoll  
Consultant and  
ISTAT Appraiser  
ISHKA AMERICAS



Eva Karagianni  
Analyst  
ISHKA

# Agenda

Market Environment

Production and Deliveries

Values and Lease Rates

Pointers for 2023

Q&A

# Market Environment

Paul O'Driscoll, Consultant and ISTAT Appraiser

# Macro market overview



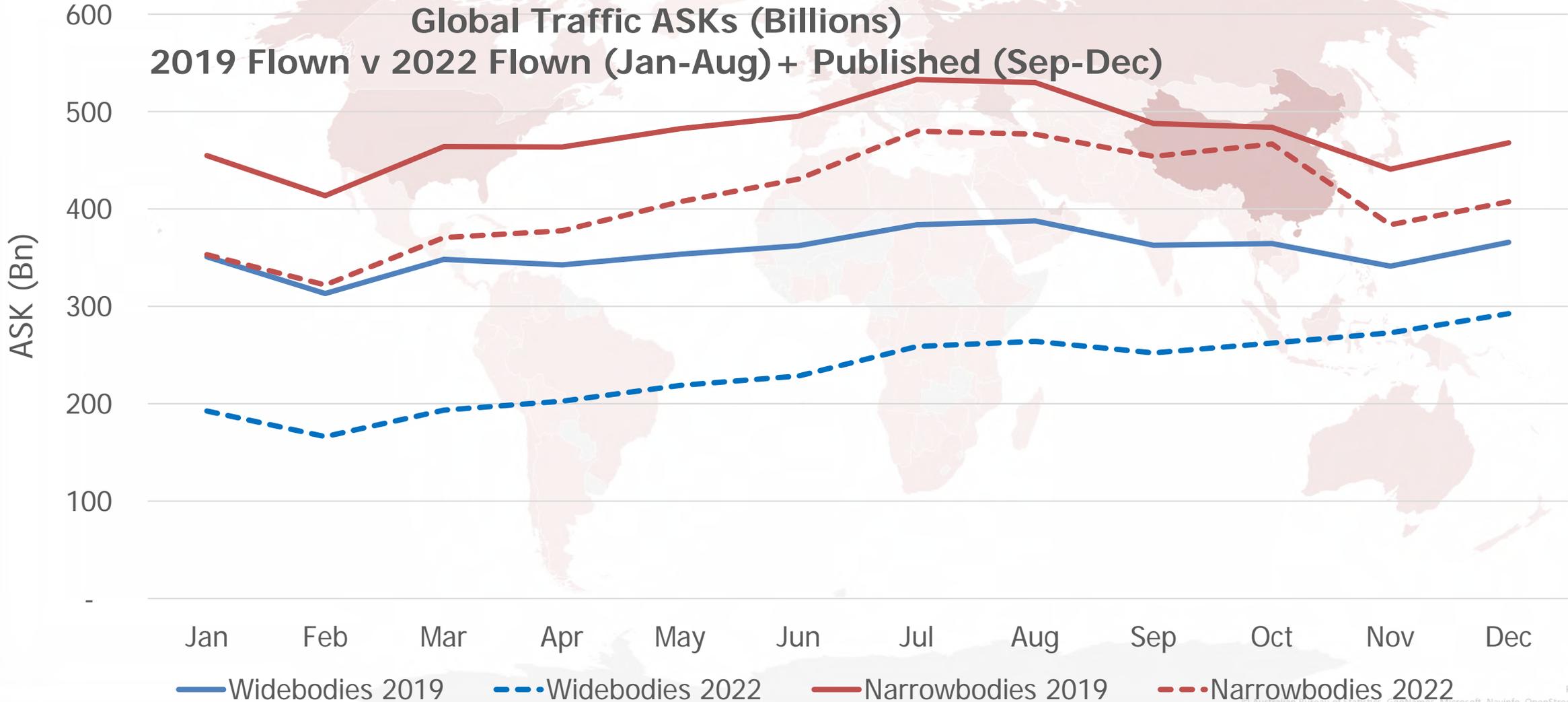
## Airlines

- Solid Q2 for most North American and European carriers
- Strong rebound in leisure demand as many took vacation for the first time in since 2019
- Profitable Q for most as higher traffic and yield offset increased fuel and labor cost and operational difficulties caused by shortages in airport staff (Europe) and pilots (US)
- More difficult to predict how traffic and yields will behave in Q4 and into 2023
- Asia is still due to its post-COVID rebound, with its largest markets still dealing with policies that hinder travel

## Capital Markets

- Higher inflation and interest rates provide a mixed blessing for aviation investors
- Aircraft assets still popular with investors – new capital continuing to flow into the sector
  - Avilease, Bain Capital (Griffin) KKR (Altavair) among others

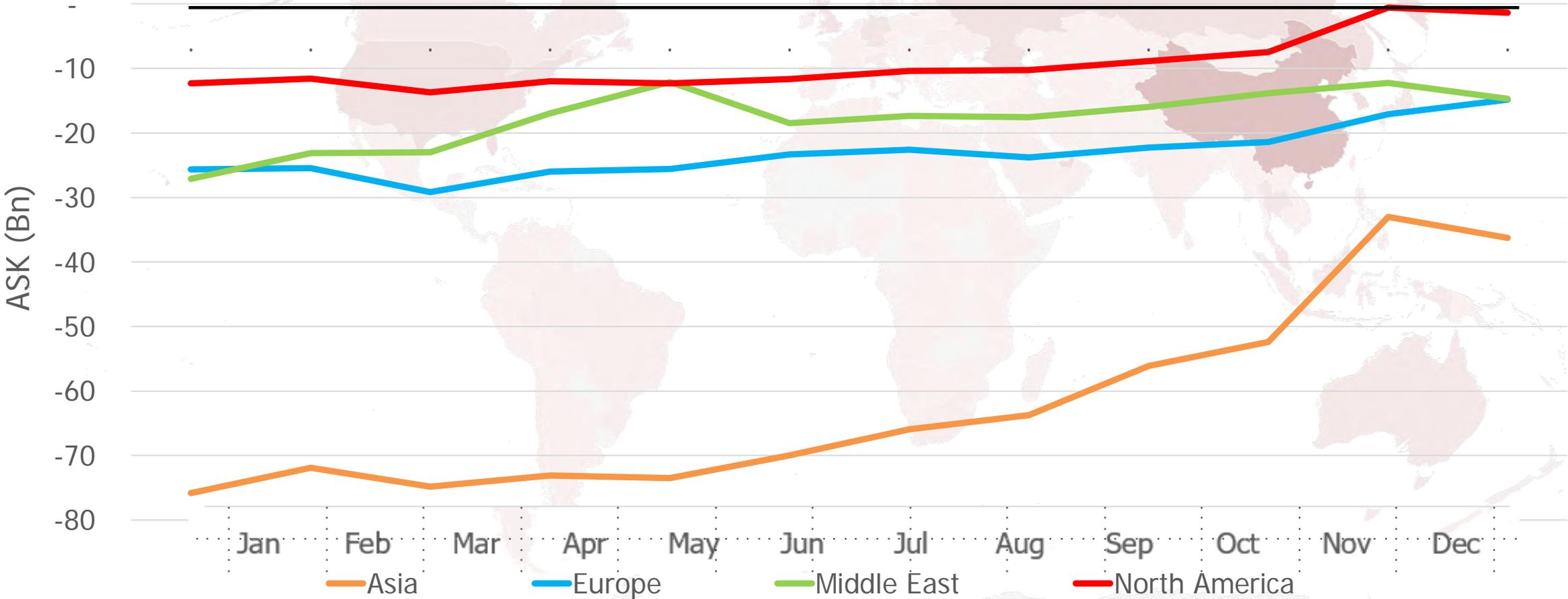
# Narrowbody traffic closing on 2019 levels, with widebody traffic now improving



# Published schedules show rebound in WB capacity

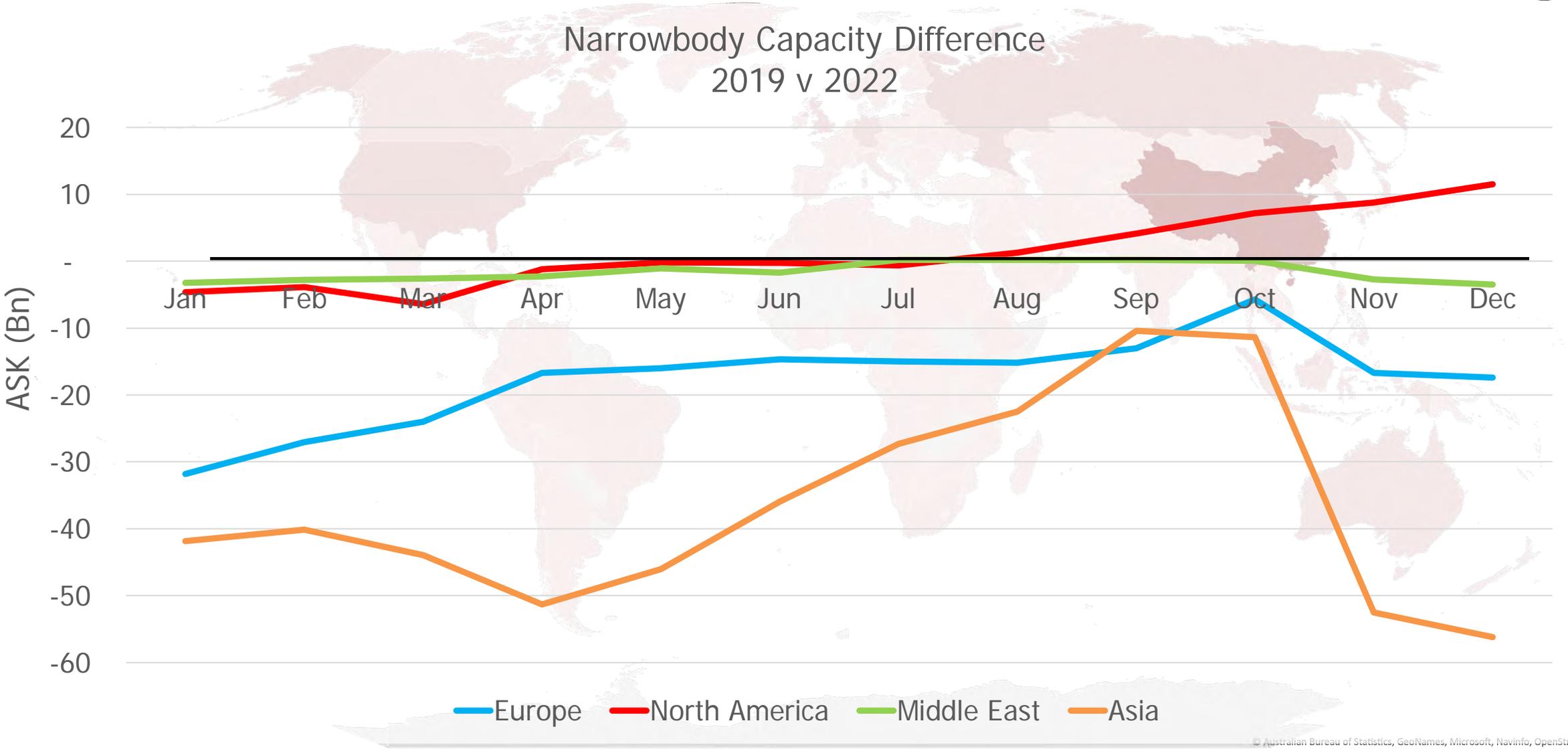


Widebody Capacity Difference  
2019 v 2022 (Flown / Published)



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# NB market is nearly complete back to 2019 levels



# Production and deliveries

Stuart Flaye, Senior Consultant

# Production Rates – improving in 2022

Aircraft Programme	Pre-shock rate per mo.	Post-shock rate per month	Plan for 2022	Future Plans
A220 (CSeries)	5	5 (4/mo Mirabel 1/mo Mobile)	Increase from 5/mo to 6/mo	Montreal has a capacity of 10/mo and Mobile's capacity is 4/mo. Airbus wants to ramp up production to the full capacity of 14/mo between the two plants by 2025.
A320	60-63	40	45+	Production is progressing towards a rate of 75 aircraft per month in 2025. Now targets a monthly rate of 65 in early 2024, around six months later than previously planned
A330 <sup>Note 1</sup>	3.5	2	Going to 3	
A350	10	6	4.5 - 5	Feasibility of further rate increases to meet growing market demand as international air travel recovers
737 MAX	42 / 0	Low rates to begin in 2020 with a gradual increase to 31/month during 2021, with further gradual increases to correspond with market demand	Maintaining a rate of 31 for the remainder of 2022. Had planned to increase production to 38/mo later in 2022	Boeing wants to eventually produce about 52 per month
747	0.5	No change	No change	Expect to complete production of the 747 in the fourth quarter of 2022
767	3	No change	No change	No change
777/777X Combined	5	Decrease to 3/month in 2021	2/month in 2021. Expected to increase from 2 per month to 3 per month in the second half of 2022 (i.e. 777F)	In April 2022, Boeing paused production of the 777X during 2022 and 2023. Implemented the production pause during the second quarter of 2022.
787	14	Reduce to 10/month in 2020, and gradually reduce to 7/month by 2022	2/month	Expected gradual return to 5/mo over time, once deliveries flow resumes
ATR	65 (Per year)	40/year in 2020 and 15/year in 2021	To reach high 20s	
Embraer	90 (Per year)	44/year in 2020 and 45/year in 2021	In the 60s	

Based on Commercial aircraft deliveries only

(Vista 2022 forecast in brackets)

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# Deliveries – behind schedule for 2022

	2021	Q1 2022	Q2 2022	Q3 2022 Est.	Q4 2022 Est.	2022 Estimate
<b>Airbus</b>						
<b>A220</b>	50	11	14	10	18	53 (63)
<b>A320 family</b>	483	109	121	116	182	528 (550)
<b>A330</b>	15	4	6	6	7	23 (20)
<b>A350</b>	55	16	13	13	15	57 (50)
<b>A380</b>	5	-	-	-	-	-
<b>Total</b>	<b>608</b>	<b>140</b>	<b>154</b>	<b>145</b>	<b>222</b>	<b>661 (683)</b>
<b>Boeing</b>						
<b>737</b>	245	81	100	72	105	358 (500)
<b>747</b>	7	1	2	1	2	6 (7)
<b>767</b>	19	2	3	6	8	19 (20)
<b>777</b>	24	3	9	5	6	23 (24)
<b>787</b>	14	0	0	12	29	41 (60)
<b>Total</b>	<b>309</b>	<b>87</b>	<b>114</b>	<b>96</b>	<b>150</b>	<b>451 (611)</b>
<b>Embraer</b>	48	6	11	9	14	40 (68)
<b>ATR</b>	28	6	3	7	11	28(38)
<b>DHC</b>	7	3	1	0	0	4 (6)
<b>Overall Total</b>	<b>1,000</b>					<b>1,180 (1,406)</b>

# Retirements



	2016	2017	2018	2019	2020	2021	2022
Single-aisle	280	242	240	335	231	211	82
Twin-aisle	137	127	114	131	164	84	26
Regional Jet	64	74	83	105	50	31	19
Turboprop	74	74	92	82	45	30	9
<b>Overall Total</b>	<b>555</b>	<b>517</b>	<b>529</b>	<b>653</b>	<b>490</b>	<b>356</b>	<b>136</b>

Source: CAPA Fleets. Western-built aircraft only.

To end August 2022

- 2021 numbers were much lower than was anticipated
- 2022 numbers (to date) suggest number could be even lower than last year
- Time for the data to catch up to the on-the-ground reality
- Airlines and lessors are waiting to see how traffic (and residual values) recover, although some aircraft described as “parked/stored” will likely already have been retired

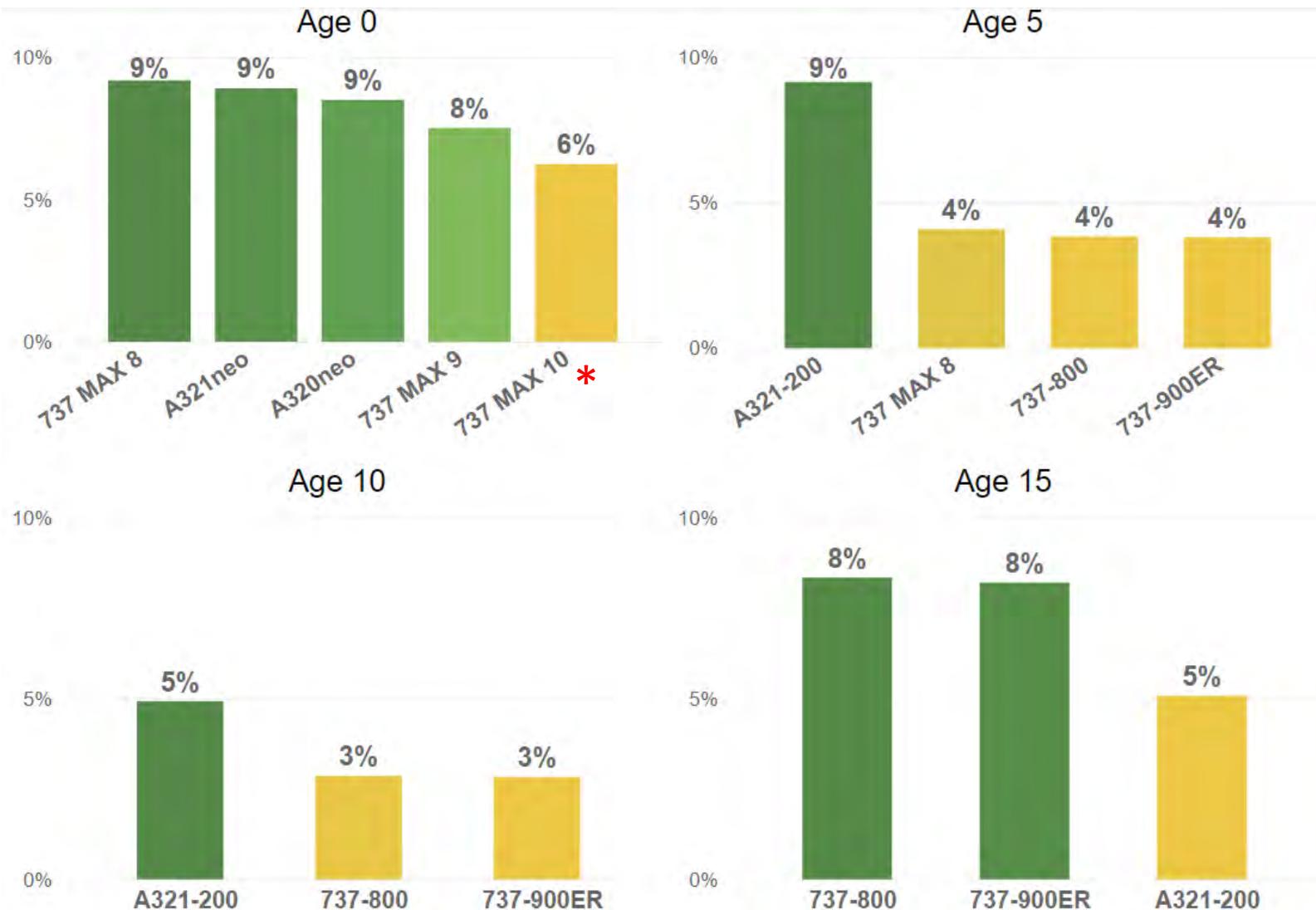
# Values and lease rates

Making Headway

Where value and lease rate performance has been strongest

Eddy Pieniazek, Head of Advisory

# Recent Market Value Improvements Narrowbody Aircraft (since mid 2021)



Younger aircraft:

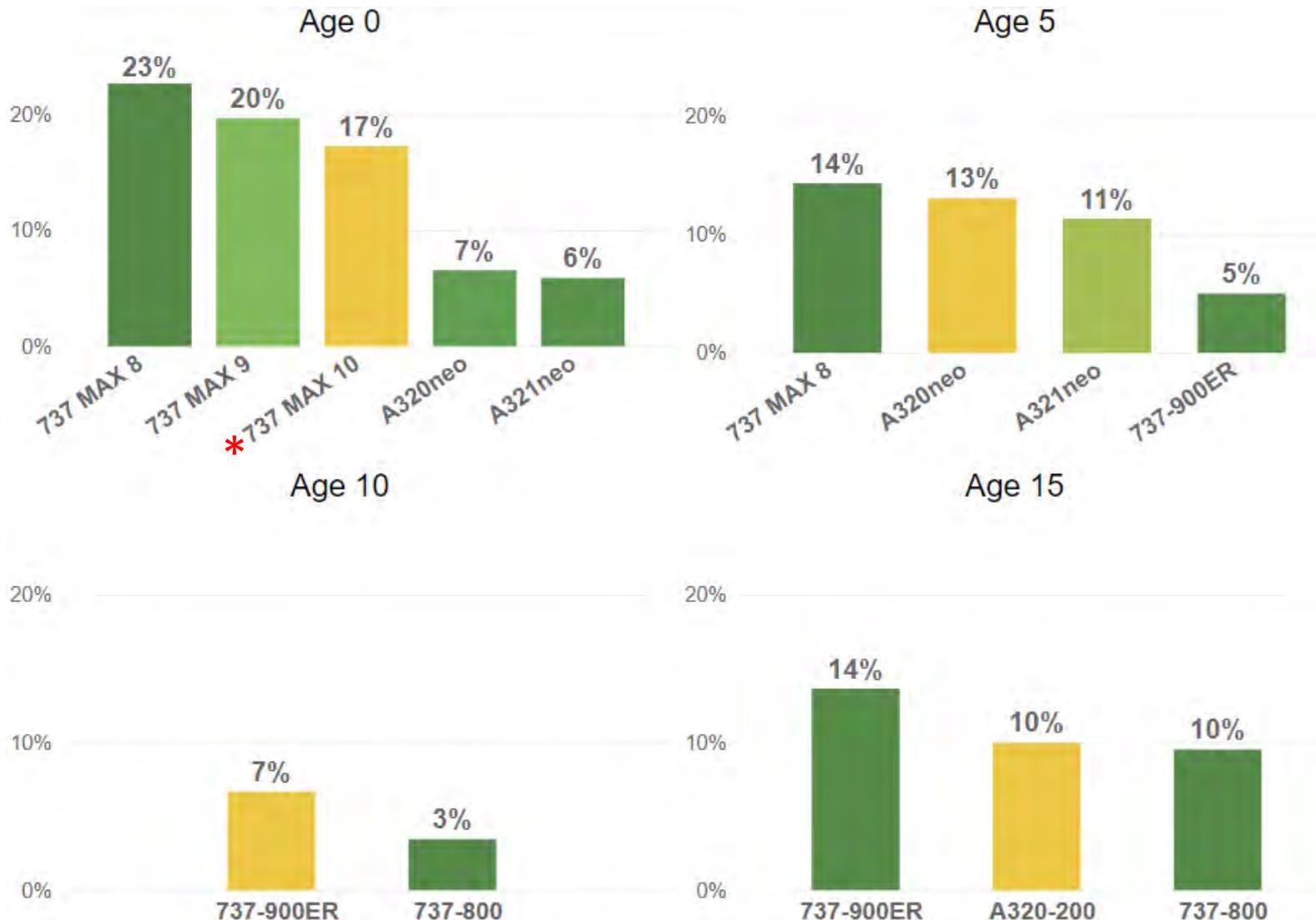
B737 MAX – off a low base

\* (MAX 10 numbers for 2023 delivery)

A320/321neo – narrowbody demand exceeds supply / attractive asset

Older aircraft:  
B737NG – filling in for delayed MAX  
A321ceo – seat/cost economics

# Recent Market Lease Rate Improvements Narrowbody Aircraft (since mid 2021)



Younger aircraft:

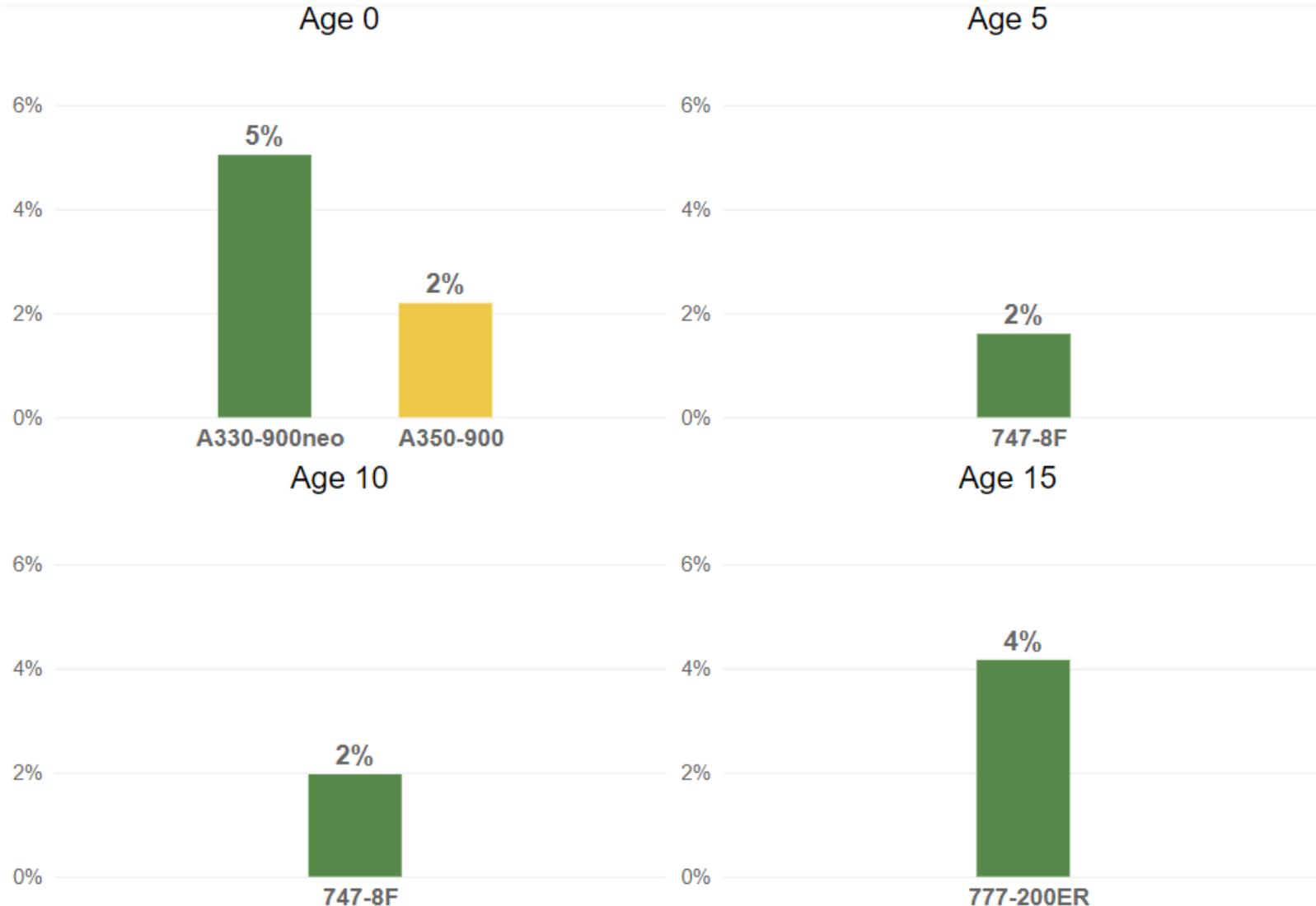
**B737 MAX –**  
recovering from a low base

**\* (MAX 10 numbers for 2023 delivery)**

**A320/321neo –**  
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**Older aircraft:**  
**B737NG –** filling in for delayed MAX  
**A320ceo –** recovering from a low base

# Recent Market Value Improvements Widebody Aircraft (since mid 2021)



**Limited Recovery to date**

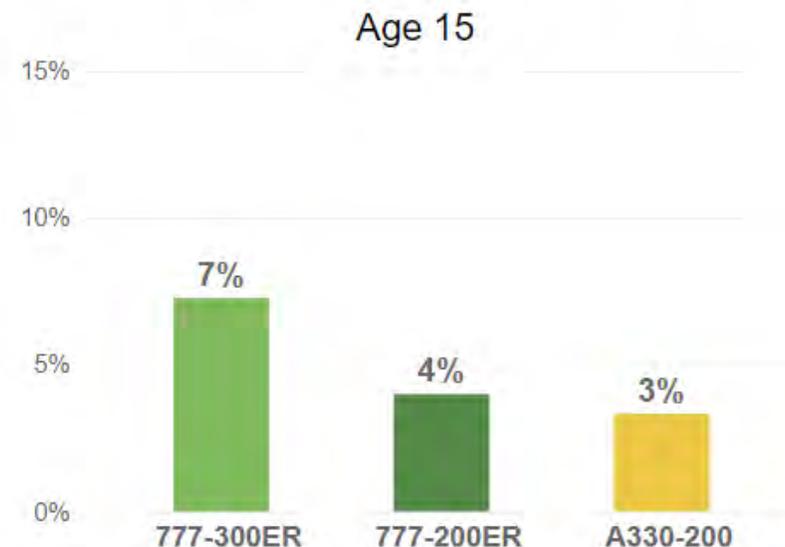
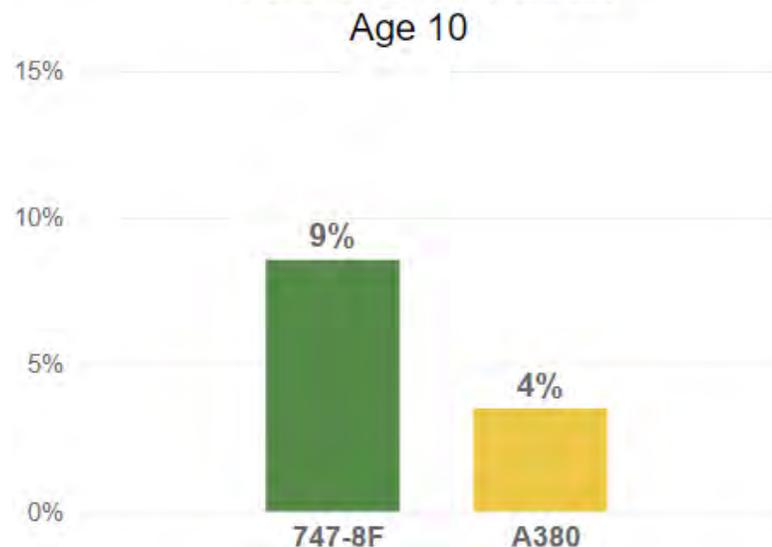
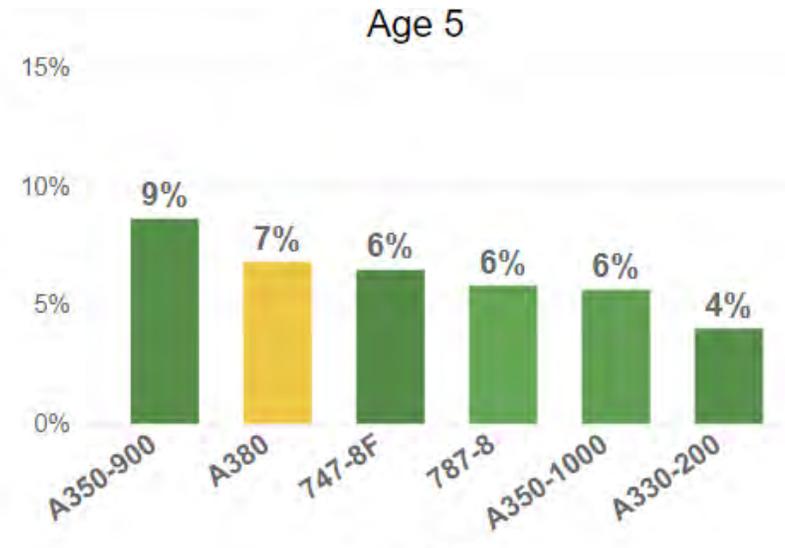
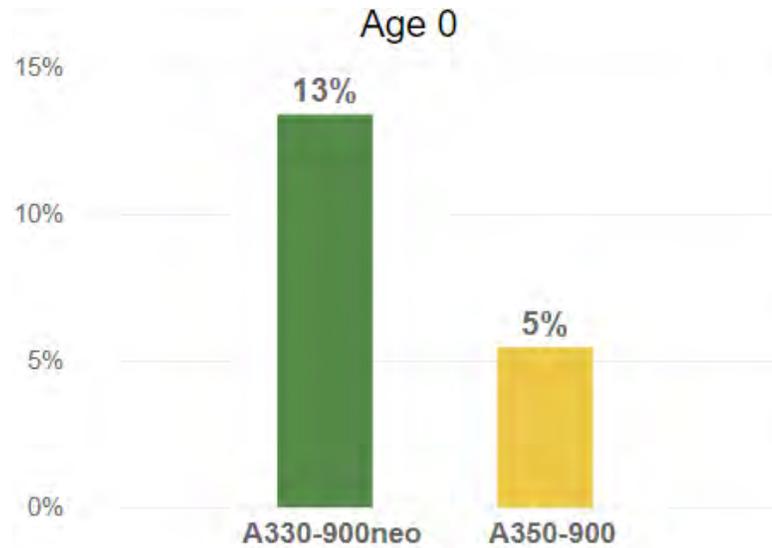
**Younger aircraft:**

**Minor improvements on few young/new aircraft – attractive assets for financing**

**Older aircraft:**

**Few improvements, the B777-200ER improves a little off a low base**

# Recent Market Lease Rate Improvements Widebody Aircraft (since mid 2021)



Long Haul markets opening

Younger aircraft:

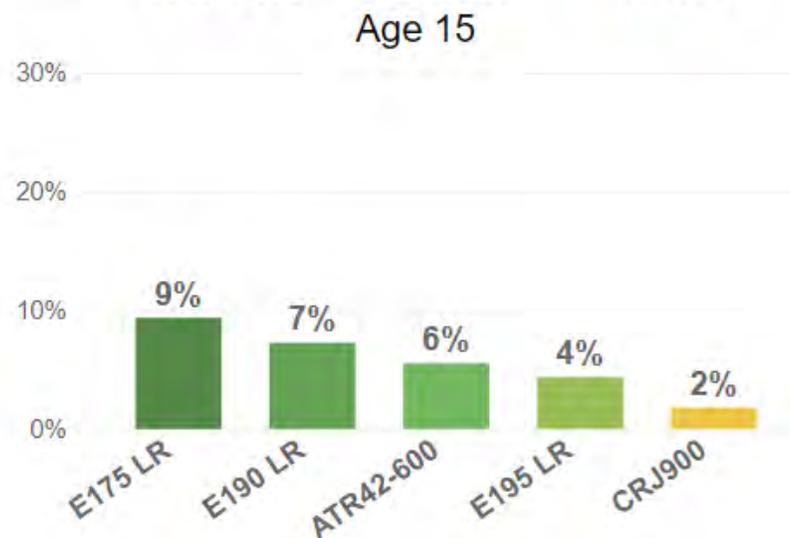
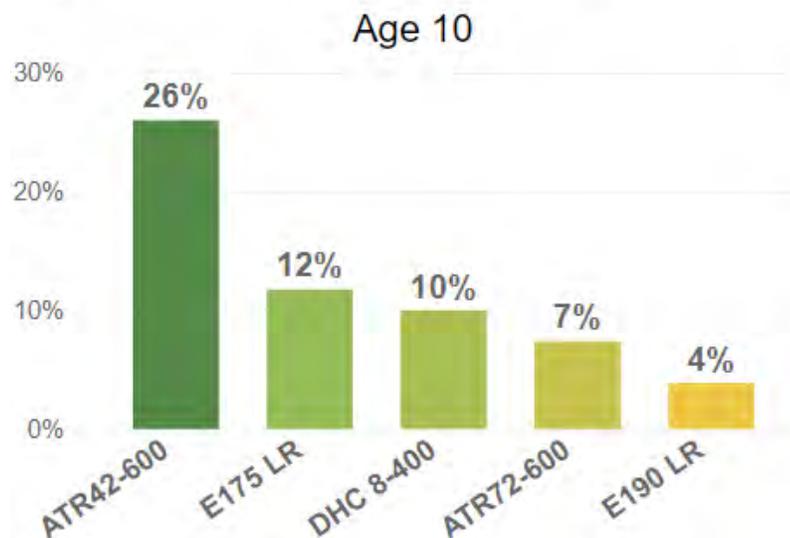
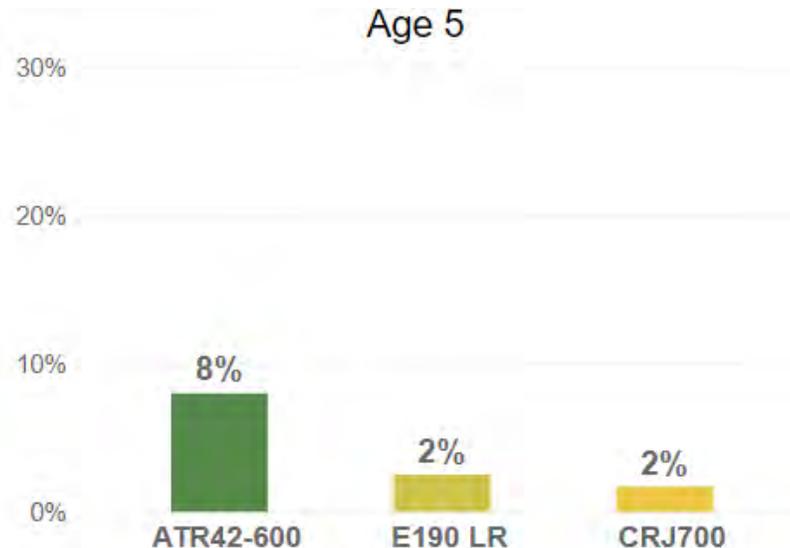
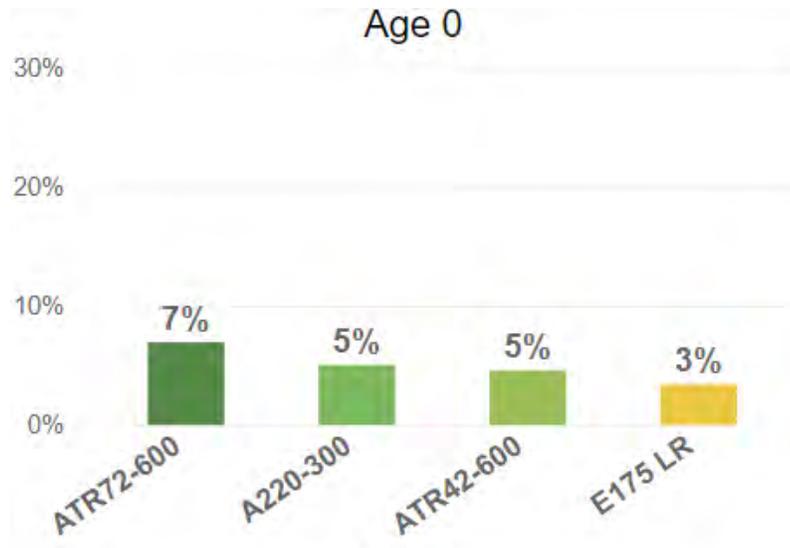
Leasing Market recovering from a depressed level, for in demand assets

Older aircraft:

Freighters have been in demand

Other types show small improvement from depressed levels

# Recent Market Value Improvements Regional Aircraft (since mid 2021)



**Younger aircraft:**

**ATR– recovering from a low base – production slowdown helped address capacity issues**

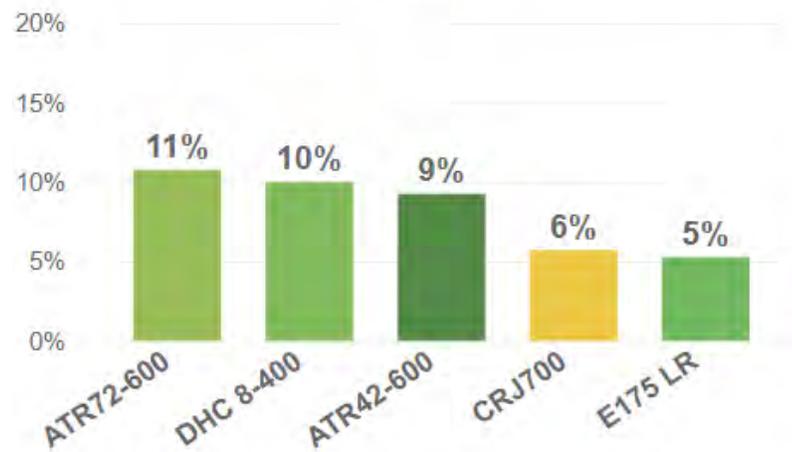
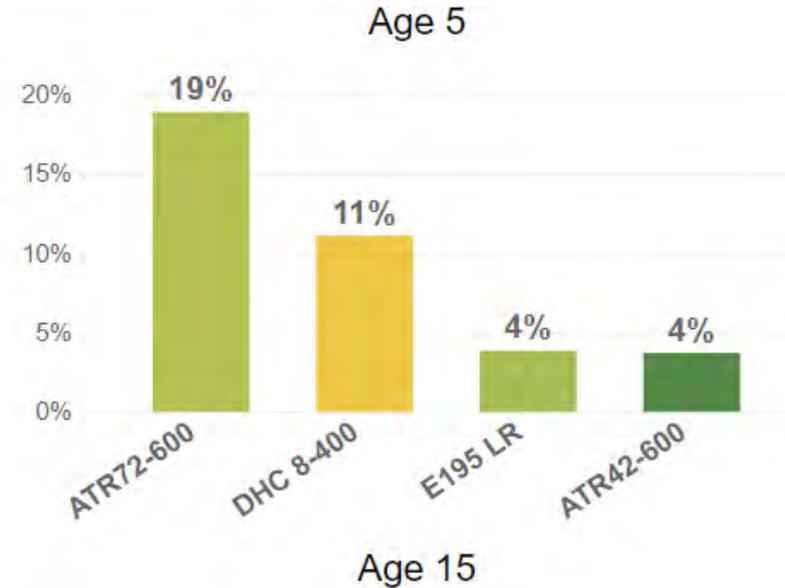
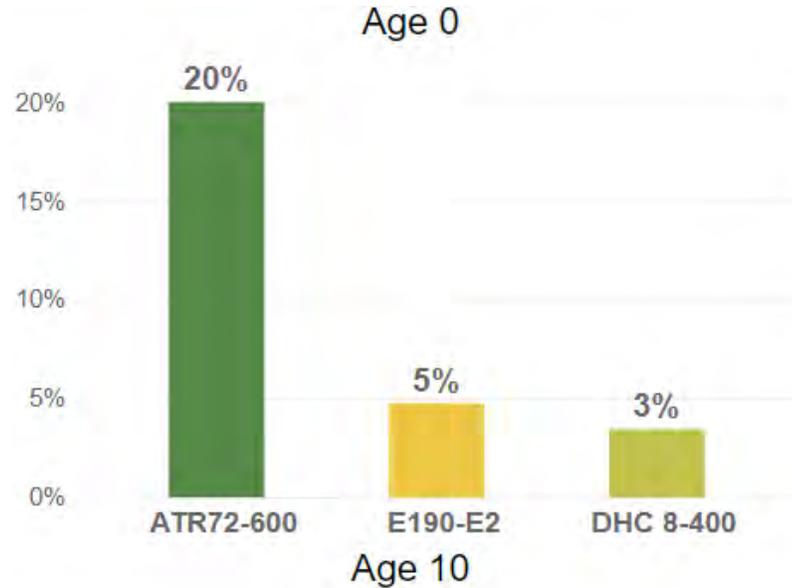
**Embraer E175 – US market continues to drive production of E1 model**

**Older aircraft:**

**ATR – growth and replacement markets**

**Embraer E1s attractively priced**

# Recent Market Lease Rate Improvements Regional Aircraft (since mid 2021)



Lease Rates responding to travel restrictions being lifted in domestic / regional markets

ATR production slowdown has helped support existing inventory

US regional market has been driving used CRJs, Embraer E1s

Dash 8s improving from a depressed base as parked inventory enters service

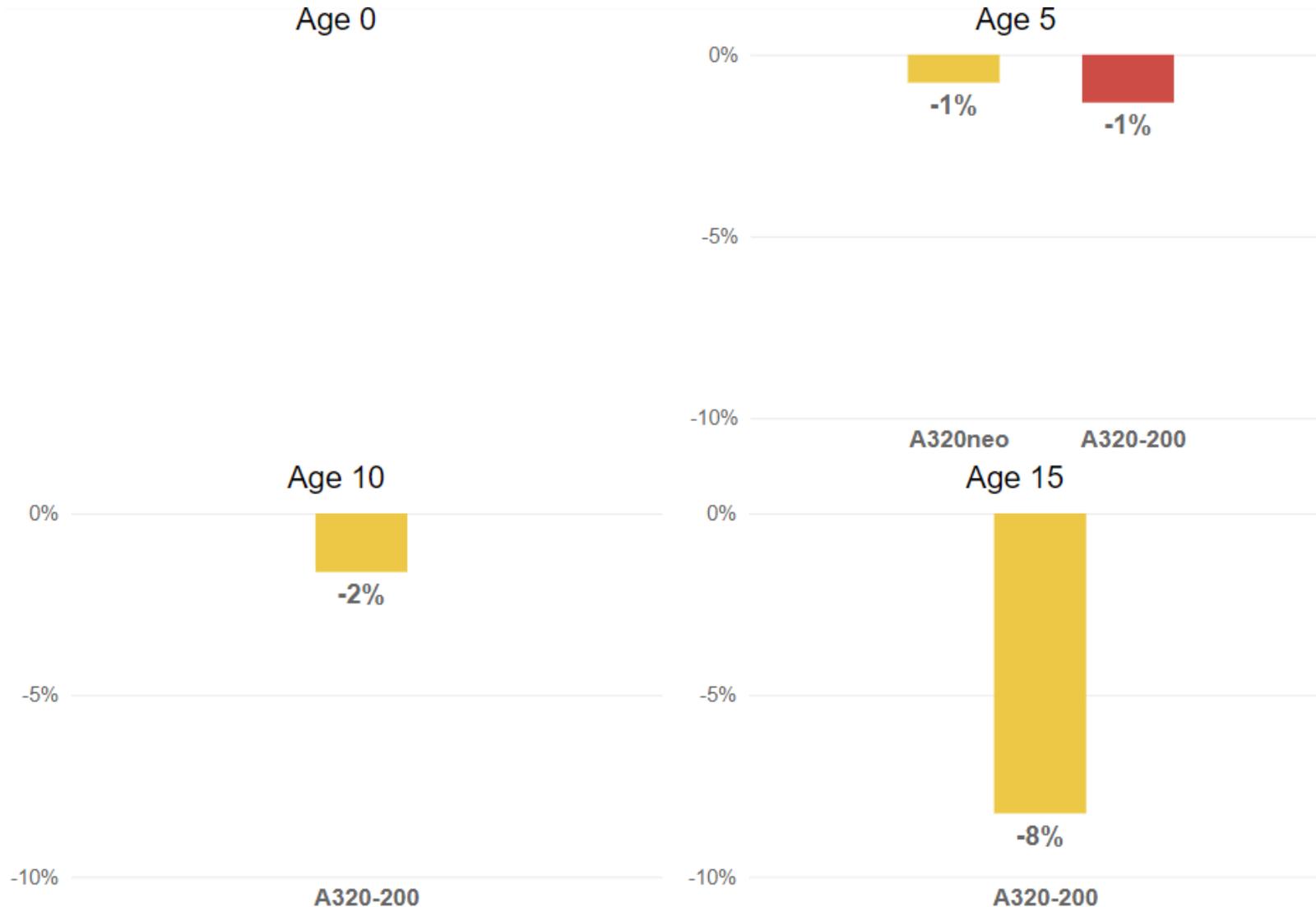
# Values and lease rates

## Facing Headwinds

Where value and lease rate performance is facing ongoing market pressures

Eva Karagianni, Analyst

# Market Values Under Pressure Narrowbody Aircraft (since mid 2021)



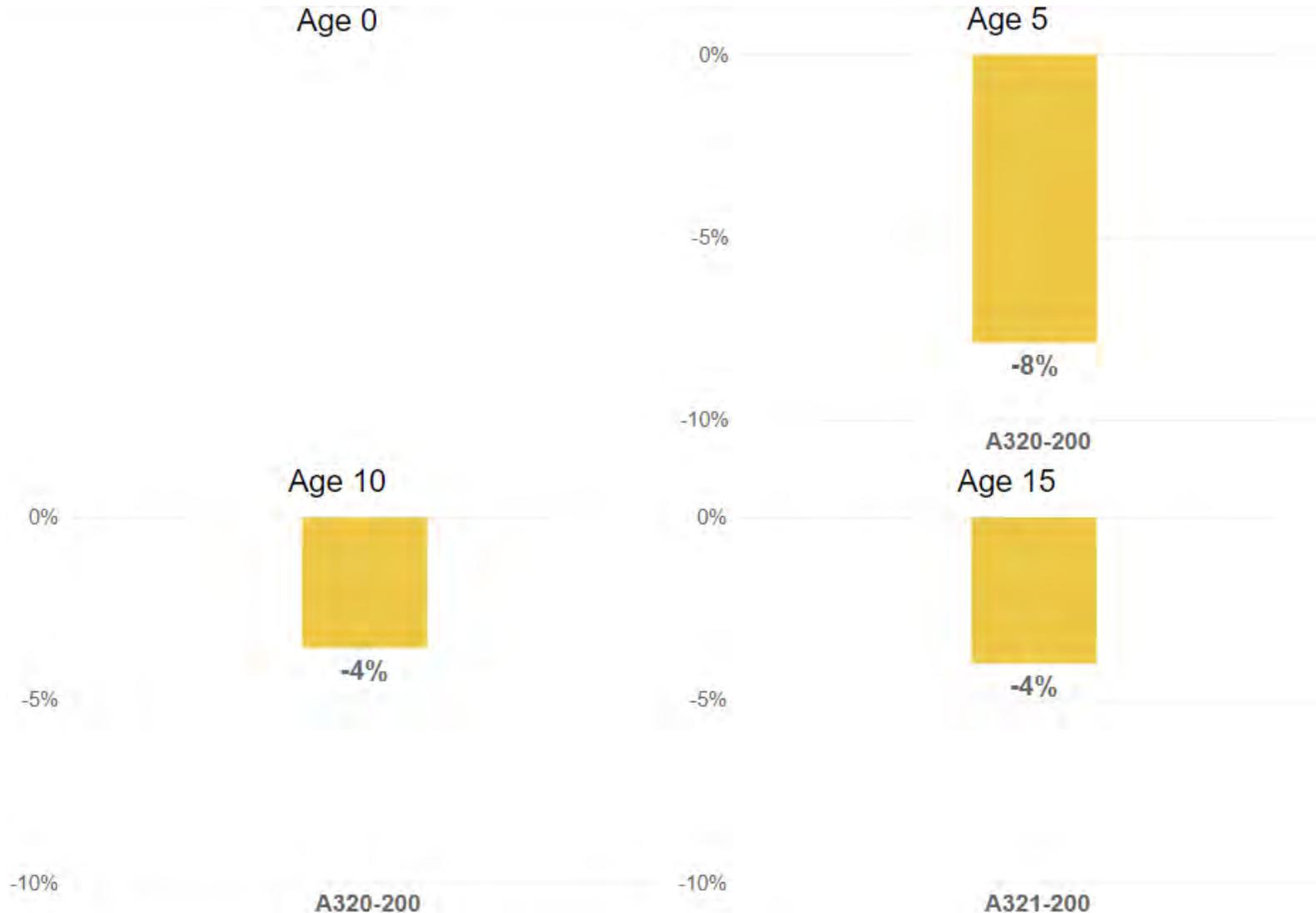
Younger aircraft:

Small movement in A320ceo reflects gradual transition towards A320neo

Older aircraft:

Older available A320ceo likely to require more maintenance input and higher related costs

# Market Lease Rates Under Pressure Narrowbody Aircraft (since mid 2021)



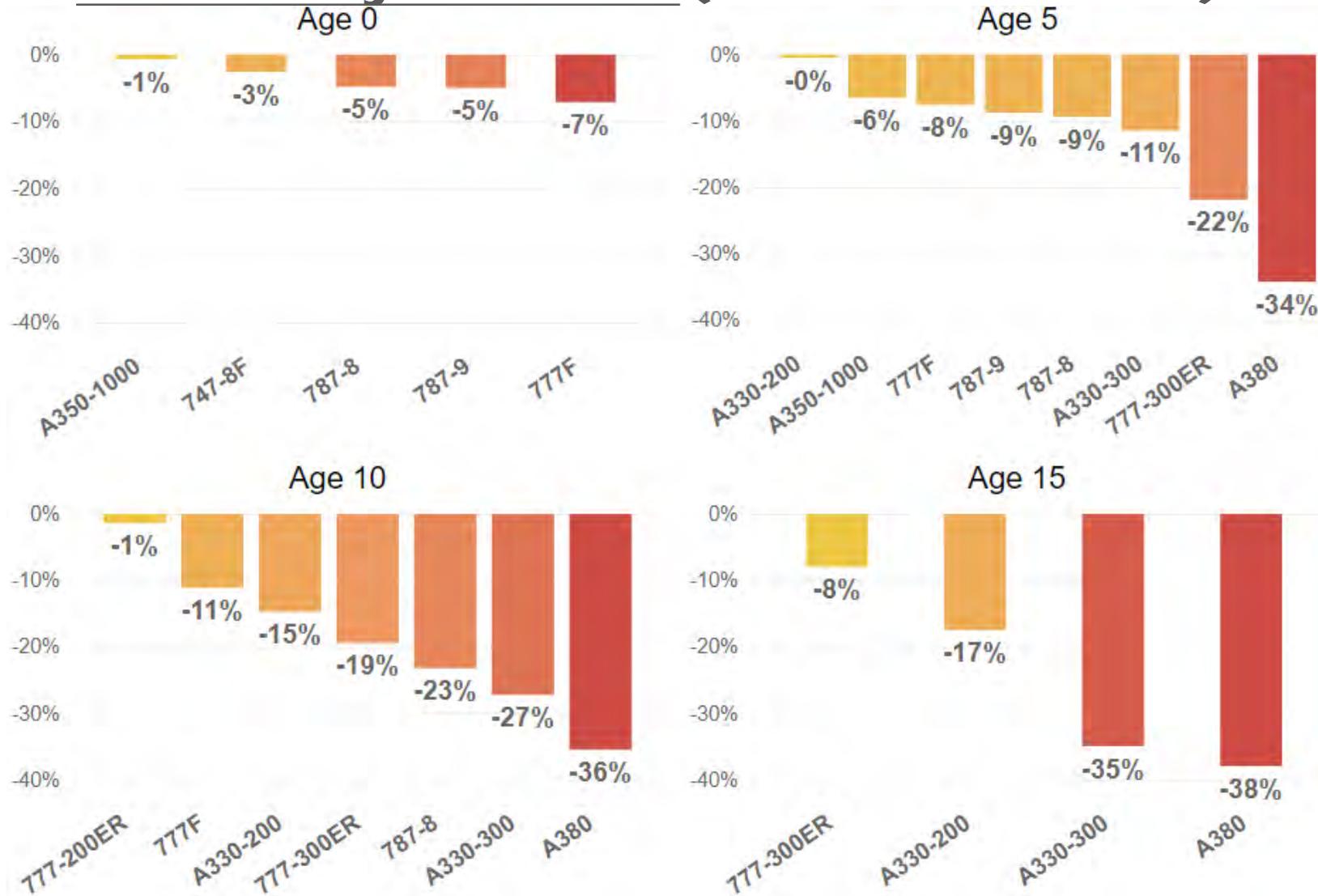
Younger aircraft:

Younger A320ceos facing competition from A320Neo, MAX and B737NG

Older aircraft:

Still a competitive lease market at the older end of the narrowbody sector

# Market Values Under Pressure Widebody Aircraft (since mid 2021)



Long Haul markets still underperforming

Younger aircraft:

A380 and B777-300ER still have small secondary markets. Other types have stronger opportunity to recover

Older aircraft:

Market for older A380s is very thin. A330 and B777 now have freighter conversion potential

# Market Lease Rates Under Pressure Widebody Aircraft (since mid 2021)

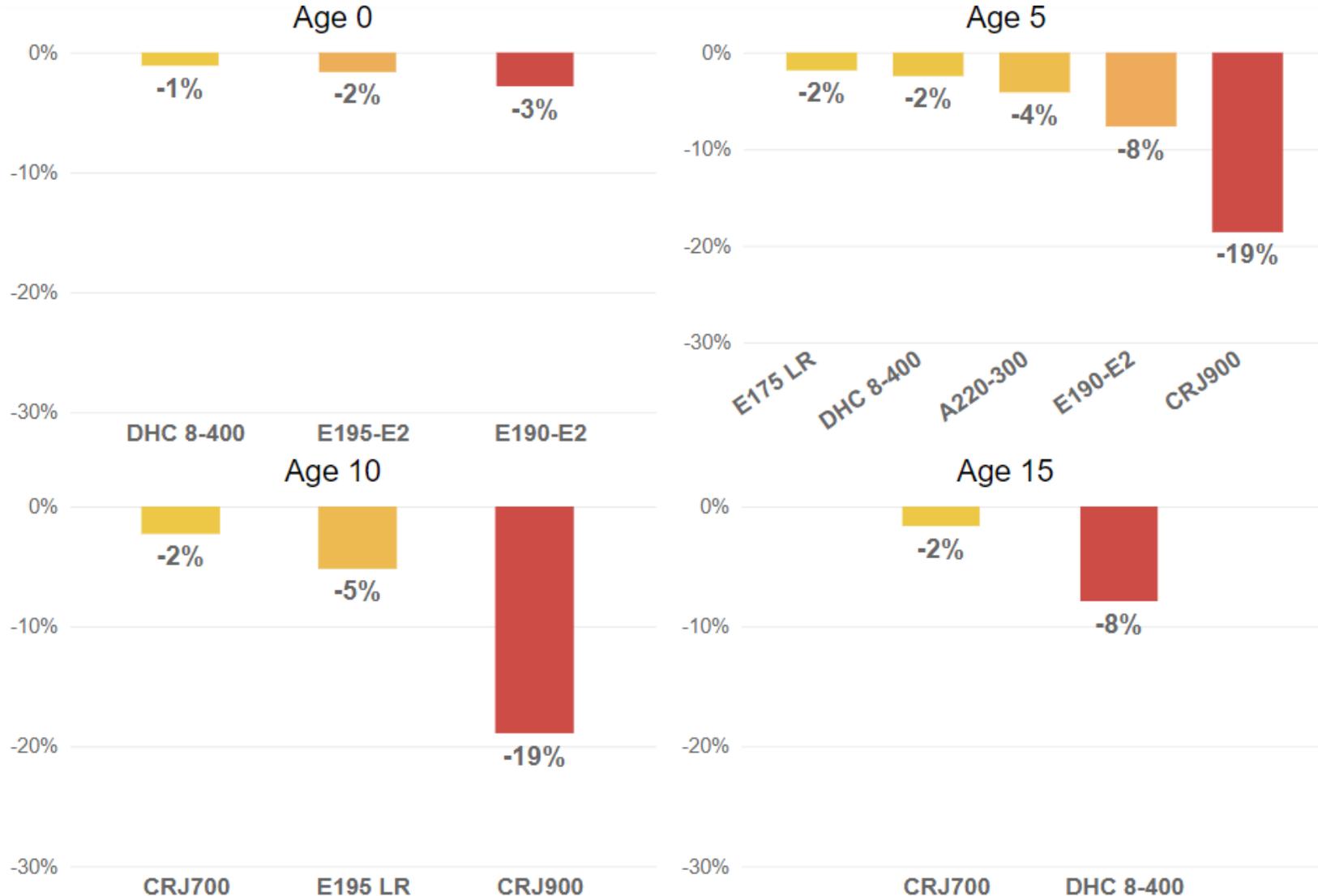


Lease Rates were already heavily impacted in 2020 and H1 2021.

Softness has continued in H2 2021 and across 2022 with the slow long-haul market recovery.

Potential for improvement in most instances

# Market Values Under Pressure Regional Aircraft (since mid 2021)



Some Regional types face challenges

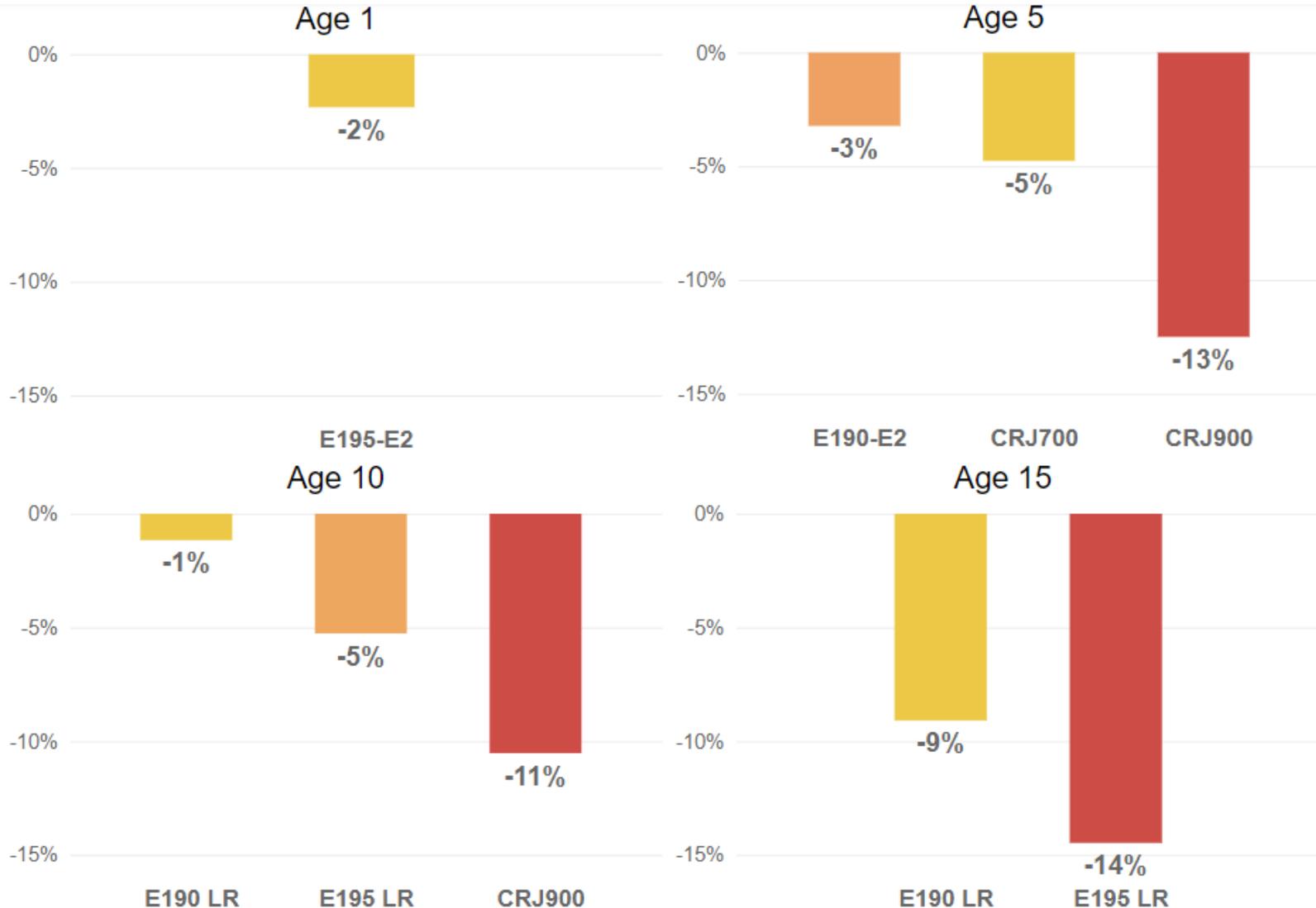
Younger aircraft:

CRJ900 impacted by end of production, and by popularity of E175-E1

Older aircraft:

Embraer prospects could improve with introduction of freighter conversion programme

# Market Lease Rates Under Pressure Regional Aircraft (since mid 2021)



Lease Rates for 'out of production' CRJs and Embraer E1s still face challenges as market focus has been on younger 'in production' asset types

Lower lease rates can help to stimulate market interest

# Pointers for 2023

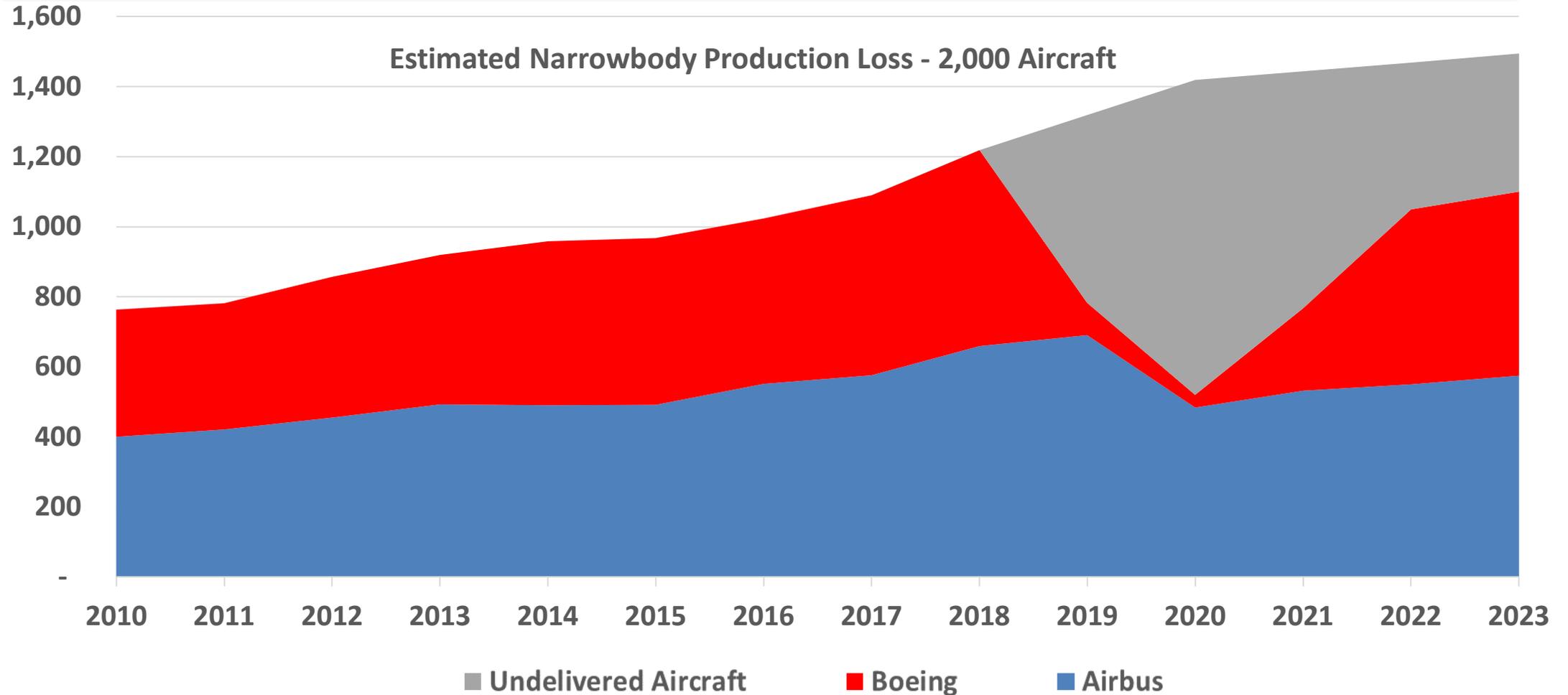
The Next Wave

Paul O'Driscoll, Consultant and ISTAT Appraiser

# COVID – short term demand event with long term supply impact



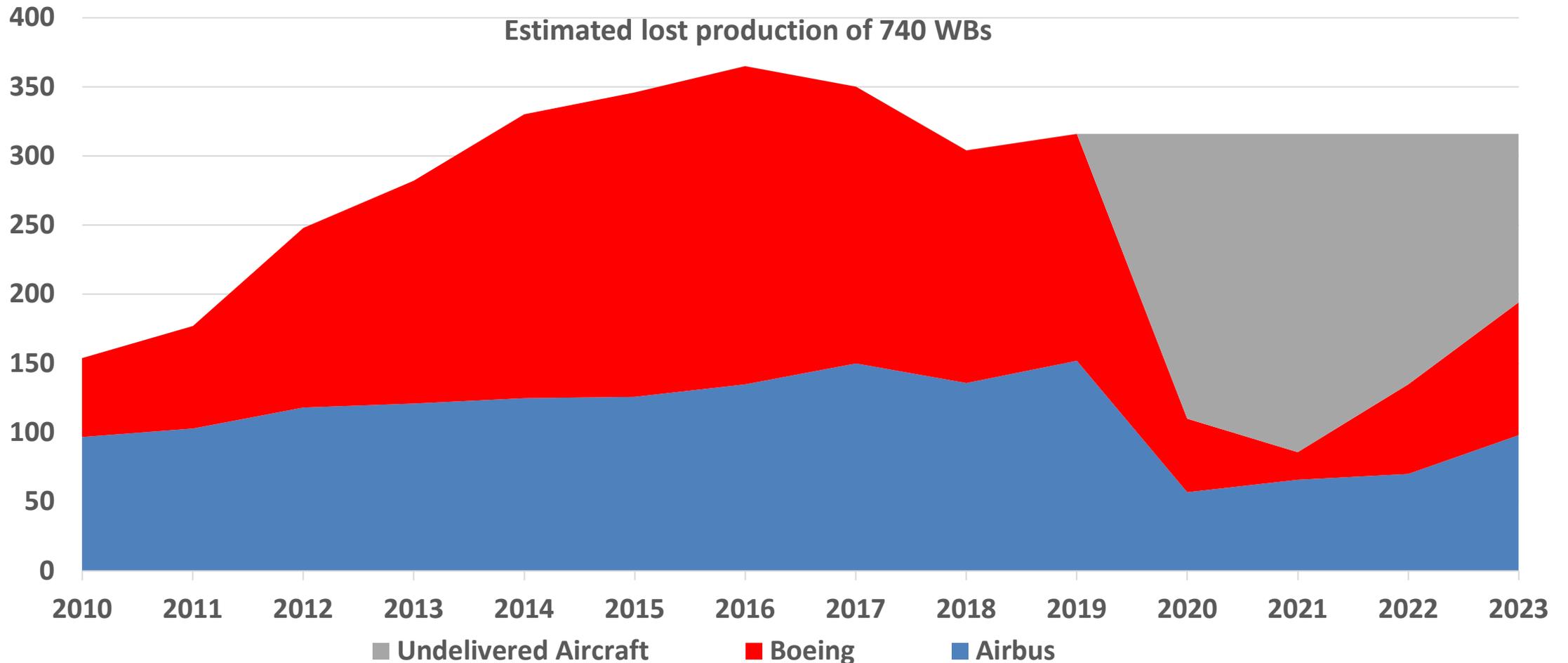
MAX issues have compounded the production loss due to COVID = NB shortage in coming years?



# Production cuts and quality issues lead to potential shortage of aircraft



COVID reductions & 787 / 777 production delays may lead to shortage of WBs in the medium term



# Pointers for 2023...



Upward cost pressure on airlines

- Sustained higher inflation?
  - Aug 2022 8.5% v expected 5yr inflation rate 2.9%
- Cost and access to capital – a lot of capital committed to sector, US airlines with a lot of cash on their balance sheets
- Will tier 2 and 3 airlines suffer from negative forex moves v USD?

Mixed outlook for traffic

- USA – strong outlook, as borne in published airline capacity
- Europe – cost of living a major factor in 2023, will traffic and yields hold up?
- China/Asia – post-COVID bounce in traffic or the start of a debt crisis?

Other factors

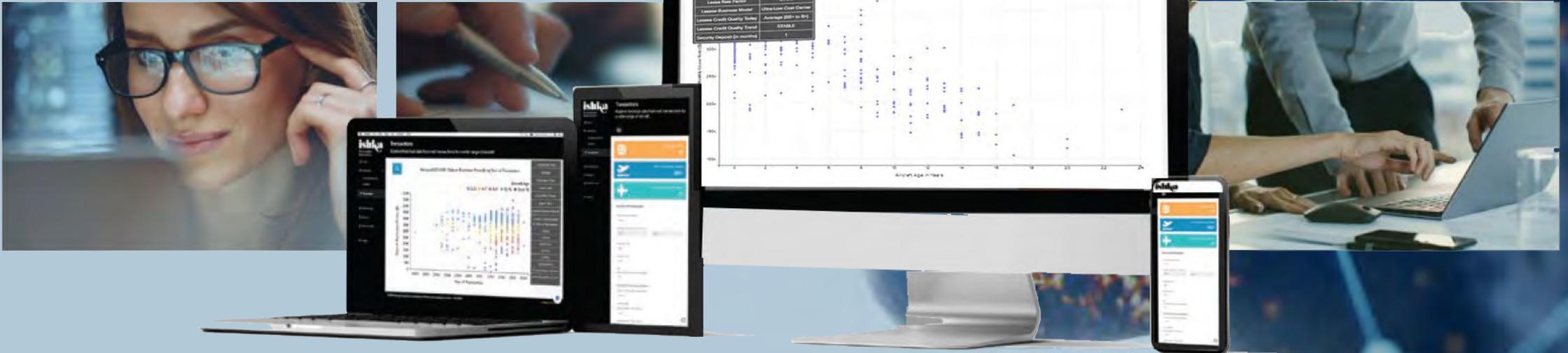
- Cost of carbon, pax attitudes to carbon
- Judicial risk – will investors and insurers foist a higher cost on certain markets

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