



ishka

Market. Metal. Money.

Outlook Improves but Risks Remain

Ishka Advisory Webinar

Thursday 16th March, 2023

www.ishkaglobal.com

Introducing your Ishka presenters



Eddy Pieniazek
Head of Advisory



Paul O'Driscoll
Head of Advisory
Americas &
Certified ISTAT
Appraiser



Stuart Flaye
Senior Consultant



Sid Narkhede
Head of
Airline Analysis



Chris Keene
Head of
Client Relationships

Agenda



Market

Macro Market. Signals and indicators from airline traffic and financial results. **Airline Market.** Regional performance. Upsides and positives are interwoven with headwinds and risks.

Metal

The Delivery Conundrum. How OEMs are faring in 2023. Explaining the bottleneck. It's not just about engines (or maybe it is.)

Money

The Ishka Values Indicators: aircraft values and lease rate performance in Q1. New build pricing v secondary market developments. Will Q2 be any different?

Live Q&A: put your questions to the team

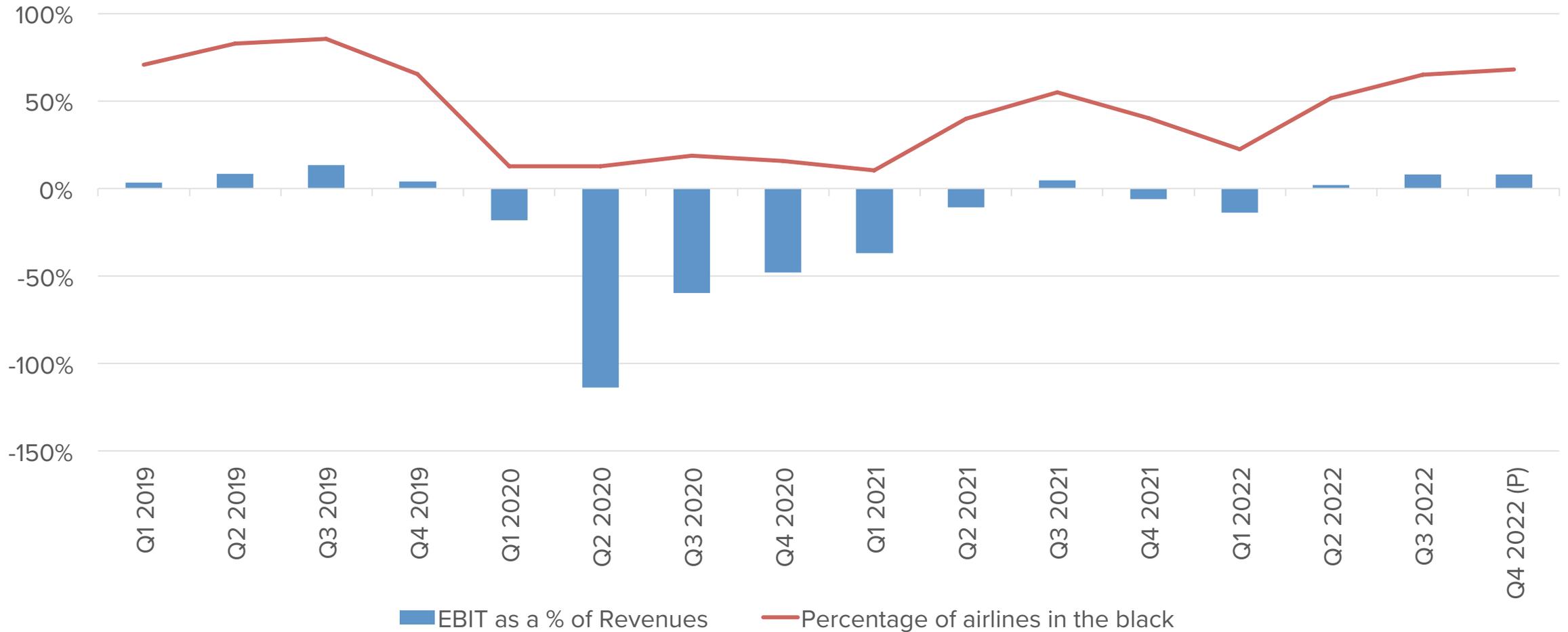


Sid Narkhede
Head of Airline Analysis
The Airline Market

Q4 caps a positive 2022 for most airlines



EBIT as a percentage of Revenues



Source: Bloomberg, **Ishka Airline Credit Profiles and Ishka Calculations**. Sample Size – 68 airlines (Q4 2022 – 41 airlines). Sample size could vary by quarter marginally depending on airline disclosures. *Q4 2022 results are preliminary, not all airlines have released results.

Balance sheets improving but only for select few...

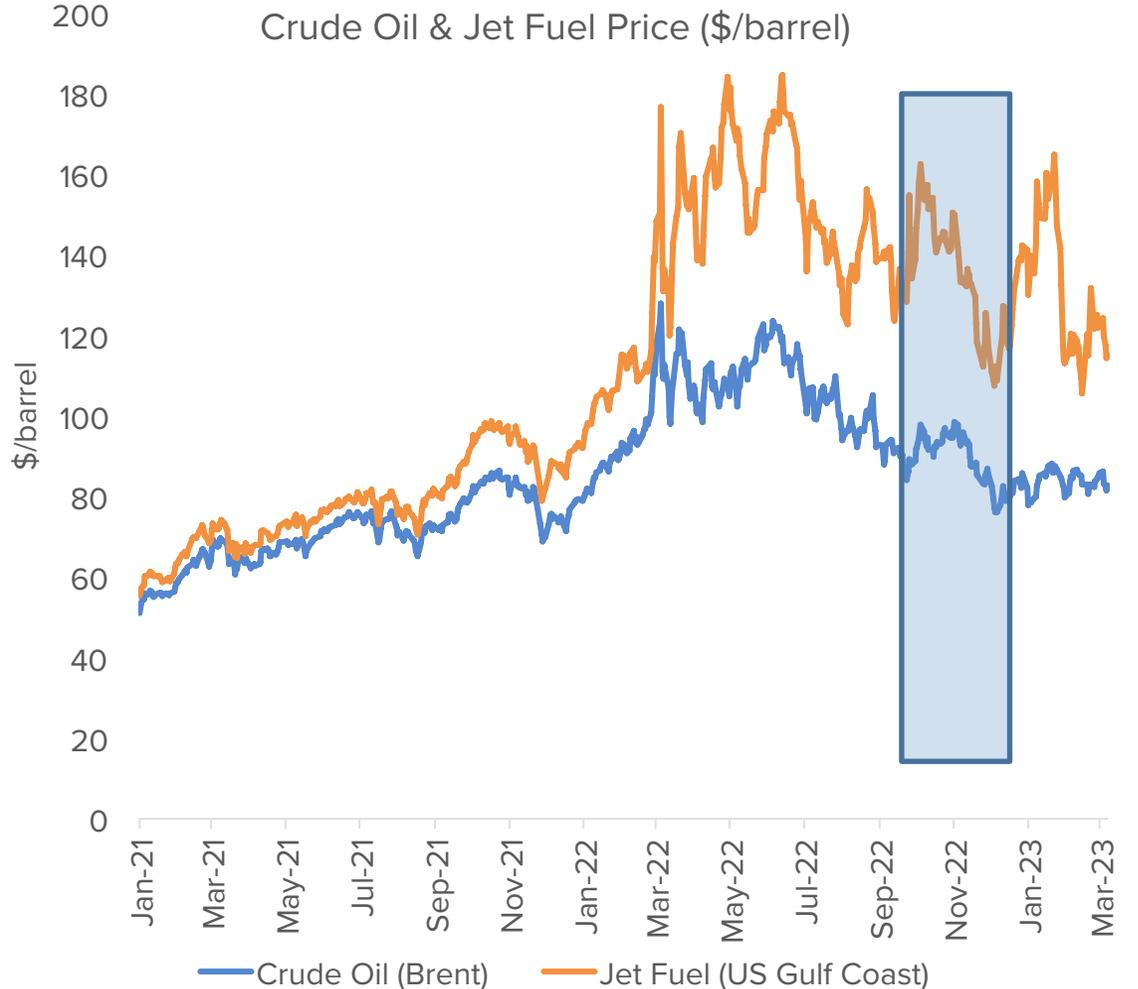
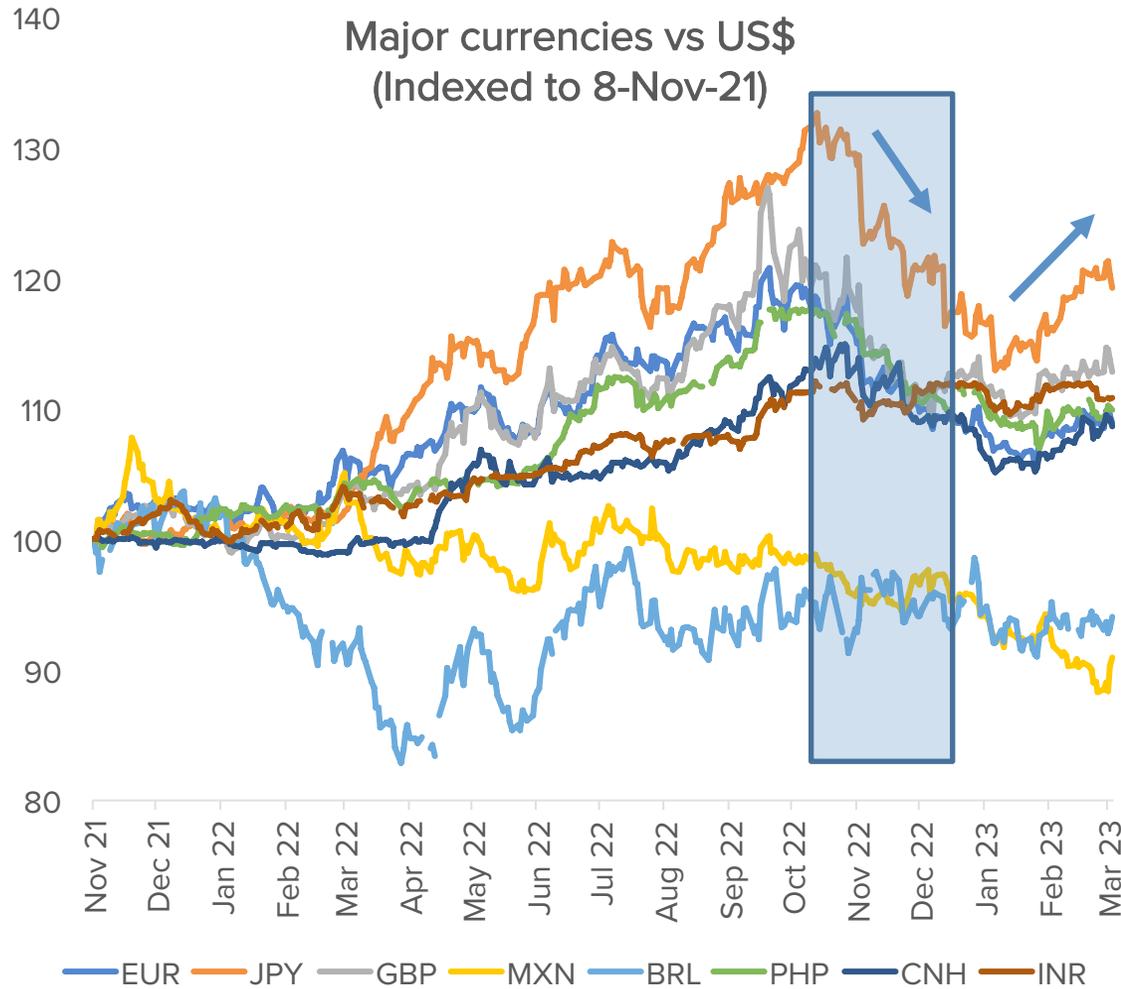


Net Debt to Equity



Source: Bloomberg, **Ishka Airline Credit Profiles and Ishka Calculations**. Wider sample size – 68 airlines. Sample size could vary by quarter marginally depending on airline disclosures. *Select airlines sample size – 41 airlines. *Q4 2022 results are preliminary, not all airlines have released results.

Currency and fuel continue to remain volatile...



Source: Bloomberg

2023 – a year of cautious optimism



2022 was a positive year overall despite all the challenges

Airlines from all regions returned to the **black**

Asia Pacific is showing signs of robust recovery and overall demand remains healthy

But we do know that meaningful challenges/pressures still exists

Events over the past week in the US have highlighted **uncertainties** with the **macroeconomic** situation

Inflation remains high at various levels

High cost environment for airlines

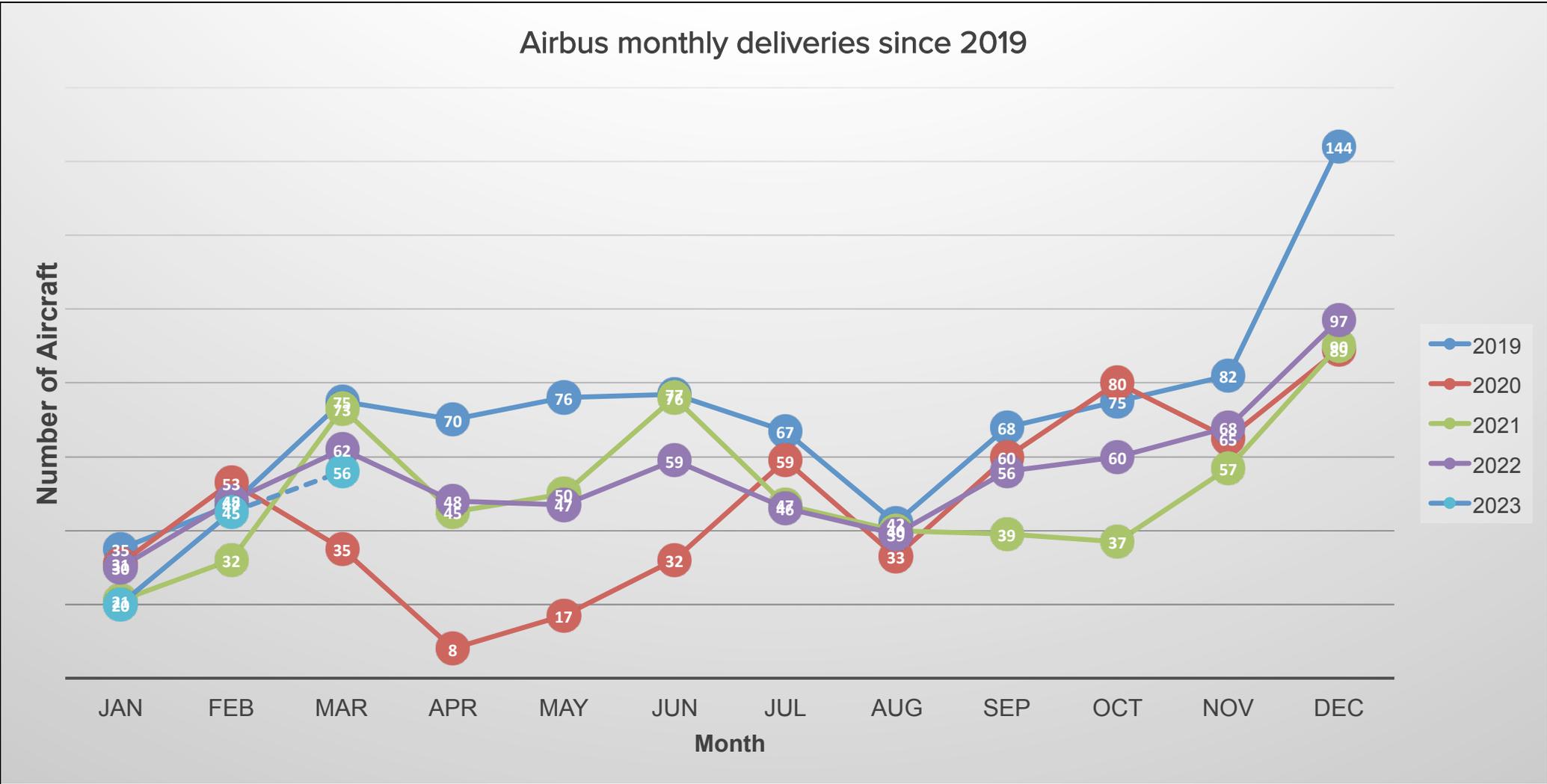
Additional challenges from **supply chain** issues

While balance sheets are improving, that's a **trend limited** to select airlines



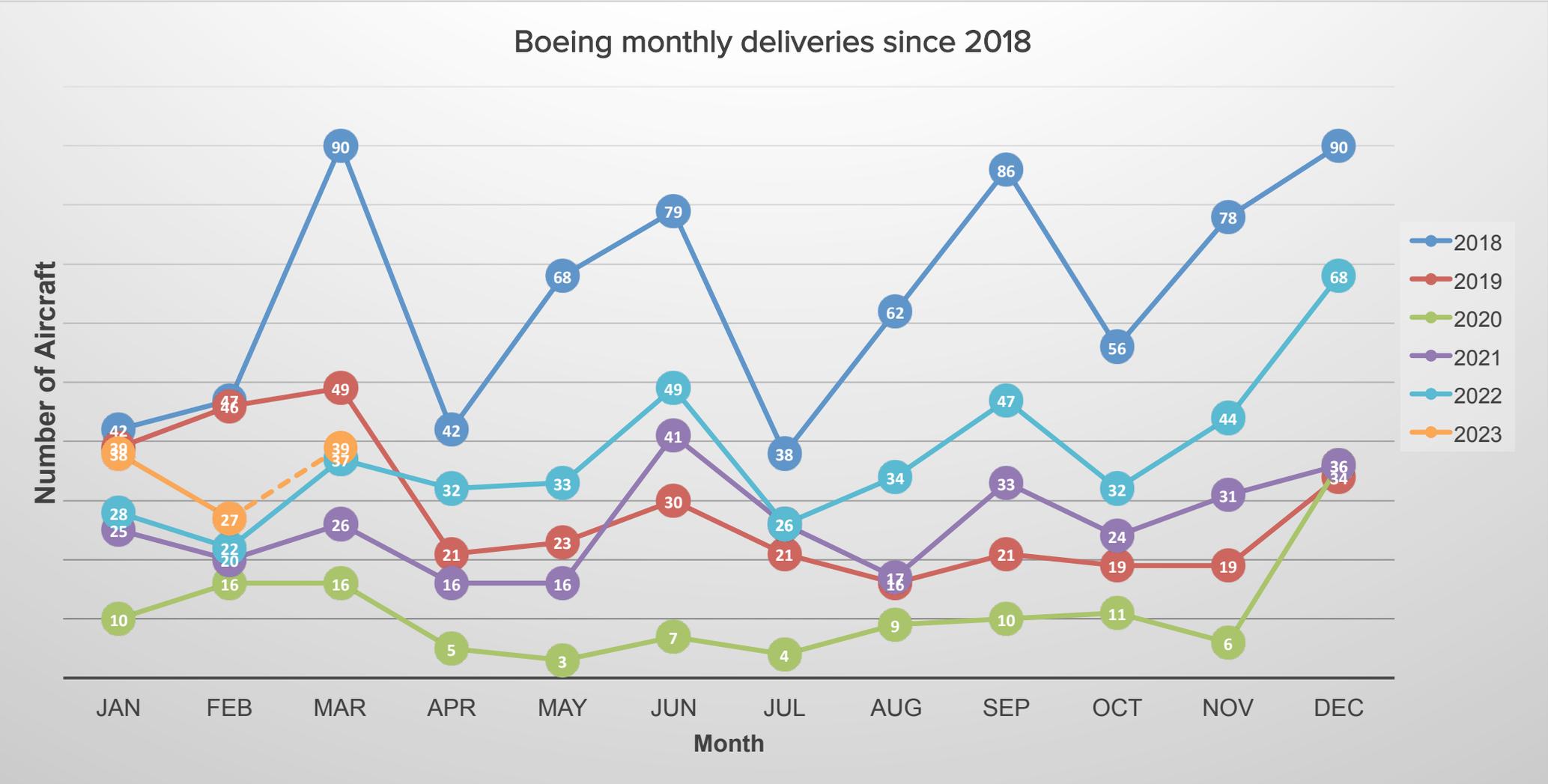
Stuart Flaye
Senior Consultant
The Metal. Deliveries

Airbus Deliveries



Source: CH Aviation / OEM report

Boeing Deliveries



Source: CH Aviation / OEM report

Key Takeaways

Delays set to continue throughout 2023 and into 2024

Billed as a 'redo of '22'

The term "excusable delay" is being tested

Airlines having to extend leases or source used aircraft to cover for delays

Double-edged sword for lessors

Airline fleet plans suffering, not in time for northern hemisphere summer season



Paul O'Driscoll
Head of Ishka Advisory Americas
Certified ISTAT Appraiser

Need more engine production for new aircraft deliveries

- Lack of high skilled labor
- Supply chain issues
 - Forging and casting suppliers getting most of the blame
- Material cost pressure
 - Impact of Russian War

Need more spare engines and replacement parts

- Parts needed to support existing operators
- New tech engine reliability is currently vastly inferior to 3rd generation engines
 - CFM56 had been achieving 20,000FC
 - Coking issues on require repair potentially every 1,000FC (now a line maintenance issue)

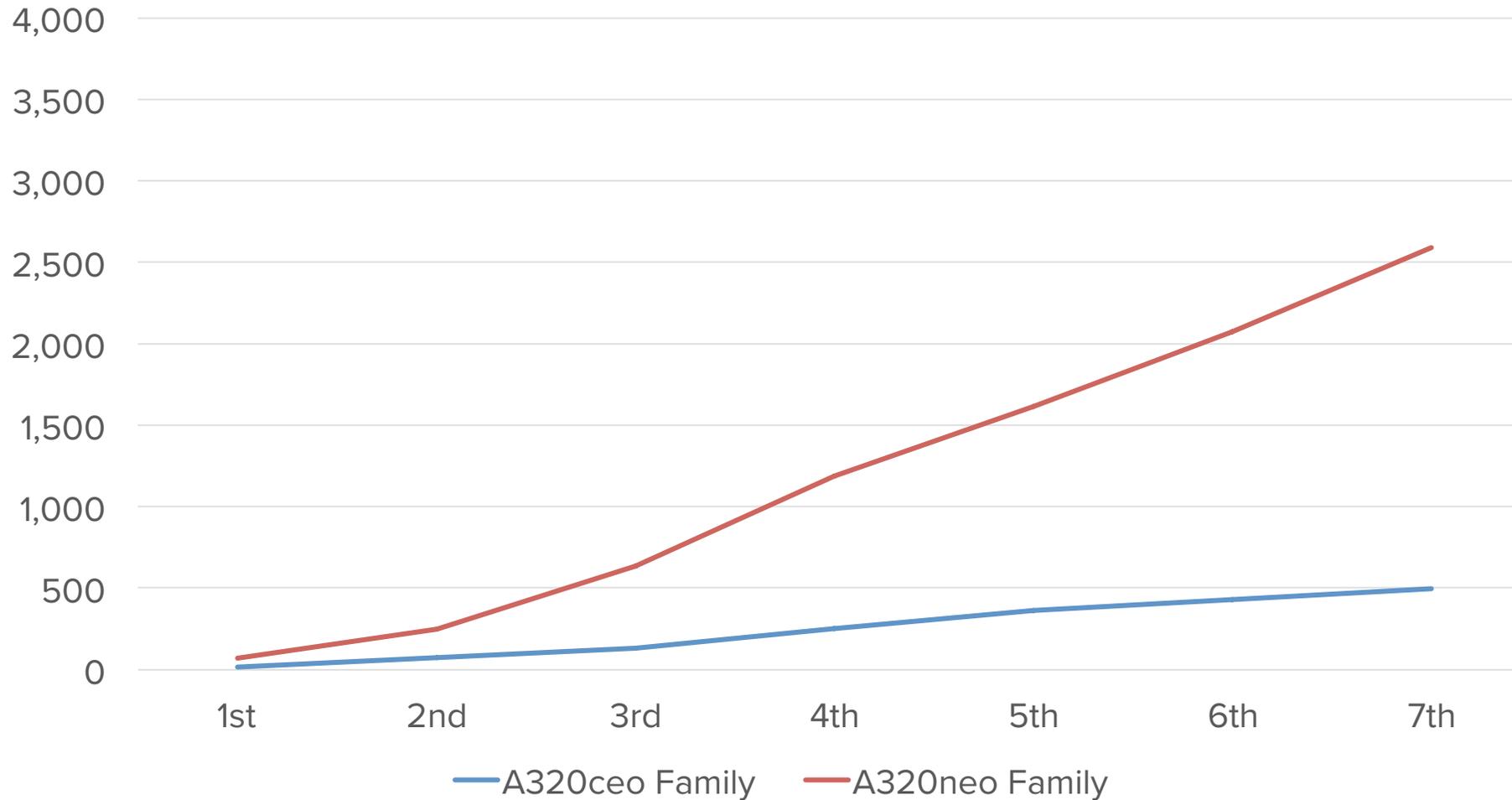
Increase cost of materials: not gone away



- Some key aerospace raw materials are still significantly more expensive than there were pre-COVID
- Supply dynamics unlikely to improve in the short-term



A320 Family CEO v's NEO production ramp



CEO Family new engines

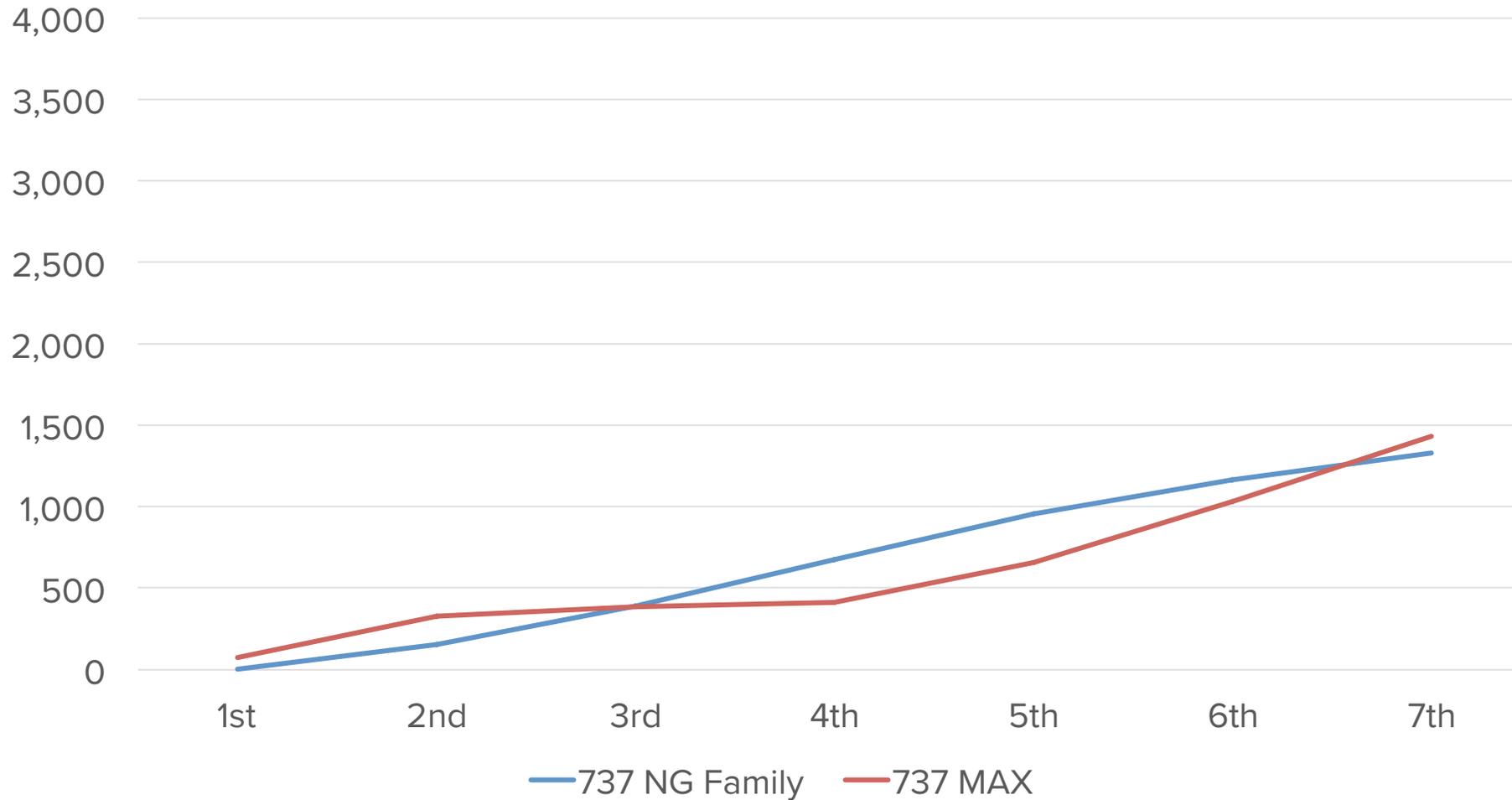
- CFM56-5A
- V2500-A1

NEO Family new engines

- LEAP 1A
- PW1100G

7yrs into the A320 program the CFM56-5B was introduced

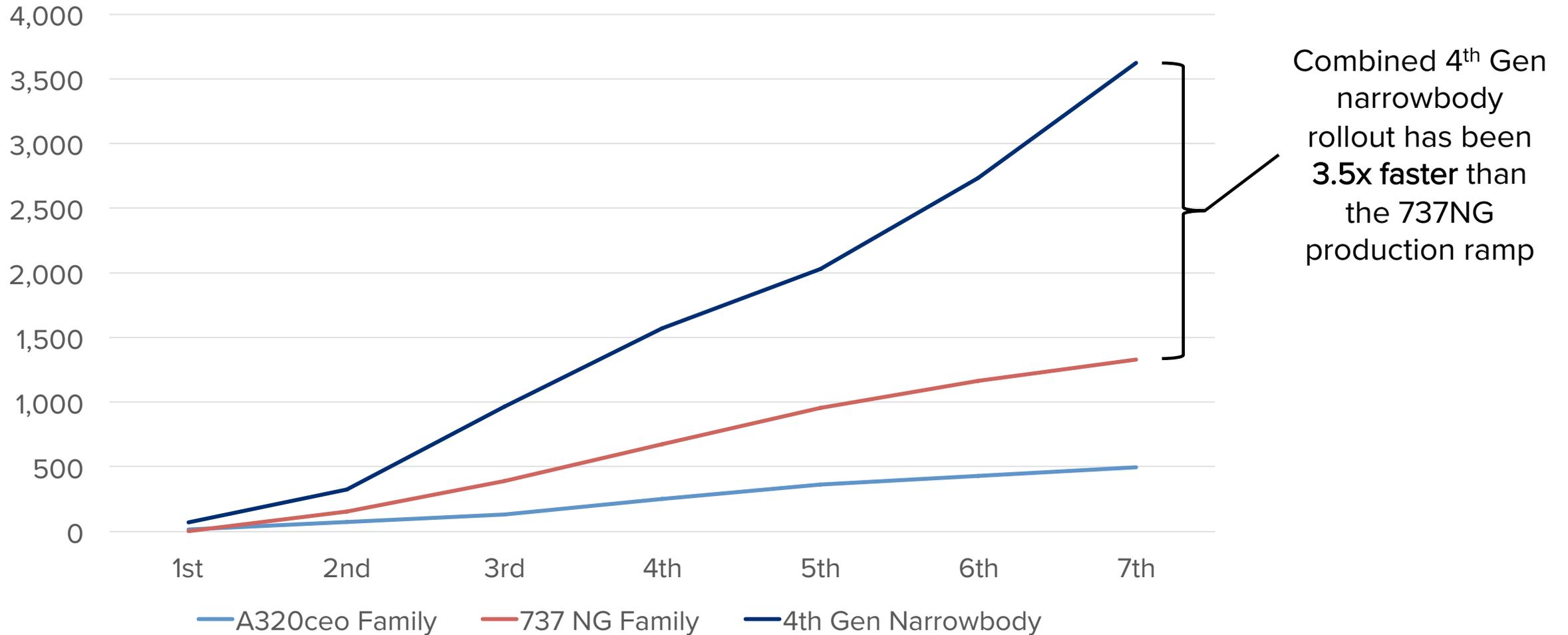
Boeing 737 MAX v's NG production rollout



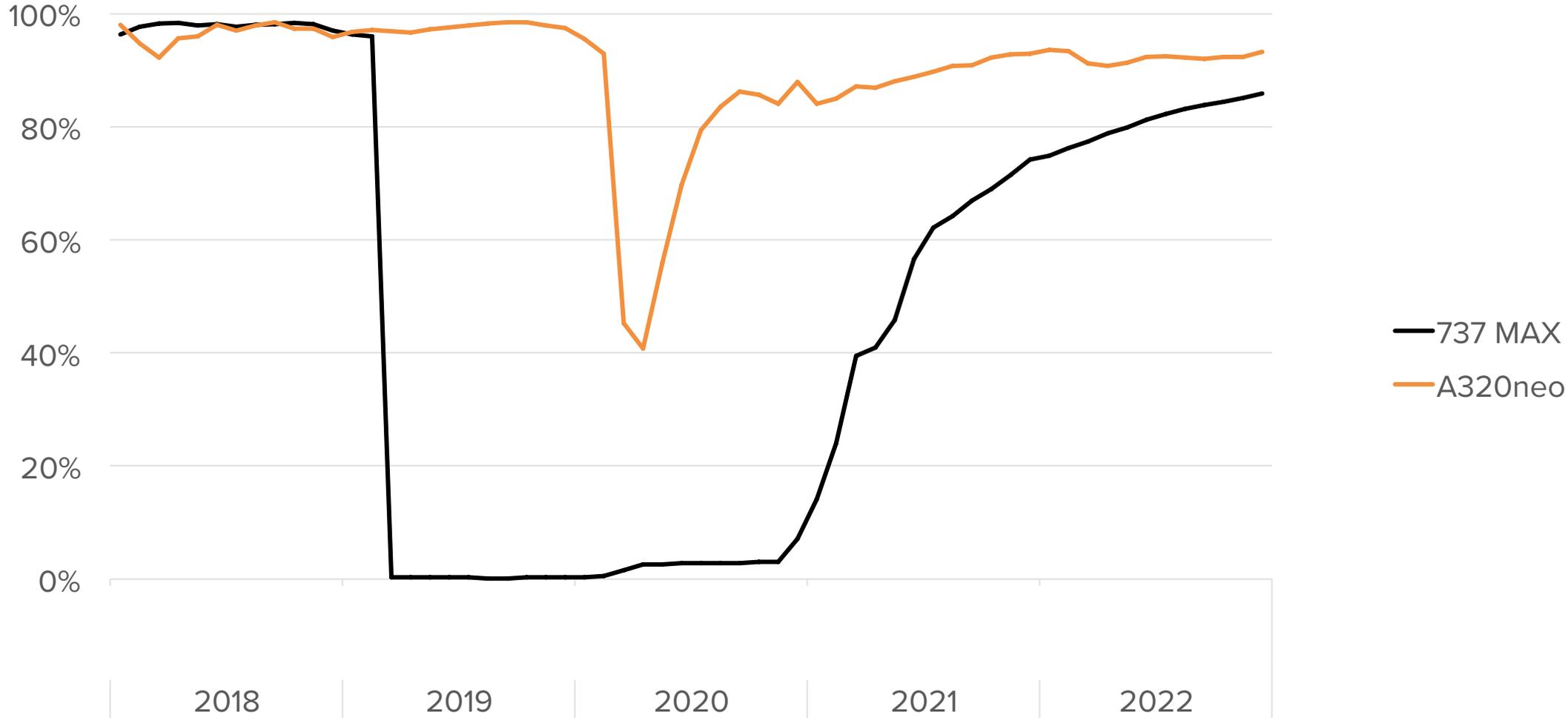
Notes:

- NG was a mature program
- MAX had production issues unrelated to the engine

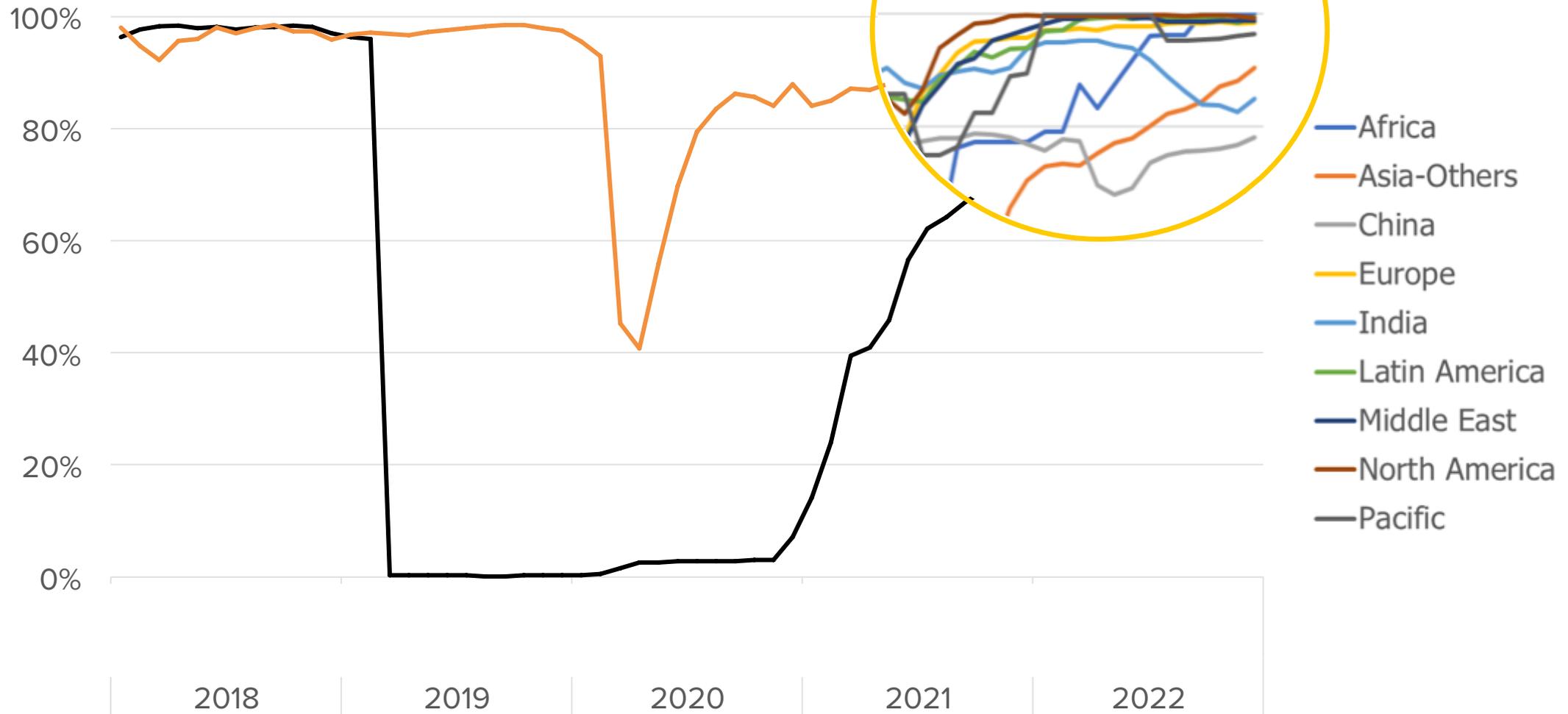
First time that both major OEMs have rolled out simultaneous new generation aircraft



% of New Tech Narrowbodies In Service are returning to pre-COVID levels



But some regions still lag...



Conclusions



- Hardware is hard
- Economics of 4th generation engines are still not fully known
- Achieving 3rd gen level engine reliability could be 5-10yrs away
- Engine programs will need time or generate profit
- Don't hold your breath for the next generation of engine, whether it's fueled by A1 Jet or anything else



Eddy Pieniasek
Head of Ishka Advisory

Where are the real deals – and how many?



What do we want to know about transactions (apart from \$):

- How many are there?
- Which assets are moving?
- How old are they?
- New v Used?
- Single-aisle, Twin-Aisle, Regional Jet, Turboprop, Freighter
- What types of deal?
- How long in store before reactivation?

Interrogating the database

Extract from database all aircraft that 'moved' to a new operator in January and February 2023*

315 records met the description

149 (47%) were new/first time deliveries (14 already over 1 year old, mainly B737 MAX and B787)

=**166** events involved used equipment

* Includes December 2022 'contractual' deliveries which entered service in 2023
Database – ch-aviation

Only 36 'fresh' Narrowbody leases Jan-Feb '23

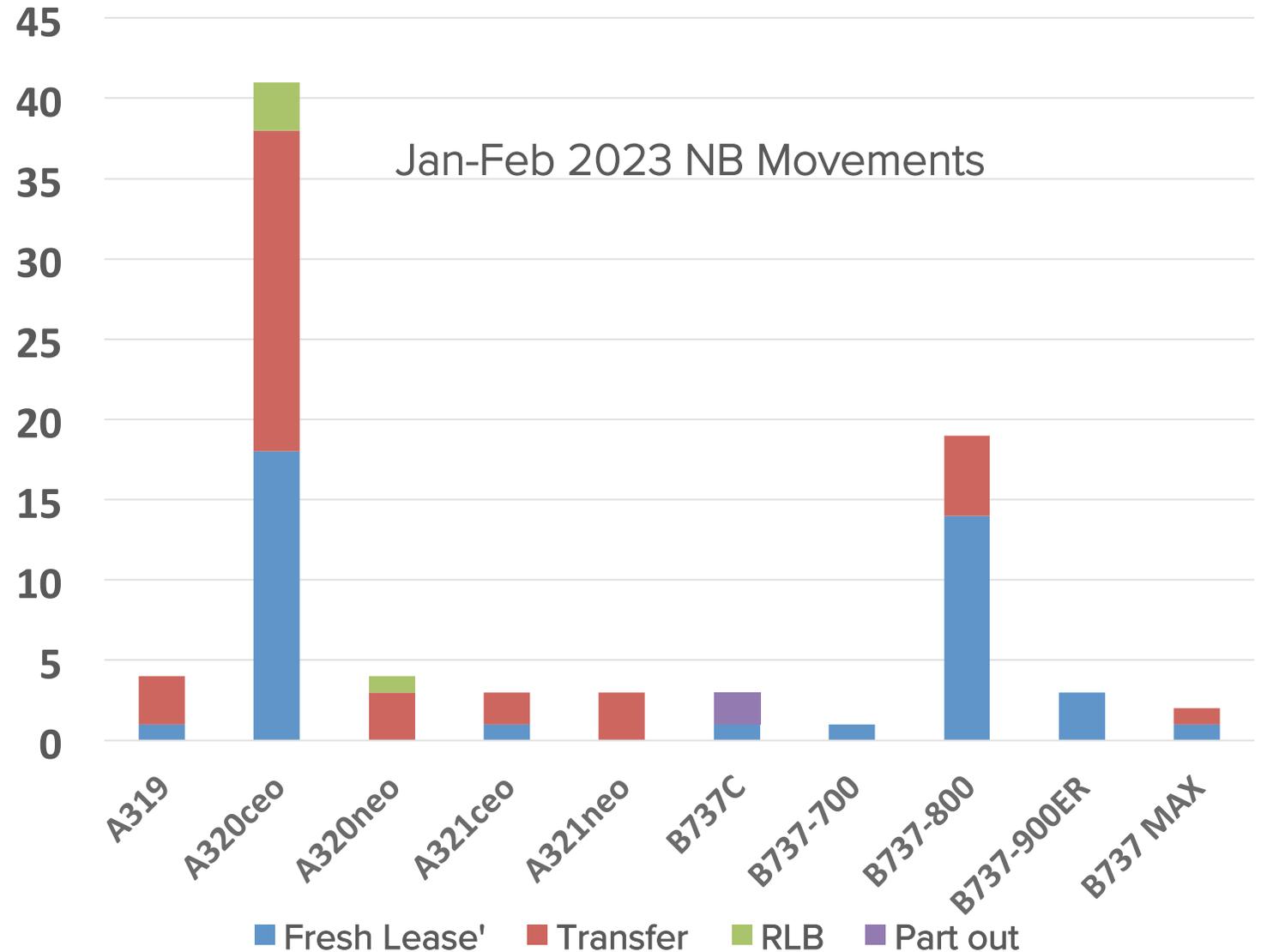


Stripping out VIP, Military, WB, RJ, TP, F etc. leaves us with 84 narrowbody movements

The majority (37) are internal transfers between airlines within a Group

Only 36 are 'fresh leases' requiring new lease terms

A few aircraft had been returned to lessors, parked and eventually leased back to the same carrier



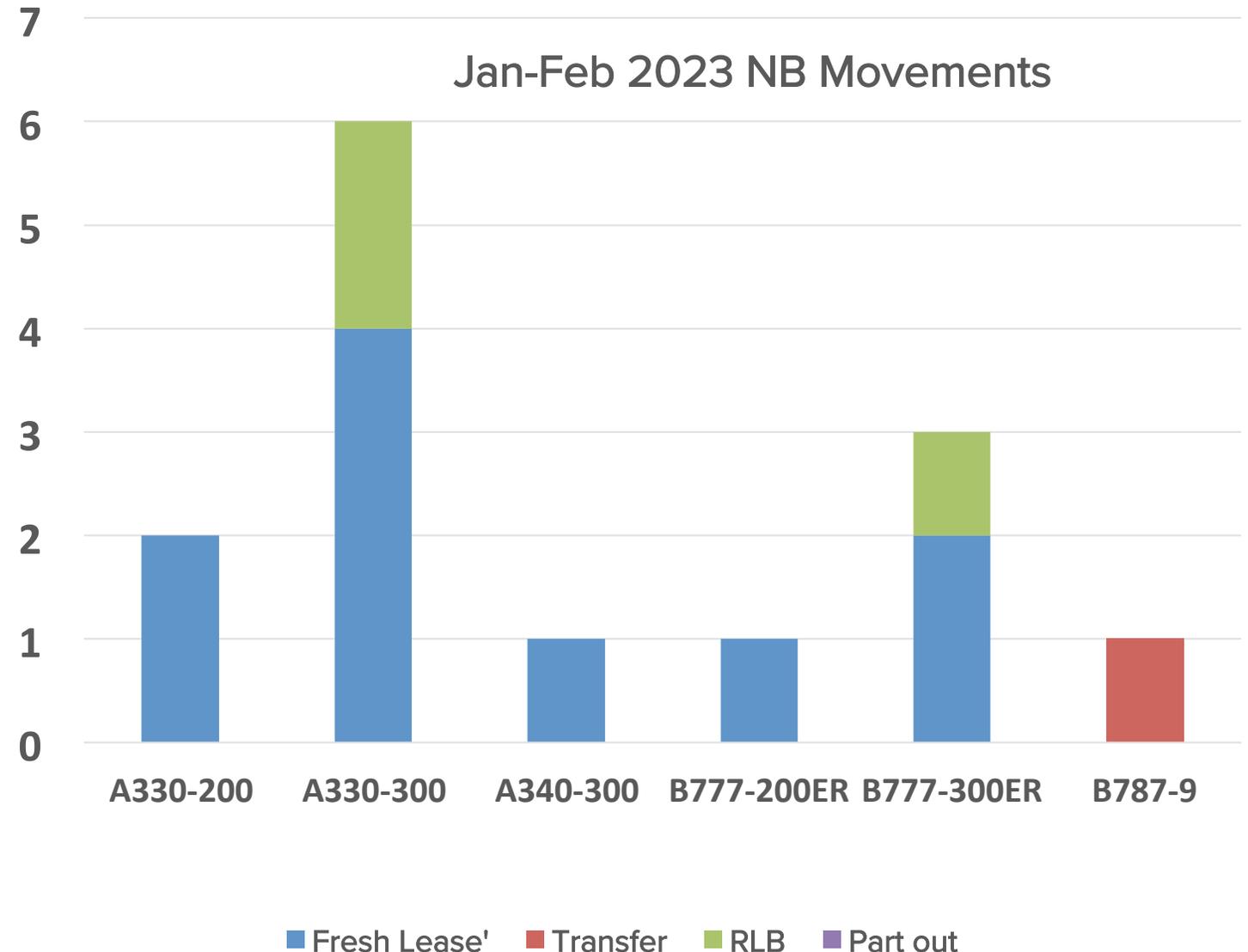
Only 14 'fresh' Widebody leases Jan-Feb '23



Stripping out VIP, Military, other classes etc. leaves us with 14 widebody movements

The majority (10) are 'fresh leases' requiring new lease terms

Three aircraft had been returned to lessors, parked and eventually leased back to the same carrier



Observations



Storage – Aircraft entering new leases have spent a lot of time on the ground

Age – Someone is spending money on reactivating older aircraft

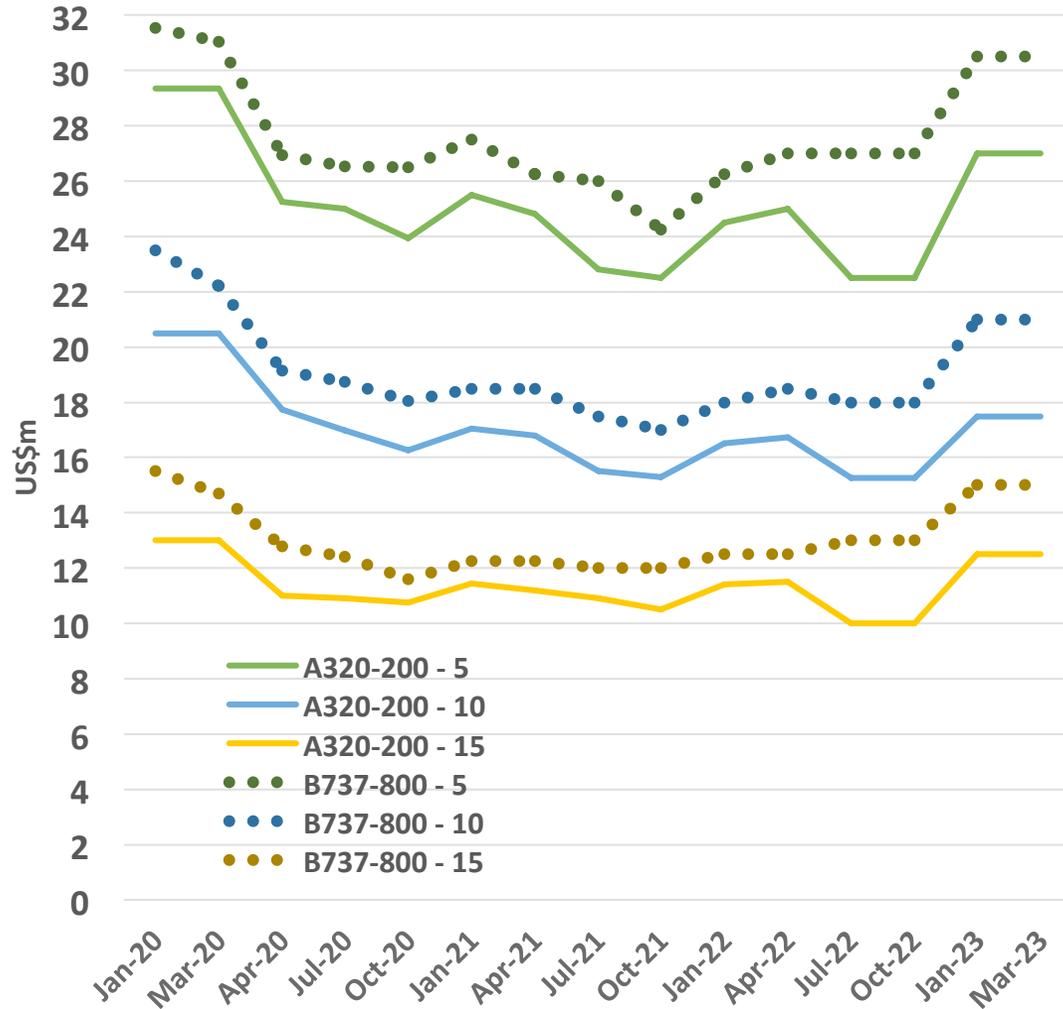
Where – Asia and Europe focus for used equipment – US preferring new



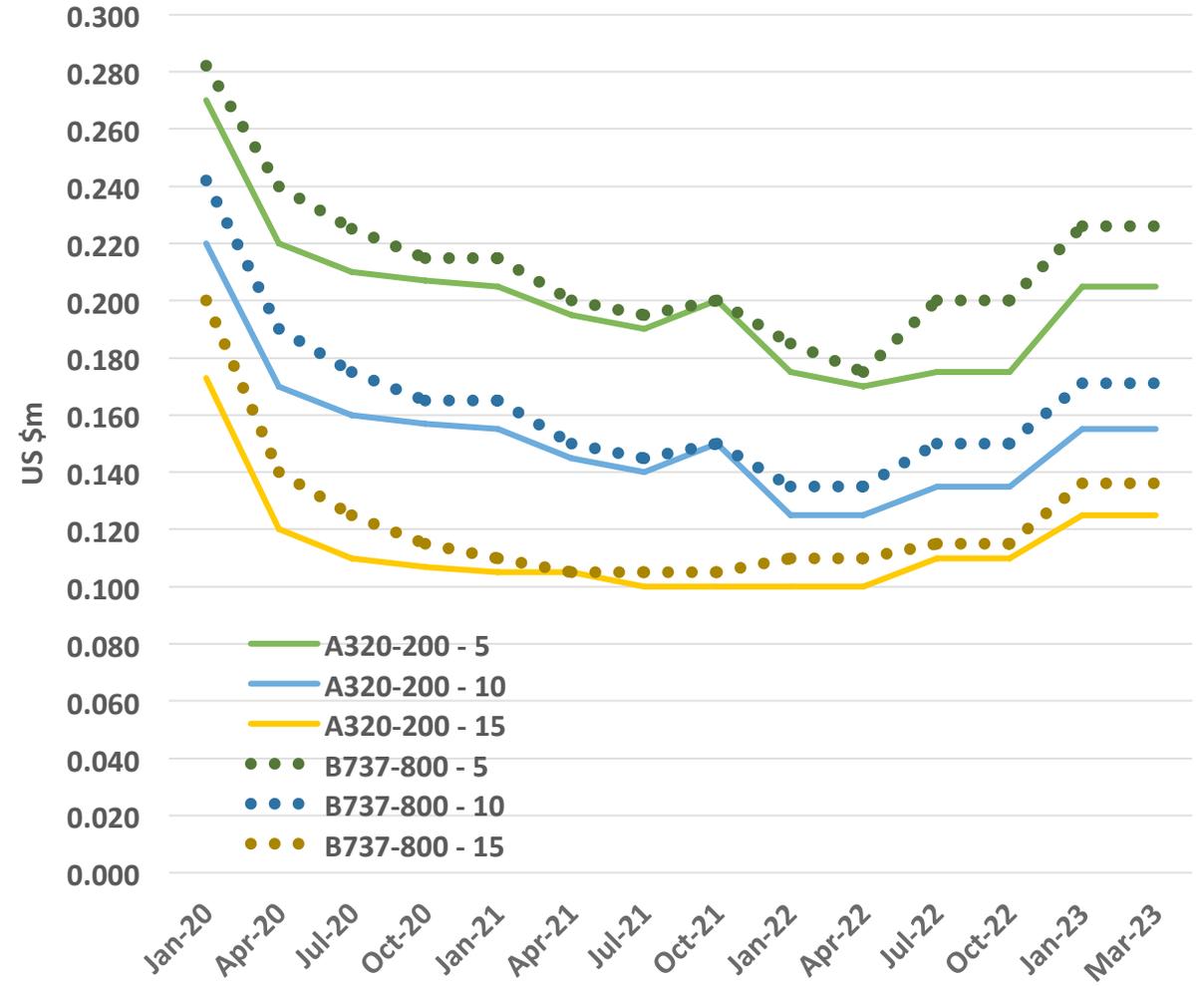
Narrowbody Values and Lease Rates Improving



Market Values



Market Lease Rates



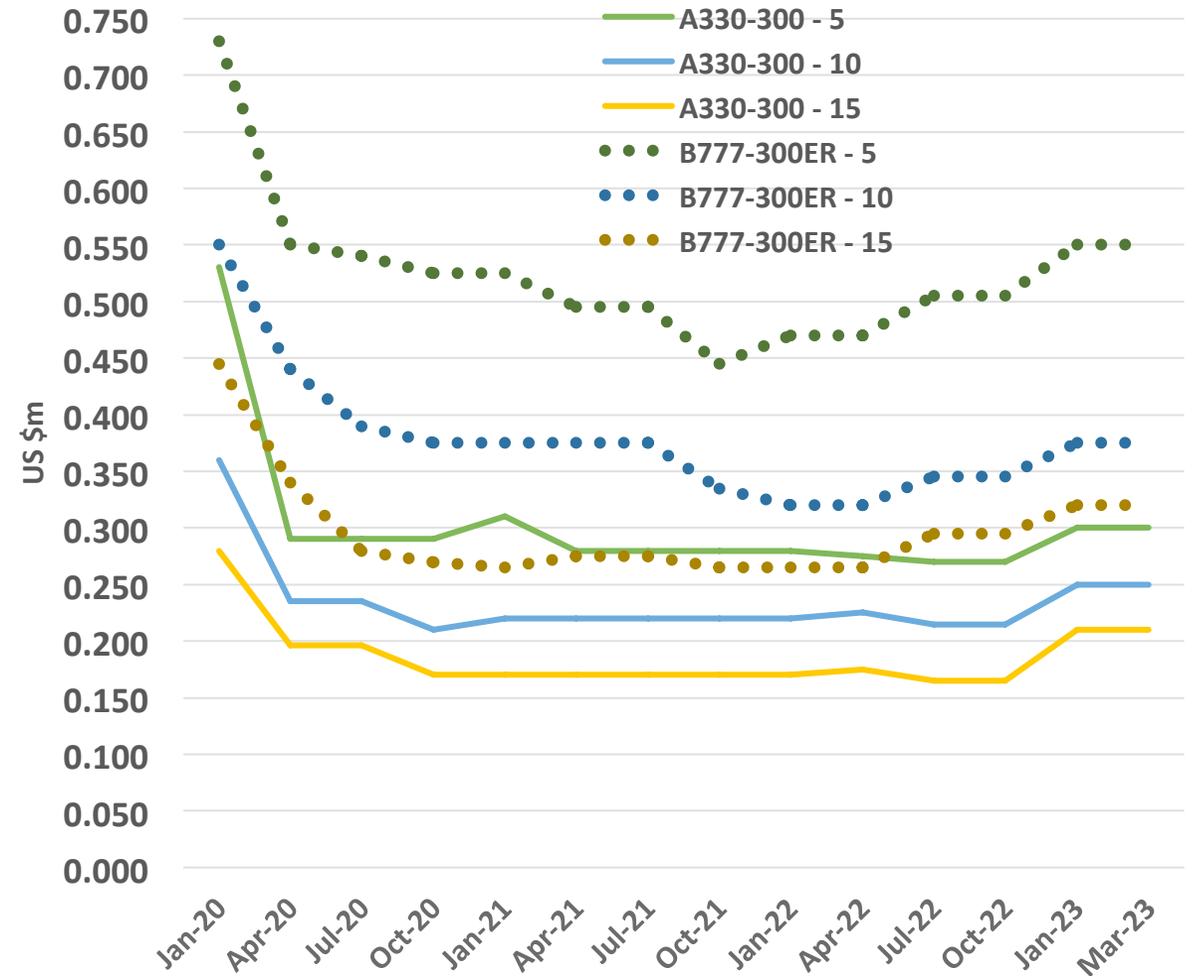
Widebody Recovery lagging



Market Values



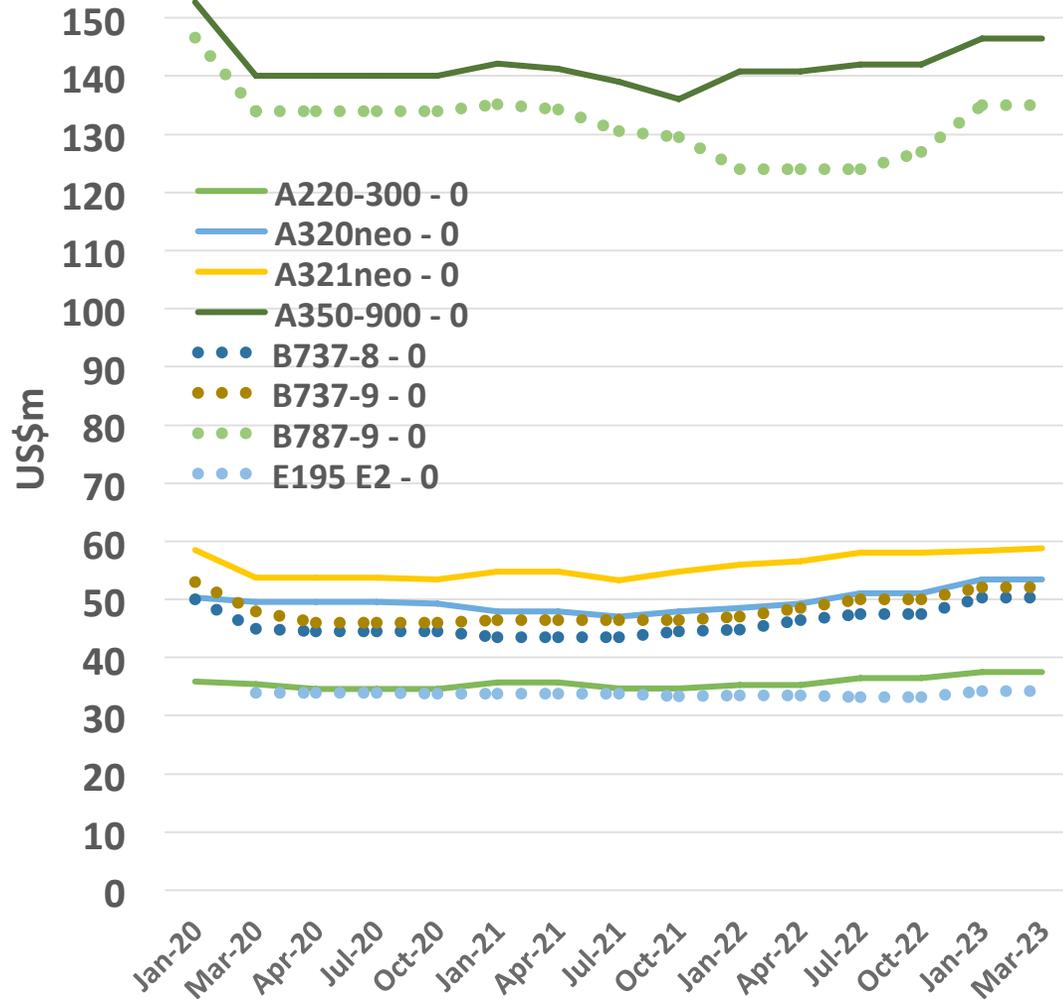
Market Lease Rates



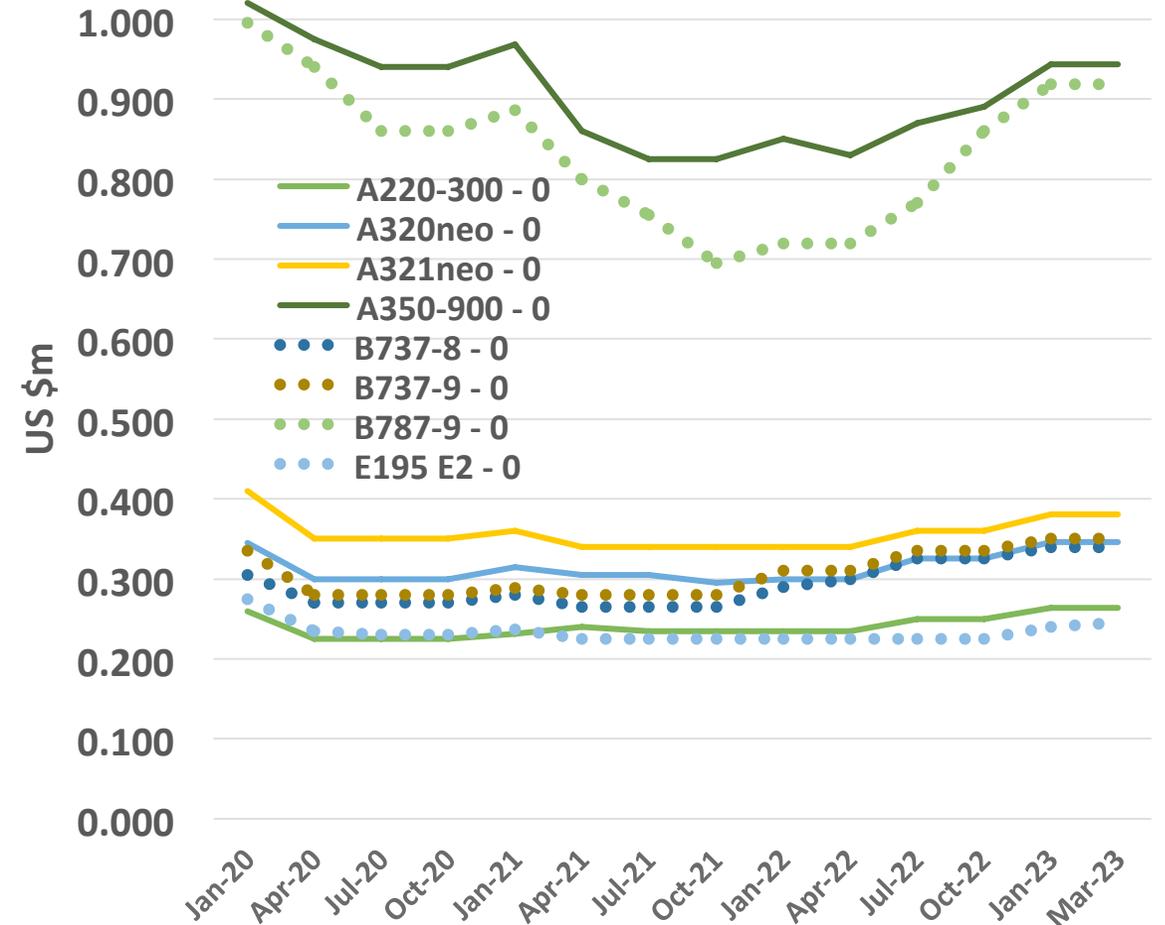
New Builds - benefitting from under-production



Market Values



Market Lease Rates





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Ishka Advisory



Eddy Pieniazek, Head of Ishka Advisory is a world-renowned expert in aviation with over 45 years' experience.

Eddy leads our team delivering a range of bespoke consultancy services to alleviate risk and position your company for profitable growth.

We operate at the very heart of the industry, with long-standing relationships with lessors, institutional investors, banks, finance houses, airlines, OEMs, suppliers and the legal and insurance communities.

We constantly track the global aviation market so our clients receive the most accurate and trusted advice. Whether it's the latest aircraft values, global trends or the competitive environment, we stay up-to-date with the information that matters.

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