





Aircraft life cycles Example of A320

A320ceo

Aircraft developments

Conversion to freighter

Launch 1984

Entry-into-service 1988

Last delivery 2022

Launch 2010

A320neo



Entry-into-service

2015

Essential for good values

Commercial success

Long-production run

Incremental improvements

P2F

(passenger to freighter conversion)

Successful new variant



A320 best-selling single-aisle Family



Single-aisle benchmark

Largest operator base of any commercial jet aircraft – the investors benchmark

End of February 2021



Publically announced start-ups in 2020 & 2021



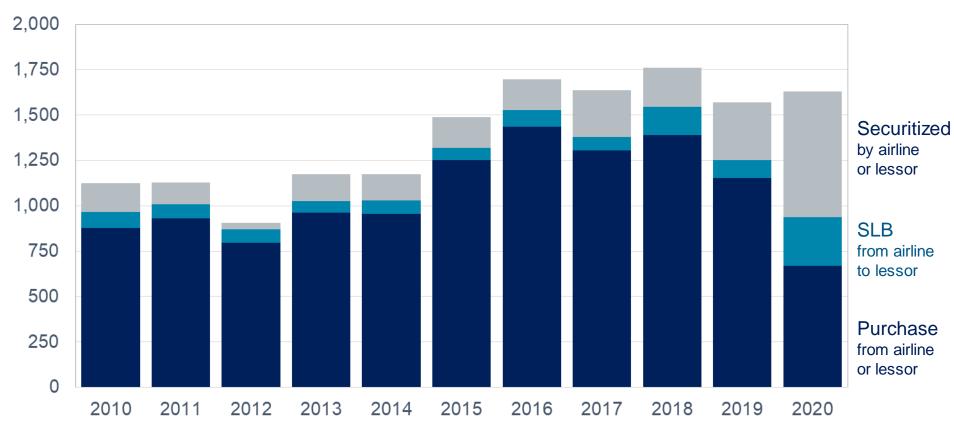
All starting with leased aircraft

Aviation business opportunities facilitated by leasing

Entrepreneurial confidence remains strong

Used aircraft market sale transactions

Number of aircraft



1,500 used aircraft trade annually

Sales and financing require valuations by independent 3rd parties - aircraft appraisers

Source: Cirium as at 01/03/21 Western SA & WB pax. a/c 12 months or older



International Society of Transport Aircraft Trading

- Founded 1983
- A not-for-profit organization
- 5,000 members worldwide
- Network primarily for aircraft investors and traders



Appraiser's Program

Largest association of aviation appraisers

Qualifies "ISTAT Certified Appraisers"

Regulates a "code of ethics" and definitions to promote common standards and practises

www.istat.org



Definitions

Numerous terms for different situations

Various aircraft value appraisals:

- Desktop appraisal
- Extended desktop appraisal
- Full appraisal
- Comprehensive appraisal
- Financial appraisal

From appraiser database

Includes aircraft inspection

Includes lease income...

Other Residual Value terms:

- Fair Market Value
- Salvage Value
- Scrap Value
- Distress Value, Forced Sale Value, Liquidation Value



Appraiser's Program

Most common terms:

Base value:

is the Appraiser's opinion of the underlying economic value of an aircraft in an **open**, **unrestricted**, **stable market** environment with a reasonable balance of supply and demand, and assumes full consideration of its "highest and best use."

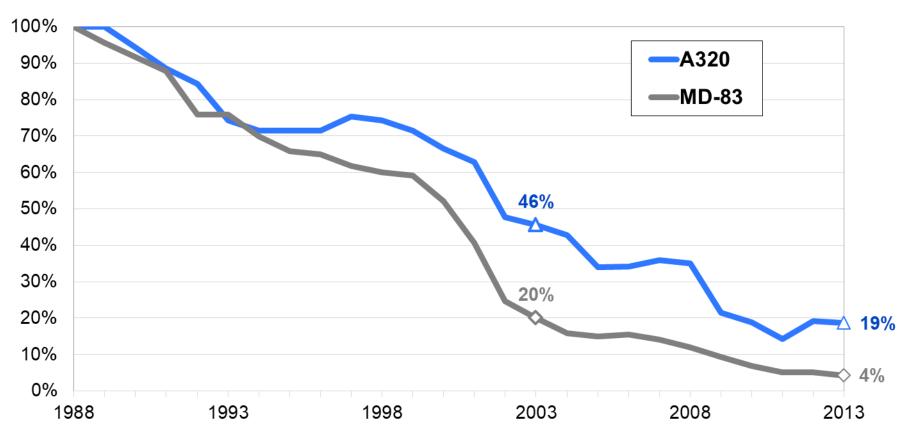
Market value (or Current Market Value)

is the value at the time of the analysis is the Appraiser's opinion of the *most likely trading price* that may be generated for an aircraft under the market circumstances that are perceived to exist at the time in question.



Market Value evolution of A320-200 and MD-83 1988 built aircraft

% New Market Value



A320: better value retention

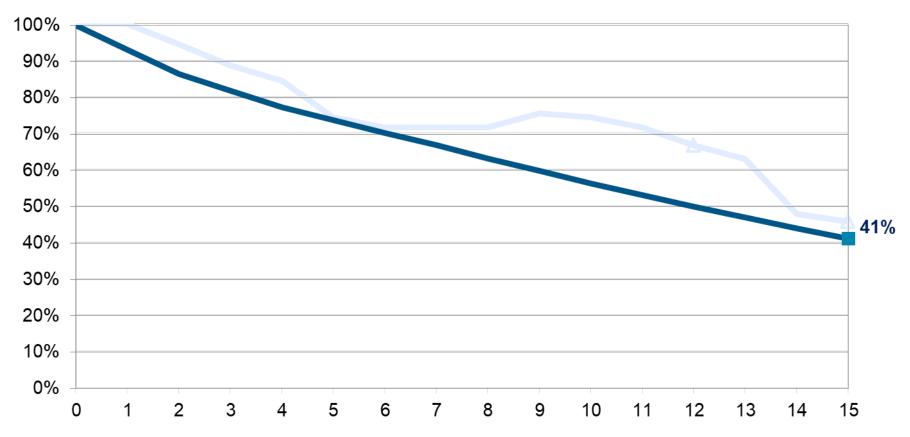
The superior product characteristics of the A320 resulted in significantly better value retention than the MD-83

Source: Cirium (Ascend)



Base Value evolution of A320neo 2020 built aircraft

% New Base Value



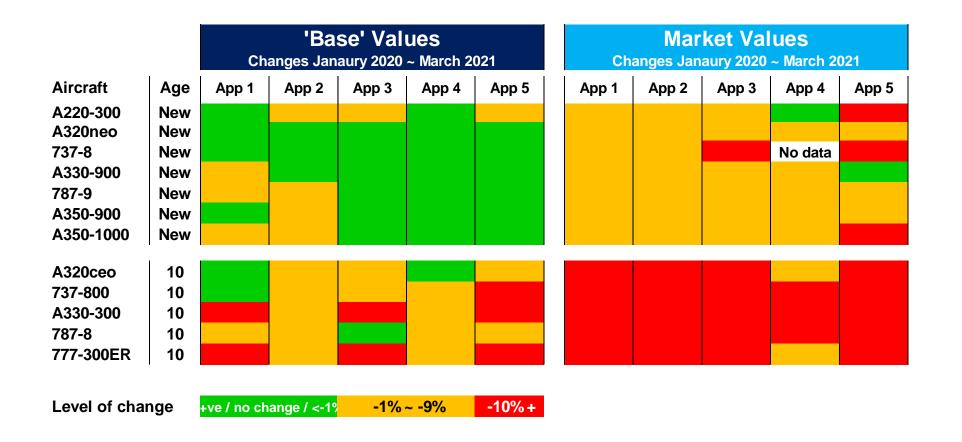
A320neo: Good value retention

The A320neo is forecast to have a low depreciation

A320neo 79T MTOW/PW1127G-JM 2020 built aircraft 2% sustained annual inflation Based upon average of forecast 'Base' Half-Life Value opinionsfrom new. Source: Average of 5 Appraiser on-line valuations January 2020



Aircraft Value changes January 2020 ~ March 2021



New-gen aircraft more stable

New generation:

Base values: 0% Market values: -6%

Previous generation: Base values: -10% Market values: -26% (10-year old aircraft)

A320 & A330 converted Passenger to Freighter fleet

A320 Family P2F in service





A330 Family P2F in-service







Growing popularity

P2F programmes stabilize aircraft values

P2F = Passenger to Freighter conversions



The multiplier effect of aircraft leasing



Direct and indirect employment Potential for urban regeneration Inflow of lease revenues

A hangar to maintain the aircraft



Physical space – requires a footprint Direct and indirect employment Generation of local expertise

A hangar to store parts



Some lessors lease engines/parts Physical space – requires footprint Direct and indirect employment Generation of local expertise

A facility to convert aircraft



Conversion to freighter / other uses Lessors provide the aircraft -some provide P2F solutions

A facility to recycle aircraft



Some lessors recycle aircraft

April 2020 Il lifecycle solution Aviation Leasing Roundtable - Aircraft lifecycles and values

Leasing benefits

Lessors and leased aircraft contribute to a potential macroeconomic multiplier effect



Aircraft lifecycles and values



- → Leasing is an enabler for airline growth, particularly for start-up and young airlines
- → Typically 1,500 used aircraft sales & transactions per year
- → Remarketing demand best for successful product with many airline operators and growing P2F market
- → Aircraft appraisers required for sales & financing
- → Value depreciation best at the beginning of programme Long production-run and P2F maintain aircraft values

Aircraft lifecycles and values are interdependent

