Chart of the Week

Balancing fleet age for efficiency and sustainable growth

In-service fleet by operator region and market class, July 2023

- Airlines modernize their fleets in a structural quest for lower fuel consumption and the associated carbon emissions reduction. Additionally, fleets are optimized to meet global passenger demand while capturing operational efficiency gains. Newer aircraft models offer better fuel economy and operational performance, resulting in cost savings and lower CO2 emissions. Given the significant cost of aircraft, airlines often lease their assets, with ownership and leasing evenly split in the industry.

- As of July 2023, the age of the global in-service fleet spans from newly manufactured aircraft to some regional turboprops that have been in operation for more than 50 years (see chart). Looking at operators by region, Asia Pacific and the Middle East have the youngest fleets (around 10 years old), while Europe's average age matches the global average of 11.6 years. Fleets in the Americas, especially North America, tend to be slightly older, partly due to aging regional jets. Africa's fleet is the oldest, around 5 years above the global average.

- Regional fleet sizes correspond to their respective traffic levels. Asia Pacific's airlines held the largest share of the global fleet at 33%, followed by North America at 27%, and Europe at 24%. Accounting for 5% of operating aircraft worldwide, the Middle East's carriers prominently featured widebody jets in their fleet, supporting their specialty in long-haul operations that connect various markets through mega hubs. Meanwhile, Asia Pacific's airlines have experienced a surge in both narrowbody and widebody units, consistent with the region's anticipated growth in demand.

- During the Covid-19 pandemic, a significant portion of the global fleet was put into storage, and new aircraft deliveries plummeted by over 40% in 2020. As travel restrictions eased, parked aircraft returned to service, and 2023 is expected to see a strong recovery in new planes (around 1,500 globally). North America and Europe will receive the majority of these new units, with North America accounting for about one-third of the global total. The Middle East's deliveries are expected to recover to 2019 levels, while Asia Pacific anticipates a 15% annual increase in new planes for 2023, though still below pre-pandemic levels. The dynamic fleet modernization strategies across regions reflects the complexity of balancing airlines' operational advantages, financial considerations, and sustainable growth plans.

Source: IATA Sustainability and Economics, based on data from Cirium

* Estimated as the unit-weighted arithmetic mean. Approximately 60% of the global fleet is younger than the mean age of 11.6 years. The median age of the global fleet, representing the midpoint in the age distribution, is around 10 years.

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