



SMBC AVIATION CAPITAL

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Plane insights

Commercial Aviation Market
intelligence every quarter

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Strategic and Market Analysis

Summary

- The global macro environment is currently stable supported by an expanding US economy. Inflation in the US and Europe is declining towards long term targets, but some stickiness remains. In line with this, central banks have started to reduce interest rates; timing of these reductions will be key, as in a strong labour market there is a risk of causing further inflation. The dollar remains strong, increasing against the majority of key exchange rates.
 - Brent remains quite stable despite multiple geopolitical events, and the crack spread has tightened for jet fuel benefiting airlines. SAF production has tripled in 2024 versus 2023 and over 40 airlines now have specific SAF targets.
 - Strong traffic growth is leading to an increase in global airline net profits, but rising costs and declining yields in some regions is a concern.
 - Supply remains tight with OEM deliveries in 2024 expected to be similar to, if not below, 2023 levels. Storage rates are approaching pre-Covid levels and aside from the GTF driven groundings, supply is very limited. Retirements expected to be like 2023 levels, but an extension rich environment is moving some retirements to the right which is likely to continue into 2025.
 - The share of orderbook backlog held by lessors is shrinking, with only a handful of lessors having orderbook slots committed beyond the turn of the decade. Supply chain issues are resulting in a departure from traditional lead-times for commitment to leasing new orderbook slots with airlines now moving earlier to secure positions.
 - Aircraft values are broadly stable with slight upward movements.
 - Outlook for sale and leasebacks remains strong for airlines.
 - Lessor to airline trading is robust as airlines rebuild their balance sheets.
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Macro Environment

Growth in the global economy remains stable with GDP outlook for 2024 sitting at 2.5%, the same as in 2023, and, expected to remain similar in 2025. The US economy remains strong, most recent data showed that the US economy expanded at an annualised pace of 2.8%, a full percentage point above the July forecast. Growth in other western nations is more muted, as demonstrated by the Euro area and Canada which expanded by 0.9%, Britain by 0.7%, while Germany contracted by 0.2%. China and India continue to grow at above average rates at 4.6% and 6.7% respectively.

Table 1. GDP Forecast for 2025

Real GDP (YoY%)	Q2 2025	Q4 2025
USA	1.9%	1.9%
China	4.7%	4.5%
APAC	4.2%	4.1%
EU Area	1.5%	1.7%
India	7.0%	6.6%

Source: Bloomberg Consensus Forecast

Inflation has been steadily declining since the peak in mid-late 2022. The latest data from the US shows that inflation rose 2.1% YoY, close to the Fed target of 2%. It is a similar story in Europe and Britain with Consumer Price Index (CPI) for both falling below 2.5%. Consensus forecasts of US CPI expect inflation to remain just north of 2% through 2025.

At strong points in the cycle interest rates typically increase to combat inflationary pressures. At such times, airline profitability usually benefits from the strong economy and alternative sources of (often cheaper) funding are plentiful. Given how much inflation has been slowing, central bankers decided that they no longer need to hit the brakes on the economy so aggressively. In fact, doing so would risk slowing it down too much, potentially even causing an economic crash.

Most of the major central banks have thus begun cutting interest rates. The US Fed had a 50-basis point reduction in September, followed by a further 25 basis points in early November. The Bloomberg consensus forecasts further rate cuts, expecting the

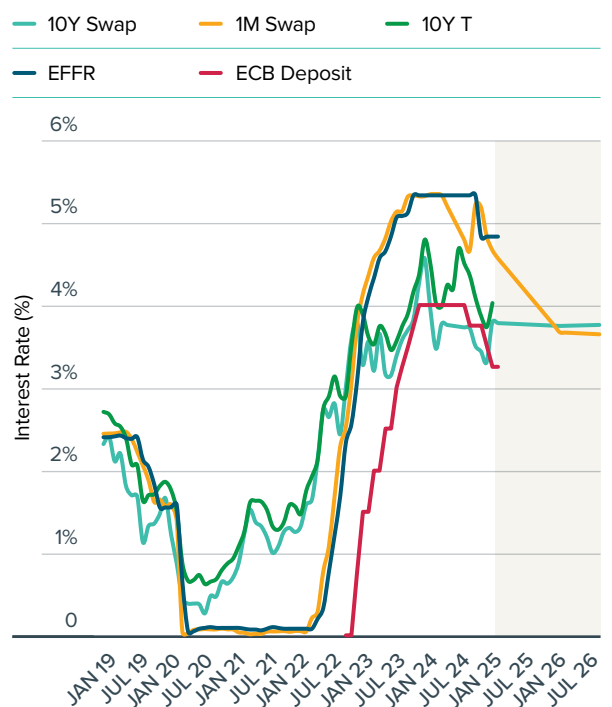
fed rate to be 4.05% in Q1 of 2025 reducing further to 3.45% in Q3.

However, with interest rate cuts in a tight labour market and the probability of tariffs from the Trump administration, an increase in inflation is something we are watching carefully.

As the commercial aviation industry is a dollar denominated industry, the performance of the dollar is key for airlines. Year to date, the dollar remains strong, up 3.8% versus the DXY which is a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies.

We would caution that the change in the US government may not be fully reflected in these forecasts as many observers are taking a wait and see approach to Pres. Trump's proposed economic policies. For example, there is a lot of speculation about the re-introduction of tariffs which if introduced are expected to boost core US inflation by 0.9%. Politically this may not be acceptable and thus may prove to be either a short-term measure or a negotiating ploy. In the previous Trump government, the tariffs on aircraft were in fact suspended for a period of 5 years in June 2021 by both the US and EU.

Figure 1. Interest Rates



Source: Bloomberg. Forecast 10Yr and 1M swaps as of November 2024

Fuel & ESG

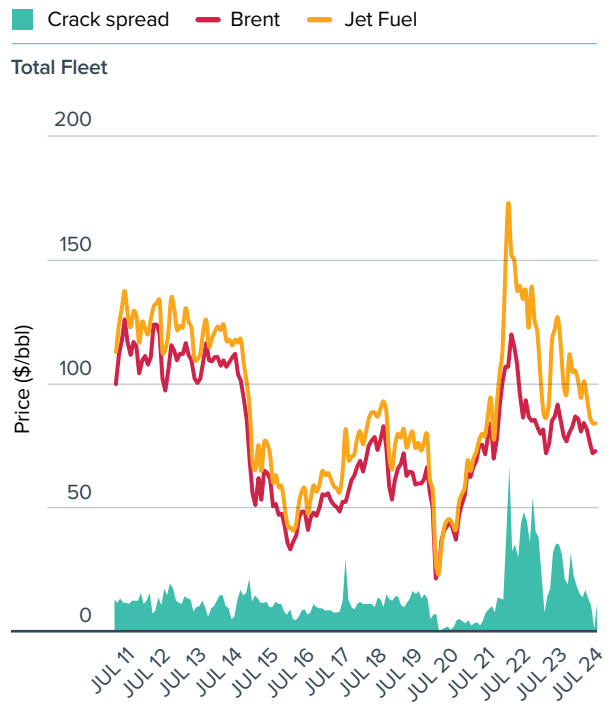
With increasing focus on ESG goals and in particular emission targets, fuel efficient aircraft are a core part of the commitment to reduce emissions. According to IATA, airline fuel cost in 2024 is expected to reach \$291 billion and can represent a third of an airline's operating cost.

In 2024 to date, Brent has averaged \$80/b and has been quite stable compared to historic oil price volatility. Meanwhile, the crack spread has averaged around \$15/b, which is a welcome reduction for airlines compared to the average crack spread of \$35/b across 2022 & 2023. An increase in refinery capacity has helped reduce the spread below the \$20/b mark and it is expected to remain below this mark through the coming months.

Prices will also vary by region due to supply-demand dynamics at regional trading points. In particular, the add-on price, which comprises transport, storage, and into-plane fuelling costs, can vary significantly between regions, with Europe having the lowest average add-on price while Africa has the highest.

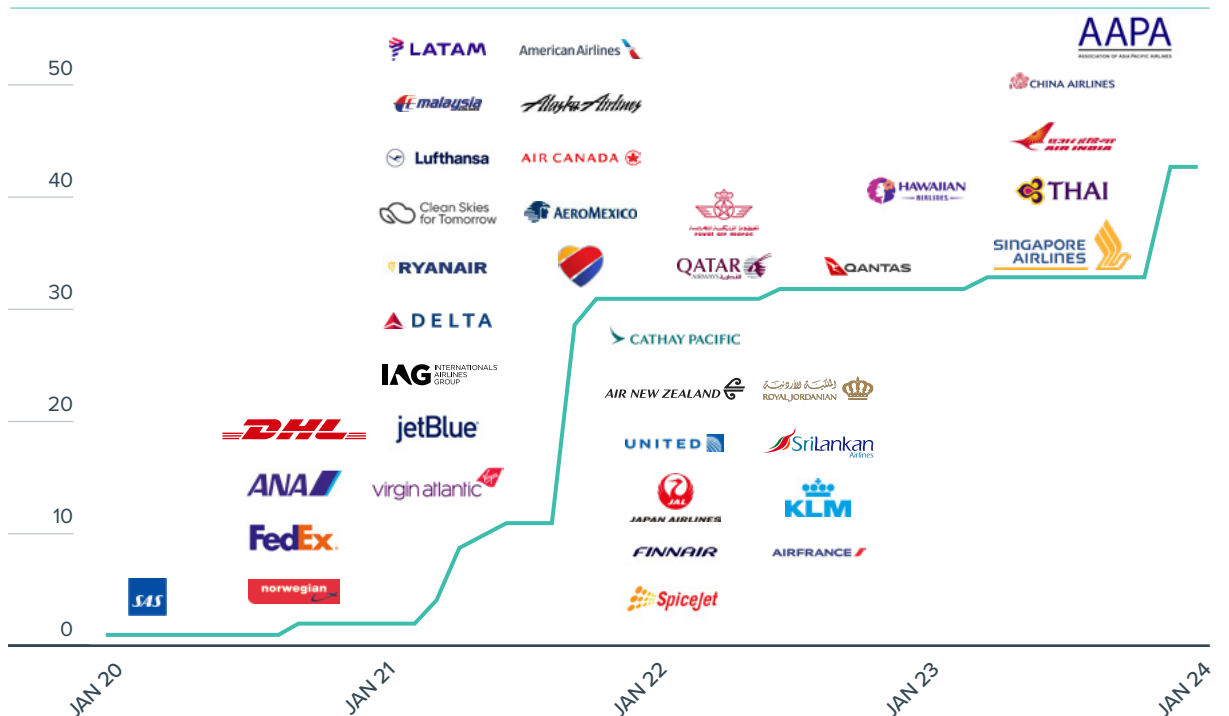
While operating new technology aircraft is key for reducing fuel burn, the increased use of Sustainable Aviation Fuels (SAF) is key to reducing emissions.

Figure 2. Oil and Jet Fuel Costs



Source: BFO Brent & Jet Fuel 54 as of November 2024

Figure 3. Airline SAF Targets by Announcement Date



Source: BloombergNEF. Includes airlines that have set a specific SAF target

Fuel & ESG (continued)

Airlines recognise this and 2021 saw the greatest number of airlines announcing target dates for implementation of specified SAF usage, mainly US and European airlines. More recently we have seen engagement from APAC carriers such as China Airlines and Thai. Over 40 airlines have now put a specific SAF target in place.

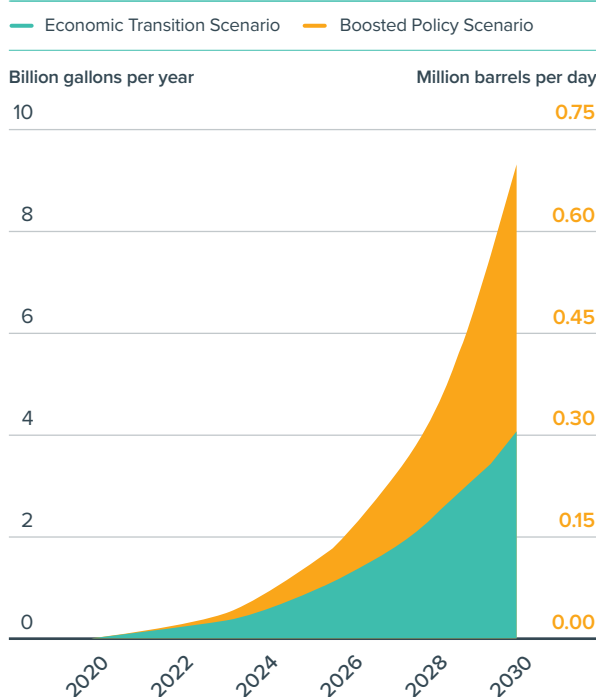
Today, global SAF production is less than 1% of the total jet fuel market. Production has tripled in 2024 versus 2023, but will need to continue to scale up rapidly. There is still a very wide range as to what the ramp up might look like. According to Bloomberg NEF by 2030 SAF volume could be between 4 and 9 billion gallons per year, representing between 3 and 8% of global jet fuel.

According to IATA, in 2023 the industry consumed SAF at a cost of \$2,500 per ton (or 2.8x jet fuel) adding c.\$750 million to the industry fuel bill.

The price premium for SAF will likely impact air fares which could see increases of 5-20% but this is highly dependent on the blend ratio (ratio of jet fuel to SAF). It also depends on the type of SAF used, the premium could be 2.2 – 5 times the price of jet fuel depending on the feedstock or technology used to create SAF.

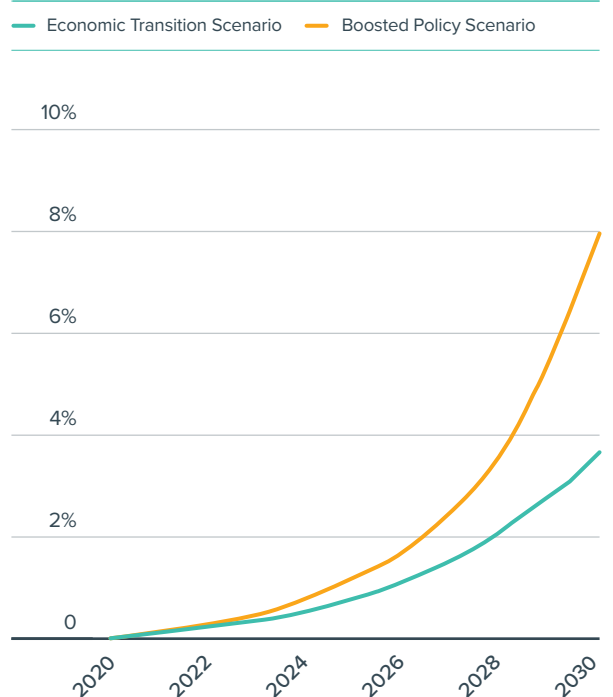
On a positive note, bank margins are declining in Europe as many European lenders are incorporating tighter ESG restrictions into their lending policies resulting in increased competition between banks who are increasingly focused on financing new aircraft only.

Figure 4. Forecast SAF Production



Source: BloombergNEF. Green = Economic Transition Scenario, Orange = Boosted Policy Scenario

Figure 5. Forecast SAF Share of Jet Fuel



Source: BloombergNEF. Green = Economic Transition Scenario, Orange = Boosted Policy Scenario

Air Travel

According to the latest IATA data, total demand for travel, as measured by Revenue Passenger Kilometres (RPKs) was up 7.1% YoY in October while Available Seat Kilometres (ASKs) were up 6.1%. Domestic travel increased 3.5% while international was up 9.5%. Load factors for both were between 83.5% and 84.5%. These record levels of demand are very good for the global economy supporting employment, tourism and trade.

On a regional basis, domestic markets showed stable growth with all in the positive territory, driven by China at 9.7% growth. The international market shows significant variability where APAC at 12.7% and Africa at 9.3% lead the way in growth while North America only saw a 0.3% increase in demand, having recovered fastest.

To see if this growth will continue, airline schedules are a useful forecast, and these show an expectation to be up 7.7% at the end of the year. The one laggard is Intra-Asia which ended Q3 2024 down c.6% and is projecting to be similar at year-end.

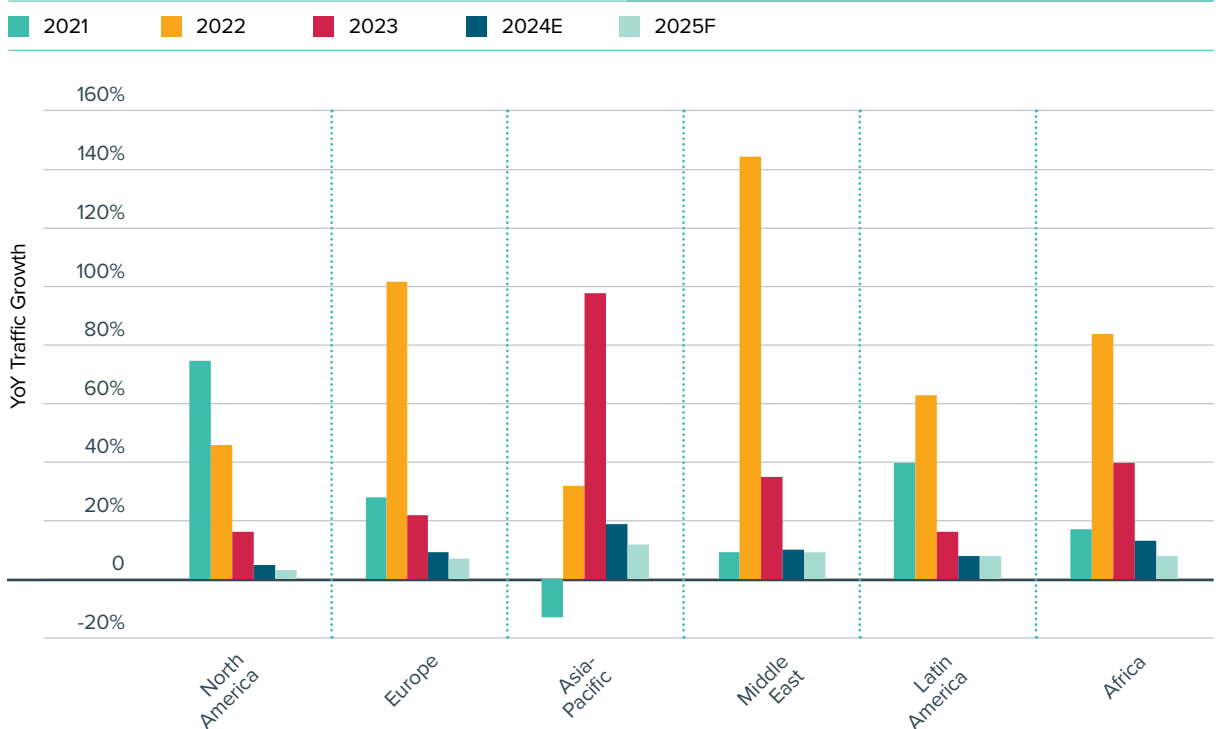
Long-Haul recovery remains soft, with transatlantic the only flow back to 2019 levels, although Europe-Asia is close. Transpacific remains considerably down, only slightly better off than long-haul China, meanwhile the recovery seems to have slowed down.

China, in particular, has a significant divergence between domestic and international schedules, domestic up 17% versus 2019, while international is down 25% year to date, expected to remain 20% down by the end of the year.

Aircraft utilization is essentially back to pre-Covid levels at around 9.5 hours a day for single-aisle and 13.5 hours a day for twin-aisle. The outlier for single-aisle aircraft is actually the US with utilization slipping over the past two quarters and is now down 6% on 2019. Twin-aisles have recovery in all regions, driven by Europe, aside from China which remains down 6%.

With an increase in air travel comes a corresponding increase in CO2 emissions with emissions increasing in September to reach 2019 levels. However, despite a 3% increase in aircraft hours flown, overall emissions are actually down 2%. This is due to more fuel efficient new-tech aircraft entering service replacing current and old-tech aircraft which are retired.

Figure 6. Traffic Growth



Source: IATA

Airline Profitability

Strong traffic has resulted in continued revenue growth. Total revenues are forecast to fall just shy of the \$1 trillion mark, a remarkable number, but unfortunately expenses are not too far behind in the region of \$905bn. Net profits for the airline industry are expected to reach \$31.5bn in 2024, around \$3.5bn less than generated in 2023. However, the returns remain thin at 3.3% net profit margin.

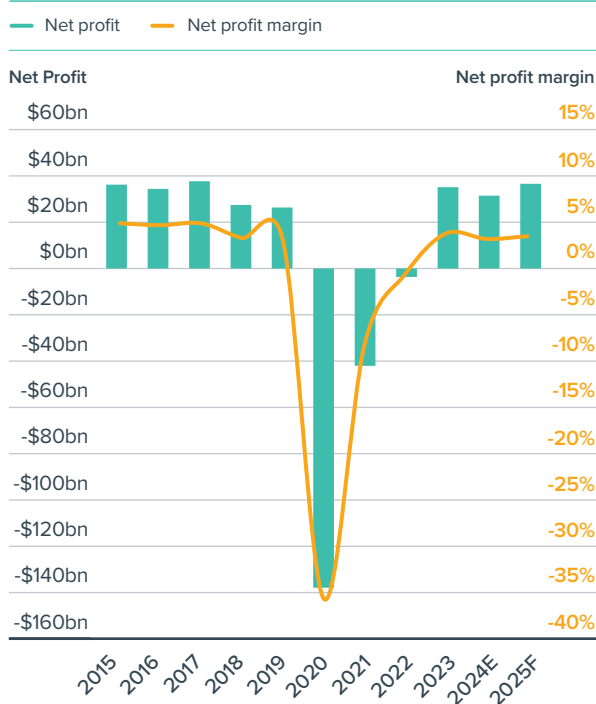
The industry remains highly capital intensive. A 6.6% return on invested capital is well below IATA's estimate of the industry's cost of capital, which is over 9% and earning of just \$6 per passenger indicates just how skinny profits are. Some airlines have looked to leasing to free up capital and boost their returns.

Q3 airline results Year-On-Year have shown some improvement on Q2, depending on the region, some declines down to declining yields but chiefly due to cost pressures. Within the North American region network carriers are faring better than LCCs.

On the air cargo side, yield has stabilised as demand and supply balances out. The global average yield sits at around \$2.50 per kg since mid-2023, a normalization after the pandemic highs but still considerably higher than the pre-Covid yield of \$1.80 per kg in 2019.

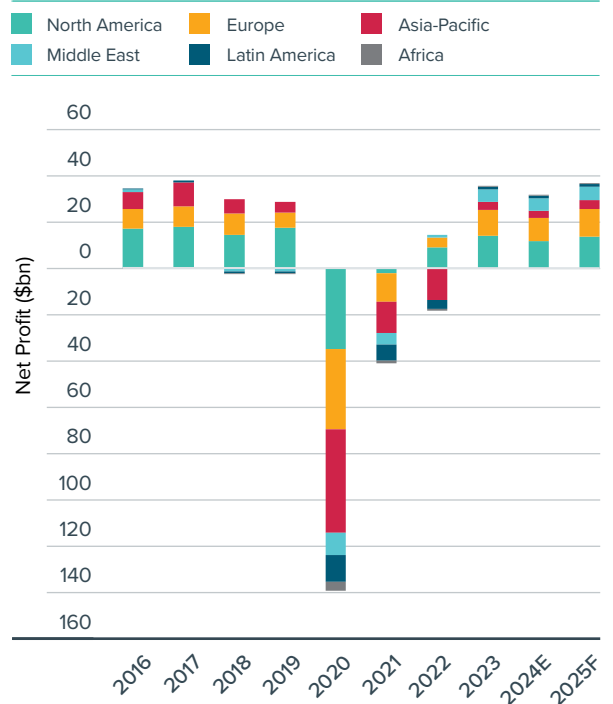
As ever, North America is the driver of profits and leads with an expected net profit of \$11.8bn in 2024, followed by Europe with an expected net profit of \$10.0bn, despite the region having suffered significant capacity and supply chain issues. Asia Pacific showed strong revenue growth with expected net profits of \$3.2bn, primarily due to the rebound in domestic travel in China, Japan and Australia. The Middle East is also experiencing increased traffic growth and benefits from the presence of important global hubs, with an estimated 2024 net profit of \$5.3bn. Latin America and Africa which are typically the weakest performing regions are also expected to be marginally profitable in 2024.

Figure 7. Airline Profitability



Source: IATA

Figure 8. Airline Profitability by Region



Source: IATA

Storage & Retirements

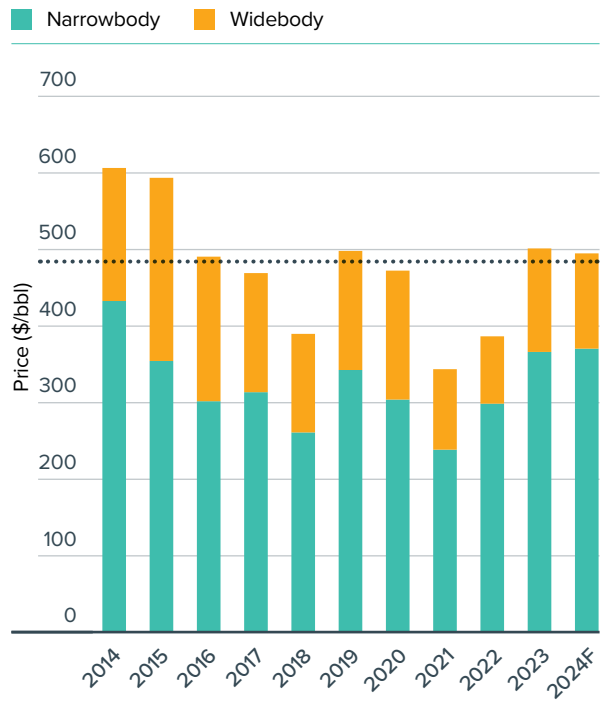
Storage rates for Single and Twin-Aisle aircraft are slowly approaching the pre-Covid level of 8% and currently sits at 11%. The excess aircraft in storage is not due to a lack in demand, rather due to the PW engine issues which have grounded a large number of aircraft as their engines go through inspection. Currently, almost 600 PW1100G-powered A320neos remain parked, a similar number to February as Turn-Around-Times (TAT) at the engine shops remain elevated.

Widebody aircraft in storage continue to decline as long-haul routes continue to reopen, particularly in APAC. The current storage of 770 units is the lowest since January 2020.

Aircraft retirements reached 500 in 2023, the highest number since 2015. The number to date in 2024 is just under 300, and according to Cirium Fleets Analyzer a similar number is expected in 2024. The actual number may be less due to the high demand for aircraft and lack of supply. Some aircraft that were intended for retirement are being retained in service by airlines, while extensions continue to run at high levels.

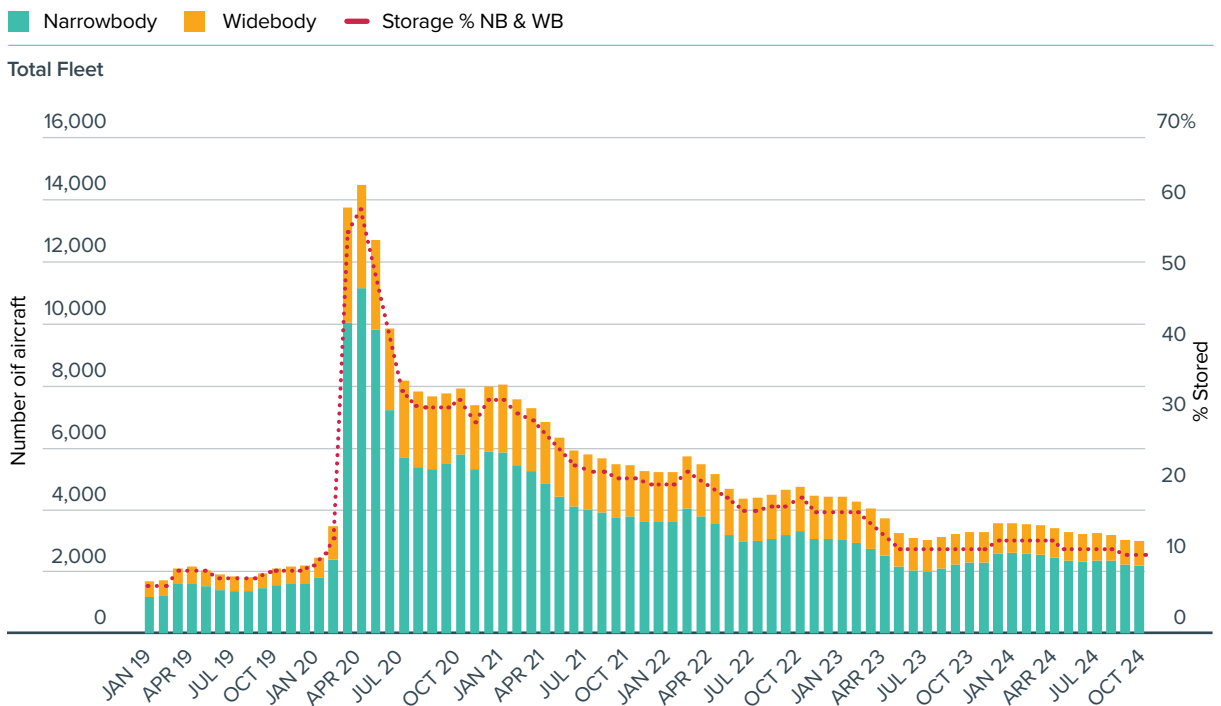
2024 total to date includes 56 737NGs at an average age of 22.3 years, and 97 A320 family aircraft at an average of 21.5 years. The average age of retirement for all assets in 2023 and 2024 is 24 years old.

Figure 10. Aircraft Retirements 2014 - 2024



Source: Cirium Fleets Analyzer, SMBC AC analysis

Figure 9. Aircraft Storage Rates



Source: Cirium Fleets Analyzer, SMBC AC analysis

Aircraft Supply

Total production for Airbus & Boeing in 2023 was just under 1,200 aircraft, with current estimates that this could range between 1,100 and 1,200 in 2024. At the beginning of the year Airbus forecast 800 deliveries; that number has since been slightly revised down to around 770, driven by persistent supply-chain issues particularly cabin equipment, engines and aerostructures and internal production issues at the OEMs.

Boeing has not provided guidance due to the volatility in their output, but most forecasters estimate deliveries at anywhere between 430 and 480. Boeing were delivering 25 MAX aircraft per month prior to the strike but will be slow to rebuild to FAA limit of 38 per month. Hence, the forecast Boeing deliveries and delivery rates have significant downside due to the strike's after-effects. As a rough guide, one day of striking equals one aircraft not delivered so the 53-day strike delays could lead to over 50 missed deliveries. This impact will be further increased as production lines only reactivated in early December and will be slow to get back to their previous level of productivity.

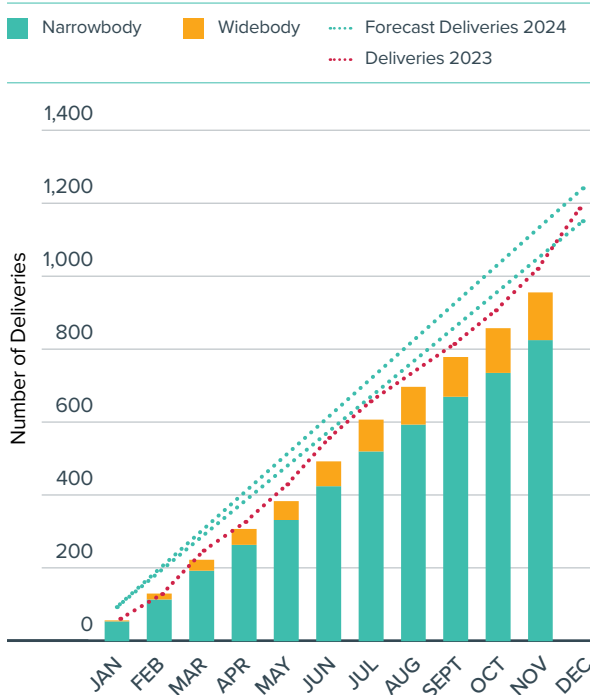
There are also currently north of 130 MAX fuselages awaiting delivery from Spirit AeroSystems to Boeing, which is equivalent to five months of production.

The orderbook is unsurprisingly dominated by narrowbody aircraft, particularly the Airbus products. With over 7,000 A320neo family aircraft on order, slots are sold out through the end of the decade. This is a similar situation with the MAX, where although they have c.2,000 less aircraft on order their production rates and production ramp up are lower. For both families, lessors only account for 15% of the backlog.

In 2024 to date, there have been just over 1,200 orders for single and twin-aisle aircraft, the majority of which are for the A321 (459) followed by the MAX (244) and the A350 (131). Some key orders include American Airlines for 170 neos and MAX, Riyadh Air for 60 A321s and Cebu Pacific for 70 A321s.

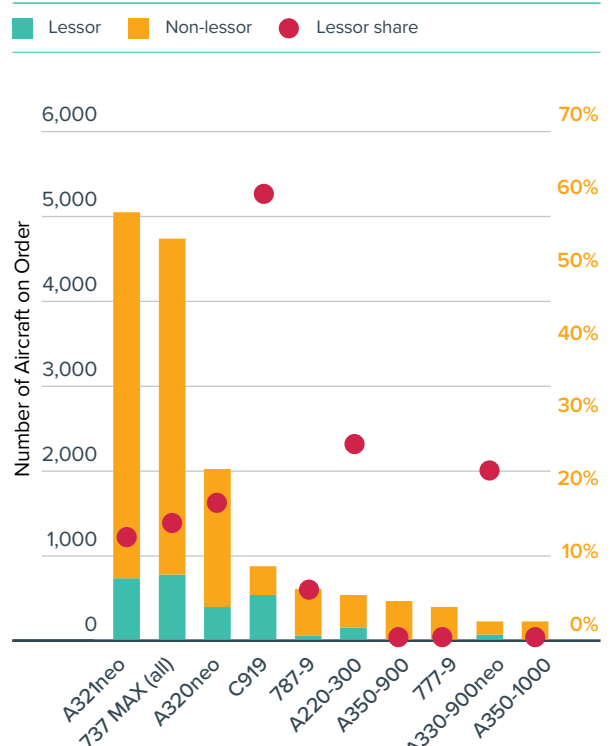
An interesting feature of this order book has been the steady decline of the lessor market share since 2018, when the lessors account for 23% of the outstanding order book in that particular year. In 2024 this has fallen to 14% and in 2028, a year in which both OEMs are oversold, it will be an estimated 9%. This decline has also seen the number of lessors with orders decline as you approach the end of the decade.

Figure 11. Commercial Aircraft Deliveries 2024



Source: Cirium Fleets Analyzer, SMBC AC analysis

Figure 12. Commercial Aircraft on Order



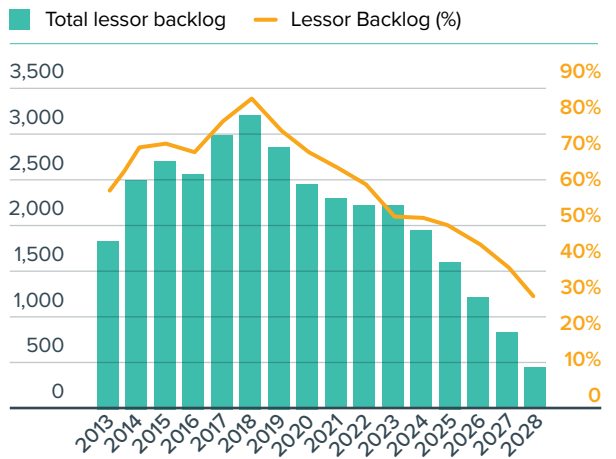
Source: Cirium Fleets Analyzer, SMBC AC analysis

Aircraft Supply (continued)

This decline has been a conscious decision by both Boeing and Airbus, whereby they have looked to concentrate the order book by working with the larger lessors rather than the smaller ones.

This movement when coupled with an a trend towards longer production lead times has resulted in many airlines locking in commitments earlier than we have seen in the past. Many lessors indicate that they are fully placed out to 2027.

Figure 13. Lessor Backlog



Source: Cirium Fleets Analyzer, SMBC AC analysis

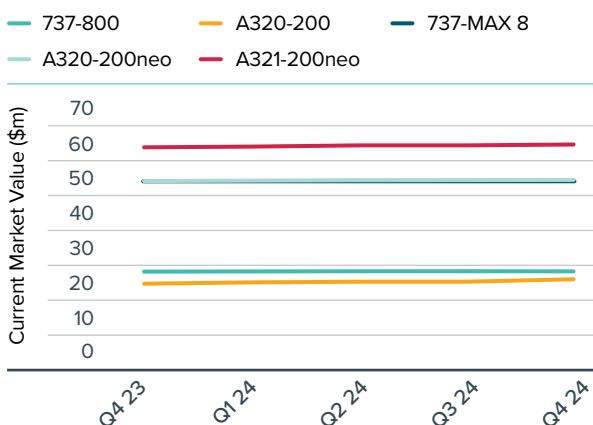
Aircraft Values

According to appraisers Current Market Values for single aisle aircraft are broadly stable across the past four quarters. The charts below are an average of four appraisal firms and reflect a new aircraft for the New-Generation aircraft and a 10-year-old for Current-Generation aircraft. The spread between the appraisers on the neo and MAX is quite tight with a value gap of between \$0.6m (A321-200neo) and \$2.3m (737-MAX 8) between the highest and the lowest. However, this variance is much higher on the 737-800 at \$9m increasing to \$10m on the

A320-200. Year-on-Year the increase in CMVs for the five types is c.2%.

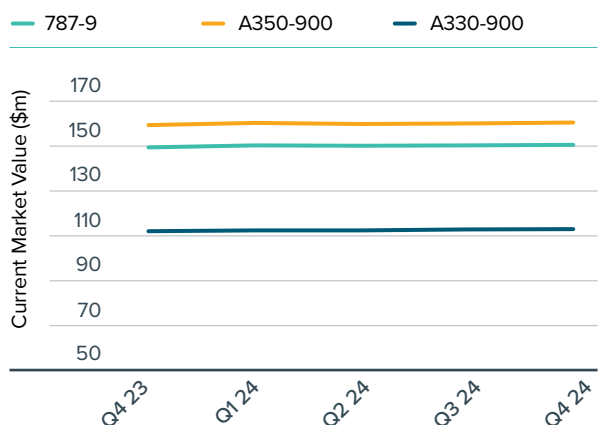
On the twin-aisle side the trend is even flatter with a 0.7% YoY increase in CMVs across the 787-9, A350-900 and A330-900neo. The variance between appraisers' ranges from \$7m on the 787, up to \$10m on the A350-900. Appraisers expect this stable trend to continue due to a lack of availability and low production rates.

Figure 14. Single-Aisle Current Market Values



Source: Average of Cirium Ascend, IBA, mba & Avitas

Figure 15. Twin-Aisle Current Market Values



Source: Average of Cirium Ascend, IBA, mba & Avitas

Sale and Leaseback Outlook

There is a strong expectation that airlines will continue funding in what will remain a strong sale and leaseback market. This strength reflects several factors:

1. Limited supply of new aircraft, especially on the Boeing side, where Boeing have focused their production on larger customers like Ryanair and Southwest, who are not overly reliant on SLBs.
2. Increased airline profitability has resulted in airlines getting better terms which reduces the overall cost of the transaction.
3. Some airlines have elected to pursue efficient deals of scale with lessors that can digest large volumes of aircraft and facilitate ease of deal-making and provide competitive returns.
4. Some airlines are choosing to keep their banking lines free with a view to using these more secured lines in the event of an economic downturn.
5. ESG issues are driving demand for new fuel-efficient aircraft as lessors look to modernise their fleet and tap ESG lines with lower costs.

This strength is expected to remain in place for at least the next 2-3 years on the back of the combination of supply chain and internal production issues at the OEMs.

Lessor to Airline Trading

From 2022 through 2024, there has been a significant increase in the number of aircraft that airlines have purchased directly from the lessors as they look to rebuild their balance sheet by bringing more aircraft onto them. The below chart displays aircraft that were on lease with an airline that they elected to purchase prior to lease end and does not consider naked aircraft sales between lessors and airlines. Along with rebuilding their balance sheets, airlines may elect to purchase the aircraft to avoid onerous Re-Delivery Adjustments (RDAs) at lease end or to avoid maintenance work required to meet Minimum Return Conditions (MRC).

This type of sale averaged 115 trades per annum up until 2022, increasing considerably to 175 in 2023 and 2024 looks to be tracking to a similar number. The widebody share of trades declined in 2023 and 2024, below the long-term average.

Looking at the aircraft which have traded in 2023 and 2024, unsurprisingly it is dominated by the A320ceo and 737NG families accounting for two thirds of all sales. Only 5% of sales are New-Tech aircraft, with the remainder split between Current-Tech and Classic-Tech.

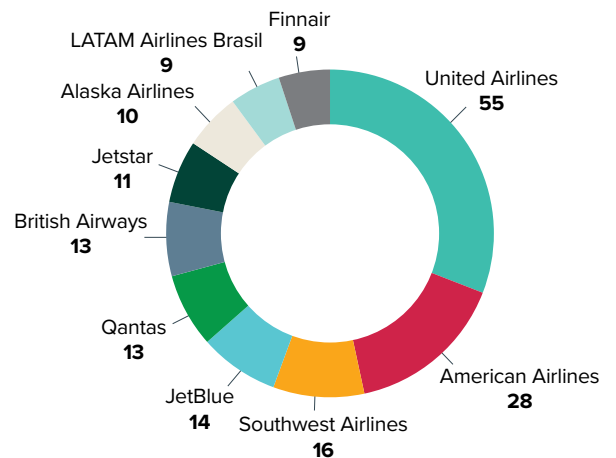
Over sixty airlines have purchased off-lease in 2023 and 2024 but is very much dominated by the big American carriers who occupy the top four positions followed by other stronger credits in Qantas and British Airways. While weaker credits have also engaged in these purchases, it has generally been in ones or twos.

Figure 16. Sales of Aircraft Under Lease to Airline



Source: Cirium Fleets Analyzer, SMBC AC analysis

Figure 17. Top-10 Airline Purchasers 2023-2024



Source: Cirium Fleets Analyzer, SMBC AC analysis

About the authors

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Shane is Head of the Strategic and Market Analysis Team leading a team of six analysts who have responsibility for SMBC Aviation Capital's proprietary models, databases and market analysis. He joined the company in 2005 as a credit risk analyst covering customers in Asia Pacific. Shane spent 10 years as an equity analyst covering airlines with NCB Stockbrokers and HSBC Securities in Singapore. He holds a Bachelor of Commerce Degree and a Masters in Business Studies in Banking and Finance from University College Dublin.

Darren Naughton

Darren joined SMBC Aviation Capital in 2004 as a Residual Value Risk Analyst before joining the credit risk team covering airlines in Europe and North Africa. In 2014 he joined the Strategic and Market Analysis team with responsibility for industry analysis, forecasting and portfolio risk management. Prior to joining SMBC Aviation Capital, Darren worked in the semiconductor industry and has an Engineering Degree and an MBA from Trinity College Dublin.

David Griffin

David is VP Strategic and Market Analysis. He initially joined SMBC Aviation Capital in 2021 as a member of the Commercial Analysis team, with responsibility for assessment and evaluation of all company transactions including asset acquisitions, placements and trading before joining the SMA team in March 2023. Prior to joining SMBC Aviation Capital, David was a Valuation Consultant with Ascend by Cirium. David holds a Bachelor's Degree in Aeronautical Engineering and a Master's in Business Management, both from the University of Limerick. He is also an ISTAT Certified Appraiser.

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