

Forecast Highlights (2025–2045)

The U.S. commercial air carrier industry has managed several years of tumultuous supply and demand environments. 2019 saw the last of ten years of unprecedented stability with lower costs and capacity discipline leading to solid profitability. Then, with the onset of the pandemic in 2020, demand collapsed overnight, bringing profitability down as well. The recovery began in 2022, but it was so uneven across markets and passenger segments that it was nearly impossible to plan for. Domestic leisure traffic surged, followed by Latin and finally Atlantic markets in 2023, but Pacific traffic still lags its 2019 levels and overall business traffic remains below trend. In addition, supply chain disruptions and manufacturing missteps continue to plague aircraft production, resulting in delays and overall unpredictability of deliveries.

In 2024, the environment continued to shift as some carriers benefited more than others and overall weakness appeared as the year progressed. Passengers continued to display a preference for premium and international travel, desires that strengthened following the depths of the pandemic as their focus moved from spending on goods to experiences. That evolution helped spur a surge in travel across the Atlantic but suppressed domestic travel. However, carriers increased domestic capacity in anticipation of a repeat of 2023 that didn't occur, leaving the market oversupplied and resulting in a drop in yields and profitability. The importance of premium travel to passengers became even more evident and, by the end of the year, carriers whose business strategies shunned premium products began to implement or

plan for such offerings. Taken together, these shifts meant that carriers with broad international footprints, a wide range of fare classes and other perceived benefits were able to operate profitably while others posted losses. In 2024, the top eight U.S. passenger carriers posted net profits of \$6.4 billion, including losses at two carriers that totaled \$2.0 billion, and were down from \$8.0 billion in 2023.

The business modifications necessitated by the downturn will shape the industry for years to come, long after the recovery is complete. Primarily, airlines will be smaller having retired aircraft and encouraged voluntary employee separations. Fleets, however, become younger and more fuel-efficient as retirements targeted the oldest and the least efficient aircraft.

In the medium-term, airlines will strive to determine which shifts in demand that occurred following the pandemic will be long-lasting and which will fade as impacts of the pandemic recede. For example, the surge in demand for travel to Florida and Caribbean leisure destinations seems to be waning and reverting to pre-pandemic levels. Similarly, the changes to travel patterns – both day-of-week and time-of-day – due to fewer business trips and more hybrid business and leisure trips have been partially unwound but may not fully revert. On the other hand, many carriers are investing in premium cabins with the expectation that customers will continue to be willing to pay for upgraded experiences. Although that willingness has been very evident during recent years, it is not certain to continue. Furthermore, trade tensions that emerged during the pandemic have

weighed on some international traffic, particularly to China and other parts of Asia. This will likely continue to lag activity in other regions, but the duration is unknown.

In the long run, many of the strengths and capabilities developed over the decade between the end of the great recession and the onset of COVID-19 will become evident again. There is confidence that the U.S. airline industry has finally transformed from a capital intensive, highly cyclical industry to an industry that can generate solid returns on capital and sustained profits.

Fundamentally, over the long-term, aviation demand is driven by economic activity, and a growing U.S. and world economy provides the basis for aviation to grow. The 2025 FAA forecast calls for U.S. carrier domestic passenger growth over the next 20 years to average 2.4 percent per year. Passenger growth is forecast to be slightly higher in the first 10 years of the forecast horizon compared to the last 10 years of the forecast.

After averaging \$55 per barrel over the five years ending in 2021, oil prices surged to \$93 per barrel with the Russian invasion of Ukraine in 2022 but then moderated to \$78 dollars per barrel in 2023 and 2024. Prices are forecast to remain at about that level for a few years before climbing slowly to reach \$99 per barrel at the end of the forecast period.

Just as U.S. economic activity drives domestic demand for air transport, foreign economic activity affects international travel demand. In 2021, global real GDP rose above 6 percent, driven by worldwide pandemic relief programs. As central banks raised interest rates to restrain inflation caused by demand imbalances, growth moderated to 2.8 percent in 2024. The forecast for growth in

2025 is for a continued slight slowing to 2.5 percent. The U.S. and the Latin America region slow somewhat below that level, but Europe experiences much slower growth with some individual countries seeing outright declines. The Asia region, however, supports the global figure with growth at about 4 percent. Beginning in 2025, global growth returns close to trend rates although some individual countries take longer.

System traffic in revenue passenger miles (RPMs) is projected to increase by 2.8 percent a year between 2025 and 2045. Domestic RPMs are forecast to grow 2.7 percent a year while International RPMs are forecast to grow slightly faster at 2.8 percent a year. System capacity as measured by available seat miles (ASMs) is forecast to grow slightly slower than RPMs over the forecast horizon.

In aggregate, U.S. carriers posted profits in FY2024, although not all carriers or quarters were profitable. FAA expects U.S. carriers to remain profitable over the next few years as rising demand -- despite higher fares -- more than offsets higher costs for labor and fuel. As carriers continue to moderate capacity growth, pay down debt, innovate their products and maintain pricing power, consistent profitability should emerge. Over the long term, we see a competitive and profitable aviation industry characterized by increasing demand for air travel and airfares growing more slowly than overall inflation, reflecting growing U.S. and global economies.

The general aviation (GA) sector has been experiencing fast growth following the recovery from the impact of the COVID-19 crisis as private aviation became an attractive substitute for wealthier individuals. This trend is reversing and the growth in GA

activity is slowing down, in both the higher end turbine and the lower end piston segments of general aviation use. Flight hours by single-engine piston powered aircraft, most frequently used in training, have shown record increases in the past few years as the highest numbers in new pilot certifications in almost all categories have been recorded. While this increase is softening, FAA expects turbine activity, mostly used in business and closely follows economic growth, to remain robust in the long run, with possible fluctuations in the near term. The long-term outlook for general aviation thus is promising, as growth at the higher-end offsets continuing retirements at the traditional low end, mostly piston-powered part of the sector. The active GA fleet is forecast to increase by 10.6 percent between 2025 and 2045. The turbine aircraft fleet, including rotorcraft, did not show a decline between 2019 and 2023, and continued its fast growth of 3.6 percent in 2022 and 2.3 percent growth in 2023. This fleet is projected to have an average growth rate of 2.1 percent per year during the forecast period. The total piston fleet (single and multi-engine pistons, and piston rotorcraft) declined by 1.6 percent between 2019 and 2023 and is estimated to have shrunk by an additional 0.4 percent in 2024. The average annual growth rate of the piston fleet between 2025 and 2045 is forecast to be -0.1 percent. When experimental aircraft are included, the majority of which are pistons, the growth rate of this combined fleet is 0.04 percent per year over the forecast period, with a total growth of 0.8 percent by 2045. While steady growth in both GDP and corporate profits results in continued growth of the turbine and rotorcraft fleets, the largest segment of the fleet – fixed wing piston aircraft will continue to shrink in the next 20 years, just to be offset by the growing

experimental aircraft fleet. Any additional growth in the GA fleet is expected to occur in turbine aircraft. Despite an average annual growth of 0.5 percent of the active GA fleet between 2023 and 2045, the number of GA hours flown is projected to increase by 19.0 percent during this period (an average of 0.8 percent per year), as growth in turbine, rotorcraft, and experimental hours more than offset declines in fixed wing piston hours.

With robust air travel demand growth in 2025 and steady growth thereafter, FAA expects increased activity growth that has the potential to increase controller workload. U.S. airline activity has recovered from the COVID downturn and is projected to see steady growth over the forecast horizon driven by growing passenger and traffic volumes. Operations at FAA and Contract Towers were 5.0 percent above pre-COVID levels in 2024 and are forecast to grow from these levels, led by strong growth in commercial operations. Large and medium hubs will continue to see faster increases than small and non-hub airports, largely due to the commercial nature of their operations. Over the entire forecast period, operations at FAA and contract towers are forecast to grow 1.1 percent a year with commercial activity growing at almost four times the rate of non-commercial (general aviation and military) activity.

Commercial Space launch activity has been steadily growing over the past 6 years. FY2024 actuals were the highest in U.S. history at 148, accounting for 17.0% of the activity since 1989. FAA forecasts launch and re-entry activity to increase from a low-high range of 174-183 in FY2025 to a low-high range of 259-566 by FY2034. Much of this increase is attributable to the lineup of reusable vehicles, satellite deployment and replacement, and the expectation for

increased human space exploration and space tourism.

The drone segment has been experiencing healthy growth in the United States and around the world over the past decade. The last few years have been no exception despite the profound impact of COVID-19 on the overall economy. The introduction of drones in the National Airspace System (NAS) has opened numerous possibilities, especially from a commercial perspective. That introduction has also brought operational challenges including safe and secure integration of drones into the NAS. Despite these challenges, the drone sector holds enormous promise; potential uses range from individuals flying solely for recreational purposes to individual businesses carrying out focused missions to large companies delivering commercial packages and medical supplies. Public service uses, such as conducting search and rescue support missions following natural disasters, are proving to be promising as well. The FAA forecasts that the recreational small drone fleet will (i.e., base scenario) attain its peak over the next 5 years, from the present 1.87 million units to approximately 1.93 million units by 2029, thus attaining a

cumulative annual growth rate of 0.7 percent between 2024 and 2029. Based on registration data, the size of the commercial drone fleet (> 0.5 lbs. and up to 55 lbs.) totaled approximately 966,000 aircraft by the end of 2024. As the base (i.e., the cumulative total) increases, the FAA anticipates the growth rate of the sector to slow over time, and forecasts the commercial drone fleet to (i.e., base scenario) be about 1.18 million by 2029.

Another sector showing promise is Advanced Air Mobility (AAM). Based on research performed by others, the FAA believes that AAM entry into service (EIS) is likely in the 2025-2027 timeframe. Starting from limited services to initial launch cities, services will be experimental, slow, and likely gain a gradual trajectory of growth until 2030. It is expected that the initial five years after EIS will be required to resolve many outstanding issues including establishing solid AAM business cases. Depending upon the sector's resolution of the outstanding issues, the 2030-2040 timeframe will see a moderate growth trajectory. Beyond that period, FAA anticipates a sustainable, mature sector on a longer-term growth trajectory.