

# FAA AEROSPACE FORECASTS FISCAL YEARS 2008–2025

Developing forecasts of aviation demand and activity levels continues to be challenging as the aviation industry evolves and previous relationships are changing. Nevertheless, the FAA has developed a set of assumptions and forecasts consistent with the emerging trends and structural changes currently taking place within the aviation industry.

The main assumption in developing this year's forecasts is that there will not be a major disruption caused by terrorism against either U.S. or world aviation. Also, the forecasts do not assume further major contractions of the industry through bankruptcy, consolidation, or liquidation.

The commercial aviation forecasts and assumptions are developed from econometric models that explain and incorporate emerging trends for the different segments of the industry. In addition the commercial aviation forecasts are considered unconstrained in that they assume there will be sufficient infrastructure to handle the projected levels of activity.

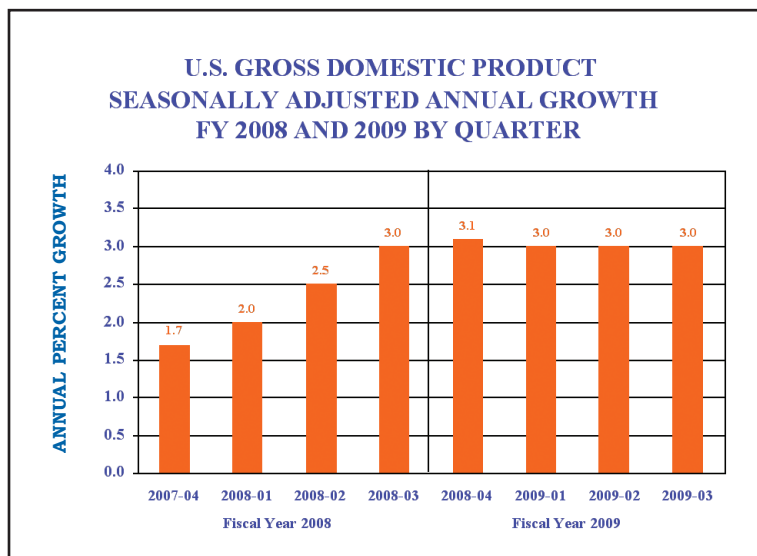
The commercial aviation forecast methodology is a blended methodology. It relies on published schedule information and current monthly trends to drive the short-term (one year out) forecasts and then bases the medium and long-term (2009-2025) forecasts on the results of econometric models. The starting point for developing the commercial aviation forecasts (air carriers and regionals) is the future schedules published in the Official Airline Guide (OAG). Using monthly schedules allows FAA forecasters to develop monthly capacity and demand forecasts for both mainline and regional carriers for fiscal and calendar year 2008.

The general aviation forecasts rely heavily on the discussions with industry experts that occurred at the October 2006 FAA/Transportation Research Board (TRB) Workshop on General Aviation. The assumptions have been updated by FAA analysts to reflect more recent data and developing trends, as well as further information from industry experts.

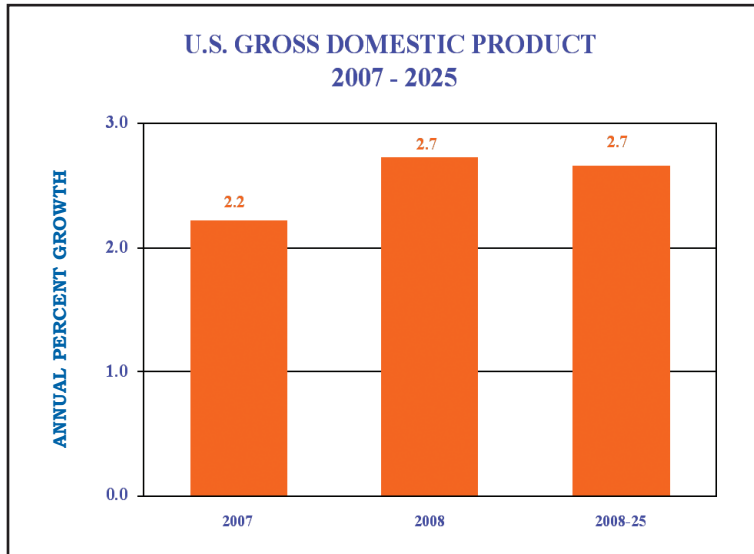
FAA also presents the forecasts and assumptions to industry staff and aviation associations, who are asked to comment on the reasonableness of the assumptions and forecasts. Their comments and/or suggestions have been incorporated into the forecasts as appropriate.

## ECONOMIC FORECASTS

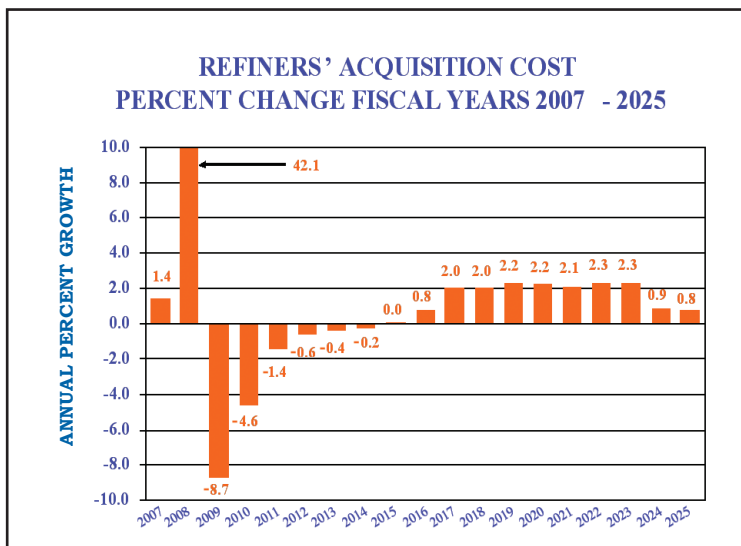
The FAA uses economic forecasts developed by the Executive Office of the President, Office of Management and Budget (OMB) to project domestic aviation demand. The FAA uses the world and individual country economic projections provided by Global Insight, Inc. to forecast the demand for international aviation services. Annual historical data and economic forecasts are presented in tabular form in Tables 1 through 4. OMB projections are presented on a U.S. government fiscal year (October through September) basis. International forecasts are presented on a calendar year basis. OMB forecasts a slowdown in U.S. economic growth in FY 2008 followed by a rebound to more historic rates for the balance of the forecast. On a quarter-by-quarter basis for the next two years OMB projects U.S. economic growth at 1.7 to 3.1 percent through FY 2009. The slowdown in 2008 could result in some difficulties for the U.S. commercial aviation industry, but the return to historic rates after that should allow the industry to continue its growth.



Over the forecast period 2008 through 2025, U.S. economic growth is expected to remain moderate with rates ranging between 2.7 and 3.0 percent through 2018 and then slowing to around 2.5 percent for the balance of the forecast period. According to Global Insight, Inc. the long-term stability of the U.S. economic growth is dependent on continued growth in the workforce, the capital stock, and improved productivity. A major risk to continued U.S. economic growth is the upward pressure on commodity prices, including the price of oil worldwide. These inflationary pressures, if unchecked, could force up inflation and bond yields and lessen domestic demand.



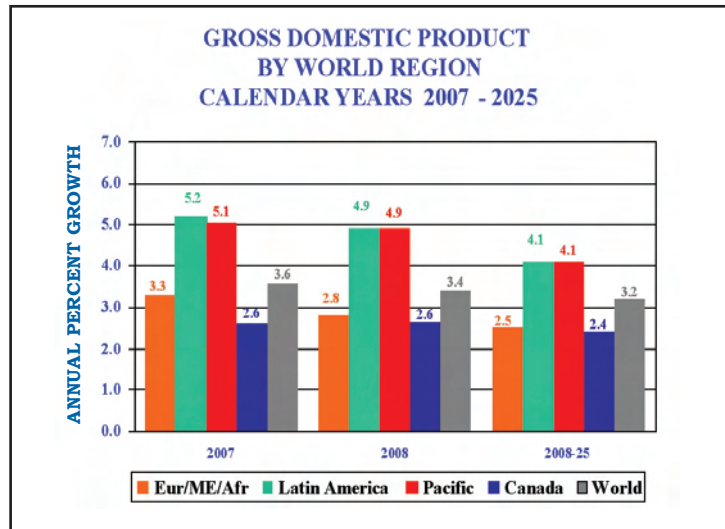
OMB projects the price of oil, as measured by Refiners' Acquisition Cost, to increase by 42.1 percent in 2008 after more than doubling over the past 3 years. Oil prices are then projected to decline steadily to 2014 and then increase slightly less than inflation for the balance of the forecast period.



The inflation rate (as measured by the CPI) is expected to be 3.1 percent in 2008, up substantially from the 2.3 percent rise in 2007. The increase in the rate of inflation in 2008 is mostly attributed to the expected rise of energy prices. Consumer price inflation is expected to rise in 2009 by 2.1 percent and then level off at 2.3 percent a year for the balance of the forecast.

## World Economy

Worldwide economic activity is predicted by Global Insight to expand by 3.4 and 3.6 percent in 2008 and 2009, respectively, and average 3.2 percent over the forecast period.



Latin America and the Asia/Pacific region will continue to have the world’s highest economic growth rates. These regions are expected to see their economic activity grow at annual rates of 4.1 percent over the forecast period. In Asia, China, with a population of 1.3 billion, is forecast to expand by 7.3 percent a year, becoming the world’s second largest economy. India, with a population of 1.1 billion, is projected to see its GDP triple in size, growing at an average rate of 6.8 percent a year during the forecast period. GDP growth in Canada and the Europe/Middle East/Africa nations is anticipated to rise at more moderate rates of 2.4 and 2.5 percent a year, respectively, over the forecast period.

## AVIATION TRAFFIC AND ACTIVITY FORECASTS

Total traffic and activity forecasts for commercial air carriers (the sum of mainline and regional carriers) are contained in Tables 5 through 9. These tables contain year-to-year historical data and forecasts.

Mainline air carrier traffic and activity forecasts and the forecast assumptions are contained in Tables 10 through 18, 20, and 22. These tables contain year-to-year historical data and forecasts.

Regional carrier forecasts and assumptions are found in Tables 23 through 26. These tables provide year-to-year historical and forecast data.

Table 19 provides year-to-year historical and forecast data for cargo activity. Table 21 provides year-to-year historical and forecast data for the cargo jet fleet.

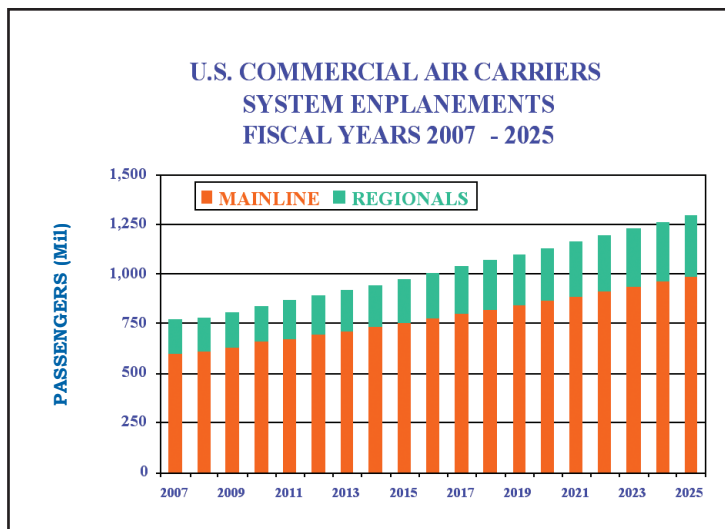
General aviation forecasts are found in Tables 27 through 30. These tables provide year-to-year historical data and forecasts.

Tables 31 through 33 provide forecasts of aircraft activity at FAA and contract facilities.

## Commercial Aviation Forecasts

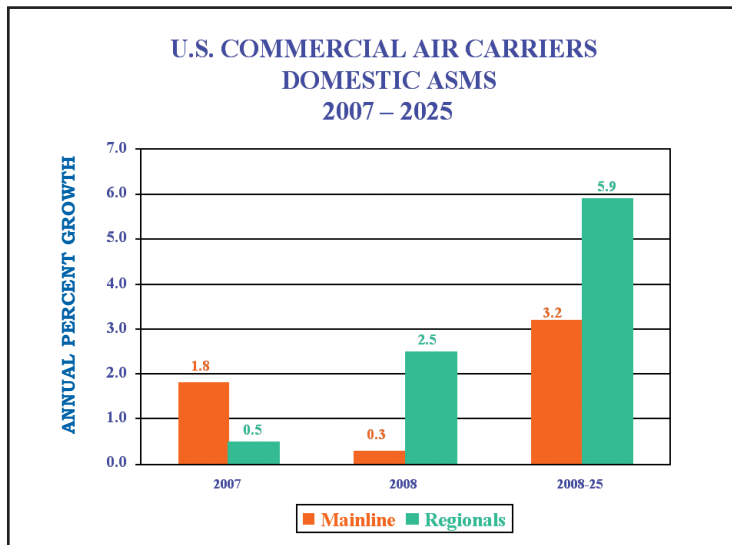
While capacity is forecast to grow in 2008 about the same rate as in 2007, demand growth in 2008 is forecast to be slower than 2007 rates. Capacity is projected to grow 2.7 percent as mainline carrier domestic market capacity increases slowly (0.3 percent) while regional carrier capacity growth remains modest. International markets continue to see healthy growth in capacity, especially the Atlantic, spurred on by the anticipation of the new U.S. – E.U. open skies treaty. Mainline carrier system capacity is projected to increase 2.7 percent while regional carrier capacity rises 2.5 percent.

Passenger demand growth slows in 2008 with system RPMs forecast to increase 2.9 percent (up 2.8 percent and 3.1 percent for mainline and regional carriers, respectively) while passenger enplanements rise 1.5 percent. Growth is projected to speed up in 2009 as system RPMs and passengers increase 4.7 and 3.8 percent, respectively, while capacity increases 4.6 percent. For the overall forecast period, system capacity is projected to increase an average of 4.1 percent a year. Supported by a growing U.S. economy and falling real yields, system RPMs are projected to increase 4.2 percent a year, with regional carriers (6.0 percent a year) growing faster than mainline carriers (4.0 percent a year). System passengers are projected to increase an average of 3.0 percent a year, with regional carriers growing faster than mainline carriers (3.8 vs. 2.8 percent a year). By 2025, U.S. commercial air carriers are projected to fly 2.1 trillion ASMs and transport 1.3 billion enplaned passengers a total of 1.7 trillion passenger miles. Planes will remain crowded, as load factor is projected to continue to increase to 81.7 percent by 2025. Passenger trip length is also forecast to increase by more than 250 miles over the forecast to 1,325.5 miles (up 14.0 miles annually). The growth in passenger trip length reflects the faster growth in the relatively longer international trips and longer domestic trips resulting from increased point-to-point service.



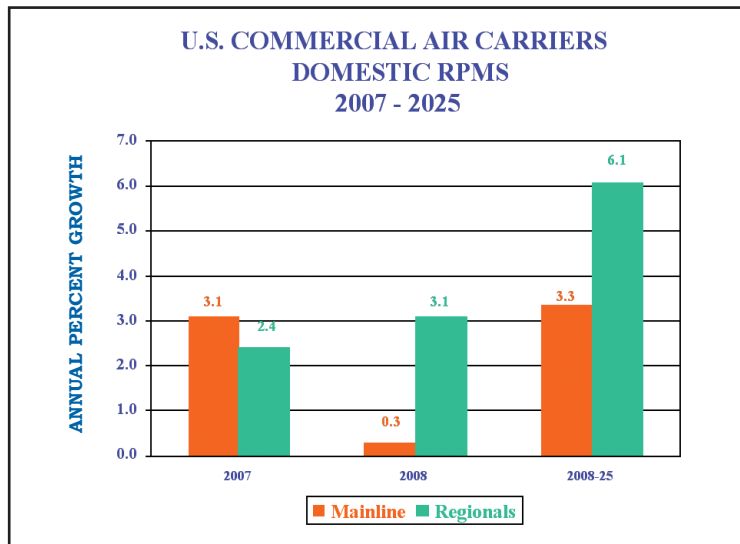
**Domestic Markets**

After a modest rebound in FY 2007, following the significant capacity decline of the prior year, domestic capacity growth in FY 2008 is projected to be 0.6 percent. Mainline carrier capacity is forecast to rise just 0.3 percent following the 1.8 percent increase in 2007 as network carriers continue to shrink and low-cost carriers temper their growth because of continuing record high fuel prices. Regional carrier capacity is forecast to grow 2.5 percent in FY 2008 as increasing numbers of 70 and 90-seat regional jets enter service, while the number of smaller regional jets (50 seats or less) shrinks. Domestic commercial carrier capacity growth quickens in 2009 to 3.3 percent as mainline carriers grow 2.7 percent while regional carriers grow 7.8 percent. For the entire forecast period (2008–2025), domestic capacity is projected to increase at an average annual rate of 3.6 percent, slightly faster than economic growth, with mainline carrier growth lower (3.2 percent) than the regional carriers (5.9 percent).



Sluggish economic growth and high energy prices restrain domestic RPM growth in 2008 (up 0.6 percent) as industry capacity and demand move more into balance. Mainline carrier RPM growth is projected to grow less than one percent (0.3 percent) for the second time in 3 years. As U.S. economic growth rebounds, traffic growth picks up in 2009 (3.4 percent) driven by higher incomes and spending. For the overall forecast period (2008-2025) domestic RPMs are projected to grow an average of 3.7 percent a year driven by continued economic growth and falling real yields. Mainline carriers throughout the forecast period are projected to grow more slowly than regional carriers (3.3 and 6.1 percent a year on average, respectively).

Following a 0.2 percent decline in 2006, passenger enplanement growth rebounded in 2007, up 3.1 percent. Similar to RPMs, passenger volume is expected to grow slowly in 2008 (up 1.0 percent) and speed up in 2009 (up 3.5 percent). During the entire forecast period, domestic enplanements are projected to grow at an average annual rate of 2.8 percent with mainline carriers growing slower than regional carriers (2.5 and 3.8 percent a year, respectively).



On the heels of an 8.5 percent increase (4.7 percent in real terms) in 2006, nominal mainline carrier domestic passenger yield rose just 1.0 percent (1.3 percent decline in real terms) in 2007. Demand weakness in the 2nd and 3rd quarters resulted in year-over-year declines in nominal yield. Demand firmed up during the 4th quarter and modest year-over-year increases in yield returned. Despite industry supply and demand more in balance and skyrocketing fuel prices, yield increases are expected to remain moderate. Newer entrant low-cost carriers (Skybus and Virgin America) will continue to put pressure on fares while the more established low-cost carriers resort to discounting in the face of slower demand. For FY 2008, nominal mainline carrier domestic passenger yield is projected to increase 3.6 percent (0.4 percent increase in real terms). For the entire forecast period, increases in nominal yields are projected to grow at a rate of 1.6 percent a year, while in real terms they are projected to decline an average of 0.7 percent a year. The decline in real yields over the forecast period assumes that increased competition from low-cost carriers will continue and exert pressure on the network carriers to match the lower fares on competitive routes. Competition in domestic markets will come from established low-cost carriers such as Southwest, AirTran, Frontier, and JetBlue, as well as newer entrant carriers.

Domestic commercial carrier activity (departures) at FAA air traffic facilities is projected to grow slower than passenger traffic growth over the forecast period (2.7 percent per year for departures versus 3.7 percent for RPMs). This reflects increased carrier efficiencies in three operational measures—aircraft size, load factor, and trip length.

For the first time since 1998, domestic aircraft size<sup>9</sup> increased in 2007 by 0.1 seats to 120.3 seats. The increase was driven by an 0.8 seat increase in network carrier aircraft size which offset declines in low-cost carrier and regional carrier aircraft size. Domestic aircraft size falls slightly in 2008 to 120.2 seats as mainline carrier aircraft size falls for the first time since 2001. Domestic aircraft size is projected to decrease through 2018 to 118.1 seats, then increase slowly through the balance of the forecast to 118.6 seats by 2025.

<sup>9</sup> Defined as seats per mile flown and computed by dividing ASMs by miles flown.

The FAA's projection of domestic carrier average aircraft size is greatly influenced by carrier fleet plans, publicly known aircraft order books and FAA's expectations of the changing domestic competitive landscape. In the short-term time frame (through 2011), the forecast incorporates several network carrier assumptions: 1) network carrier desire to constrain ASM capacity growth; 2) network carrier "own metal" service on longer-haul routes; 3) the retirement of older inefficient aircraft (many of which are narrow-body); and 4) the shifting of wide-body and larger narrow-body aircraft to international services.

In the longer-term, network carriers will replace their wide-body and larger narrow-body aircraft in their domestic route networks with smaller narrow-body aircraft. In addition, some carriers, such as JetBlue, are turning to smaller aircraft, like the 100-seat Embraer 190, to supplement their network structure. The use of smaller narrow-body aircraft allows mainline carriers to better serve their customers by boosting frequency, as well as improve profitability by more closely matching supply (the number of seats) with demand (the number of passengers).

Mainline carrier domestic aircraft size increased in 2007 by 0.3 seats to 150.6 seats, but is projected to fall in 2008 by 0.7 seats. The overall average for the mainline group will continue to decrease at a slow rate throughout the forecast period. By 2025, mainline carrier domestic aircraft size is forecast to be 147.7 seats as an increasing share of domestic capacity will be flown by aircraft with 160 or fewer seats.

While mainline carriers have been reducing the size of aircraft flown domestically, regional carriers have been increasing the size of their aircraft. The most visible example of this trend is the wave of 70-90 seat regional jet aircraft that are entering the fleet. Regional carriers are better able to support operations of their mainline partners when they can provide capacity that complements market demand. The greater number of the larger 70 and 90-seat regional jets in the fleet coupled with 50-seat jet retirements increases the average seating capacity of the regional fleet – from 49.6 seats in 2007 to 50.5 seats in 2008 up to 63.0 seats in 2025. The changing aircraft fleet mix is narrowing the gap between the size and aircraft types operated by the mainline and regional carriers.

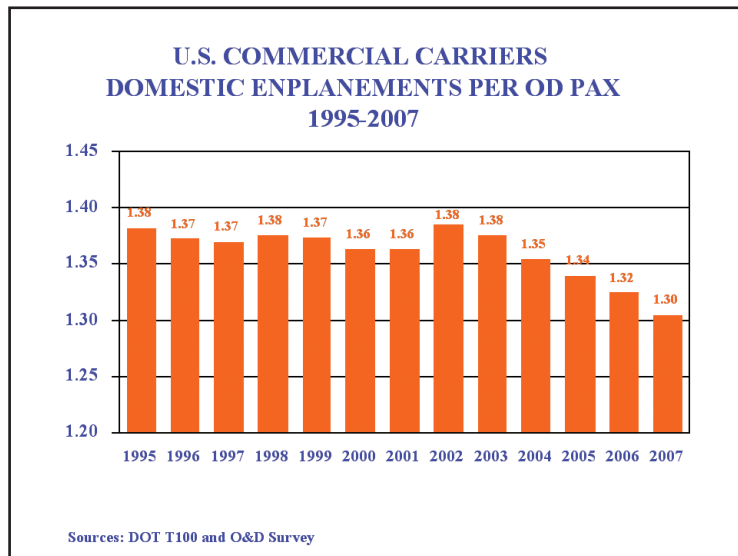
Commercial carrier domestic load factor increased 1.1 points in 2007 to 79.8 percent. The increase in load factor was heavily weighted by the results of the network carriers whose load factor grew 1.9 points to a record 82.5 percent. In 2008, domestic load factor is forecast to remain flat at 79.8 percent as mainline carriers remain essentially flat. After 2008 load factor is projected to increase between 0.1 to 0.2 points a year, reaching 81.6 percent by 2025.

Passenger trip length is forecast to decrease until 2009. In 2007 domestic passenger trip length fell by 0.9 miles to 870.5 miles, the first decline since 1994, as mainline carrier passenger trip length fell by 2.6 miles. Domestic passenger trip length is forecast to decline in 2008 and 2009 by 3.2 and 0.7 miles, respectively, as network carriers continue to restructure their networks and realign capacity. After 2009, trip length is projected to increase steadily for the balance of the forecast, reaching 1,007.8 miles by 2025. The increase in trip length reflects increases in both mainline carrier and regional carrier trip length. Mainline carrier trip lengths are increasing mainly because shorter length routes are continuing to be transferred to regional partner carriers and because of increased point-to-point service. Regional carrier trip lengths increase because the introduction and use of the larger 70 and 90-seat regional jets allow these carriers to service longer haul markets.



Another key factor in predicting aviation activity relative to passenger demand is the level of connecting versus non-stop (origin-destination) traffic. In total, it appears that the number of direct flights by carriers (both network and low-cost) is increasing. However, as the current cycle of U.S. airline industry restructuring unfolds and hub structures change, the impact on local communities and airport activity levels can vary significantly.

The FAA analyzes the ratio of passenger enplanements to origin-destination (O&D) passengers over time to identify changes in connecting versus non-stop traffic. This ratio is an indicator of the tendency of the average passenger to connect during a typical journey. The closer the ratio is to 1.0, the more passengers fly on a point-to-point routing. As the chart below shows, the overall ratio for the U.S. domestic industry varied within a narrow band between 1995 and 2002, but has been decreasing since then. Disaggregating the industry average into network and low-cost carrier segments reveals that while the network carrier trend has mirrored the national average, the low-cost carrier sector has reversed its trend in 2004, and has been increasing since. In FY 2007, the respective connectivity ratios of the network and low-cost carriers were the closest to each other since FY 1999. The FAA's forecast recognizes the changing pattern of domestic traffic connectivity and the relative mix of network versus low-cost carrier traffic volumes. These trends are captured in the forecast's passenger enplanement totals.



## International Markets

### U.S. and Foreign Flag Carriers

FAA provides forecasts of total international passenger demand (the sum of U.S. and foreign flag carriers) for travel between the United States and three world travel areas--Atlantic, Latin America (including Mexico and the Caribbean), and Asia/Pacific--as well as for U.S./Canadian transborder traffic. These forecasts are based on historical passenger statistics from the United States Immigration and

Naturalization Services (INS) and Transport Canada, and on regional world historical data and economic projections from Global Insight, Inc.

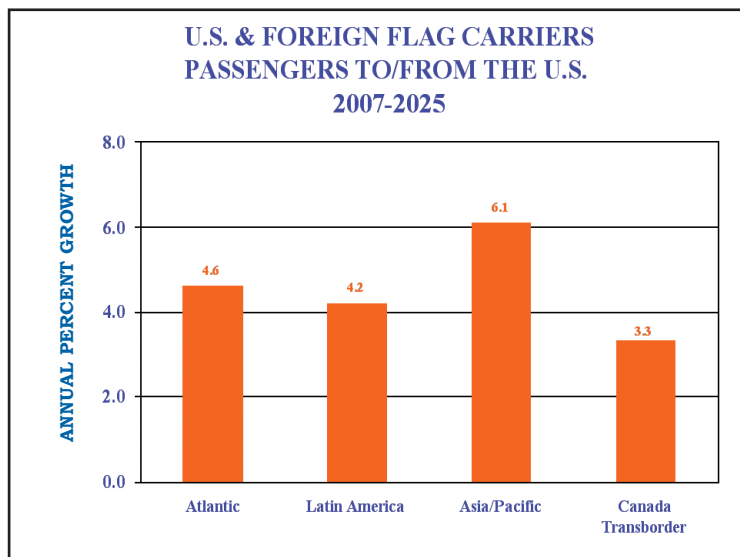
Total passenger traffic between the United States and the rest of the world is estimated to total 147.1 million in CY 2007, 2.9 percent higher than in 2006. Economic growth in both the U.S. and the rest of the world drives international passengers up 5.5 and 6.1 percent, respectively, in 2008 and 2009. For the balance of the forecast, average annual U.S. and world economic growth of 2.6 and 3.1 percent, respectively, leads to international passenger growth averaging 4.5 percent a year, and totaling 331.5 million in 2025.

Over the entire forecast period (2007-2025), high economic growth in the Asia-Pacific market drives passenger growth averaging 6.1 percent a year for this region. China, Taiwan, and India (passenger growth of 11.0, 8.5, and 8.4 percent a year, respectively) are forecast to be the fastest growing markets in the region. Growth in the Japan market (the largest and most mature in the region) is projected to be below the regional average at 4.3 percent a year.

In the Atlantic region, “open skies” between the European Union and the United States fuels passenger growth of 4.6 percent a year over the forecast period. The impact from “open skies” will be strongest during the first four years of the forecast, with passenger growth averaging 7.0 percent a year. After 2011, growth in the Atlantic market returns to a slower pace, averaging 3.9 percent a year. Growth is projected to be highest in Ireland (5.9 percent a year), the United Kingdom (5.2 percent a year), and the Netherlands (4.6 percent a year). The markets of Spain, France and Germany (averaging 4.0, 3.9, and 3.8 percent a year, respectively) are projected to grow slower than the region as a whole.

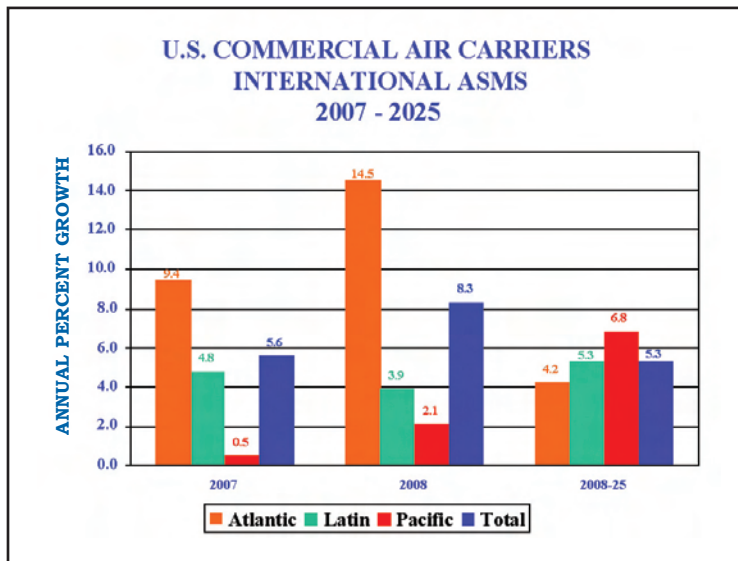
In the Latin America region, passenger growth between 2007 and 2025 is forecast to average 4.2 percent a year. The highest growth is projected for Brazil (average annual growth of 5.5 percent) while the largest market in the region, Mexico, grows at an average of 4.3 percent a year. The slowest rates of growth are projected to occur in the Bahamian, Dominican Republic, and Jamaica markets (averaging growth of 0.8, 2.3, and 2.0 percent a year, respectively).

Growth in the Canadian transborder market is forecast to be close to that of the domestic U.S. market, averaging 3.3 percent a year over the forecast period.

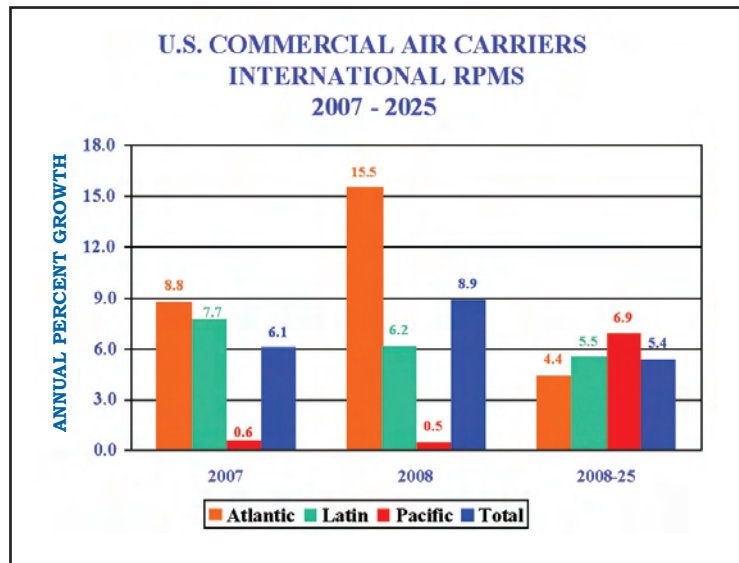


U.S. Flag Air Carriers

In 2007, U.S. commercial air carrier international capacity grew 5.6 percent. Capacity is forecast to increase 8.3 percent in 2008, buoyed by growth in the Atlantic markets of 14.5 percent because of “open skies.” Capacity growth remains robust at 7.7 percent in 2009, and averages 5.2 percent a year for the balance of the forecast. Strong growth throughout the forecast reflects favorable U.S. and world economic activity, the realization by U.S. mainline carriers that international markets are a source of profitable operations, and the implementation of “open skies.”



U.S. commercial air carrier international RPMs increased 6.1 percent in 2007 and enplanements increased 5.1 percent. RPM growth is projected to quicken in 2008 to 8.9 percent, reflecting in part the impact of “open skies.” In 2009, continued strong growth in the Pacific market results in total U.S. carrier international RPMs growing 7.8 percent. For the balance of the forecast, RPM growth is forecast to average 5.2 percent a year with the fastest growth in the Pacific region. A similar pattern is forecast for enplanement growth. International enplanement growth is projected to speed up in 2008, to 6.6 percent, and then drop to 6.0 percent in 2009. Over the balance of the forecast period, enplanements are forecast to increase an average of 4.6 percent a year with the fastest growth in Pacific markets.



The similar growth in U.S. carrier international passengers (4.7 percent a year) compared to total international passengers (4.9 percent a year) reflects stabilization in market share for U.S. airlines. Forecasts of international demand assume U.S. carriers will benefit from the favorable economic activity in both the United States and world markets.

International load factor for U.S. commercial carriers was 80.2 percent in 2007. Load factor is expected to rise to 80.6 percent in 2008 as capacity increases in the Atlantic and Latin markets are surpassed by the growth in traffic. International load factor is then projected to grow slightly to 80.8 percent in 2009, and then increase by just under 0.1 percentage points a year to 81.9 percent in 2025.

International passenger real yields for mainline carriers were up 4.2 percent in 2007. The largest increase was in the Pacific market (up 5.7 percent), and followed by the Atlantic (up 4.4 percent) and Latin markets (up 1.8 percent), reflecting strong demand for travel in the international regions. International yields are expected to increase by 6.4 percent in 2008 and increase an average 1.2 percent a year over the balance of the forecast. In real terms, international yields are forecast to increase 3.2 percent in 2008, and then decline at an annual rate of 1.0 percent over the forecast. The decline in real yields assumes competitive pressures will continue to exert pressure on carriers to hold the line on fare increases. In international markets, this takes the form of expanded open sky agreements and new and existing global alliances.

### **Air Cargo**

Historically, air cargo activity has moved in synch with GDP. Additional factors that have affected the growth in air cargo traffic include declining real yields, improved productivity, and globalization. Significant structural changes have occurred in the air cargo industry. Among these changes are the following: air cargo security regulations by the FAA and TSA; market maturation of the domestic express market; modal shift from air to other modes (especially truck); increases in fuel surcharges; growth in international trade from open skies agreements; use of all-cargo carriers (e.g., FedEx) by the U.S. Postal Service to transport mail; and increased use of mail substitutes (e.g., e-mail).

The forecasts of Revenue Ton Miles (RTMs) are based on several assumptions specific to the cargo industry. First, security restrictions on air cargo transportation will remain in place. Second, most of the shift from air to ground transportation has occurred. Finally, long-term cargo activity will be tied to economic growth.

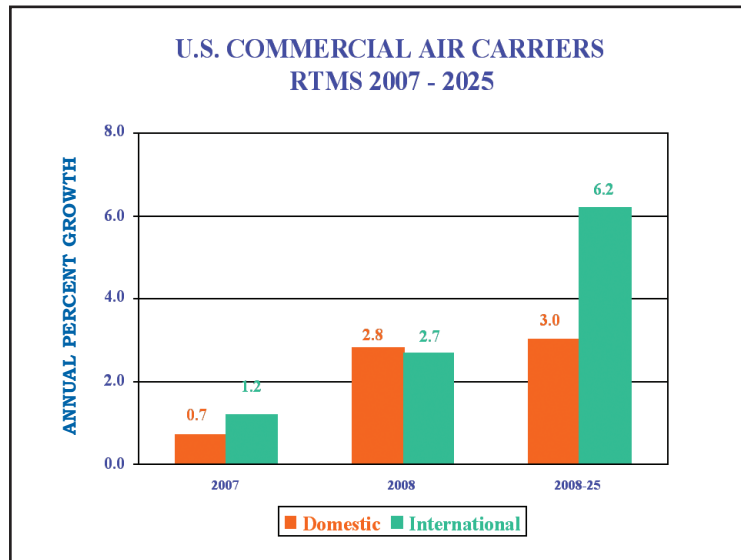
The forecasts of RTMs were based mainly on models that link cargo activity to GDP. Forecasts of domestic cargo RTMs were developed with real U.S. GDP as the primary driver. Projections of international cargo RTMs were based on growth in world GDP, adjusted for inflation. The distribution of RTMs between passenger carriers and all-cargo carriers was forecast based on an analysis of historic trends in shares; changes in industry structure and market assumptions.

Total RTMs are forecast to increase 2.8 percent in 2008 and 6.1 percent in 2009. For the balance of the forecast period, total RTMs are forecast to increase at an average annual rate of 5.1 percent, based mainly on economic growth. The forecast of 96.5 billion RTMs in 2025 represents an average annual increase of 5.0 percent over the entire forecast period.

Domestic cargo RTMs are forecast to increase 2.8 percent in 2008 and 4.4 percent in 2009 driven by growth in the U.S. economy. Between 2009 and 2025, domestic cargo RTMs are forecast to increase at an average annual rate of 2.9 percent, based on projected U.S. economic growth. The forecast of 26.7 billion RTMs in 2025 represents an average annual increase of 3.0 percent over the entire forecast period.

The freight/express segment of domestic air cargo is highly correlated with capital spending. Thus, the growth of this segment in the future will be tied to growth in the economy. The mail segment of domestic air cargo will be affected by overall mail volume.

The all-cargo carriers have increased their share of domestic cargo RTMs flown from 65.4 percent in 1997 to 80.9 percent in 2007. This is because of significant growth in express service by FedEx and United Parcel Service coupled with a lack of growth of domestic freight/express business for passenger carriers. There are several recent factors that account for the relative growth of the all-cargo sector. One was the October 2001 FAA security directive that strengthened security standards for transporting cargo on passenger flights. Another factor was the inclusion of Airborne Express into the cargo data reported to the Department of Transportation beginning in 2003. In addition, with passenger load factors at record levels, there is less space available for belly cargo. The all-cargo share is forecast to increase to 84.4 percent by 2025 based on increases in wide-body capacity for all-cargo carriers and security considerations.

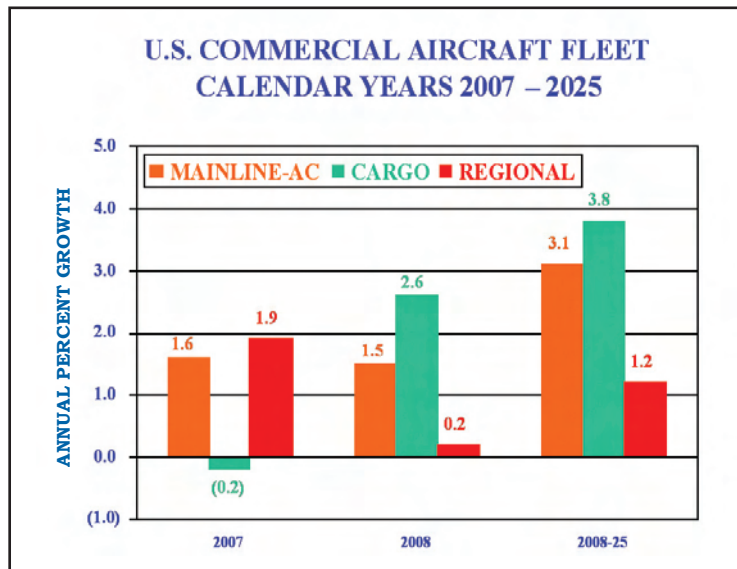


International cargo RTMs are forecast to increase 2.7 percent in 2008 and 7.3 percent in 2009 with growth of the world economy and expansion in trade with open skies agreements. For the balance of the forecast period, international cargo RTMs are forecast to increase an average of 6.2 percent a year based on projected growth in world GDP. The forecast 69.7 billion RTMs in 2025 represents an average annual increase of 6.0 percent over the entire forecast period.

All-cargo carriers increased their share of international cargo RTMs flown from 54.5 percent in 1997 to 66.7 percent in 2007. This increase has resulted from the demand for expedited service, activity from the war in Iraq, and the change in reporting of contract services. The all-cargo share is forecast to increase to 72.0 percent by 2025 based on increased capacity.

## Commercial Aircraft Fleet

The number of commercial aircraft is forecast to grow from 7,816 in 2007 to 12,202 in 2025, an average annual growth rate of 2.5 percent or 244 aircraft annually. The commercial fleet grows by a net 92 aircraft in 2008 and 80 aircraft in 2009; however, most of this growth occurs in low-cost carriers.



The number of passenger jets in the mainline carrier fleet increased by 63 aircraft in 2007 and is expected to increase by 60 aircraft in 2008 and 103 aircraft in 2009. The mainline air carrier passenger fleet increases by an average of 162 aircraft a year between 2008 and 2025, totaling 6,783 aircraft in 2025. The narrow-body fleet (including E-190's at JetBlue and US Airways) is projected to grow by 117 aircraft annually over the forecast period; the wide-body fleet grows by 40 aircraft a year as the Boeing 787 and Airbus A350's enter the fleet.

The regional carrier passenger fleet is forecast to increase by 6 aircraft in 2008. After 2008, the regional carrier fleet is expected to increase by an average of 37 aircraft (1.2 percent) over the remaining years of the forecast period, reaching 3,469 aircraft in 2025. The number of regional jets (90 seats or fewer) at regional carriers is projected to grow from 1,803 in 2007 to 3,114 in 2025, an average annual increase of 3.1 percent. All the growth in regional jets over the forecast period occurs in the larger 70 and 90-seat aircraft. During the forecast period, more than 1,000 regional jets of 50 or less seats are removed from the fleet, reflecting the relaxation of scope clauses. The turboprop/piston fleet is expected to decline from 1,033 in 2007 to 355 in 2025. Turboprop/piston aircraft are expected to account for just 10.2 percent of the regional fleet in 2025, down from a 36.4 percent share in 2007.

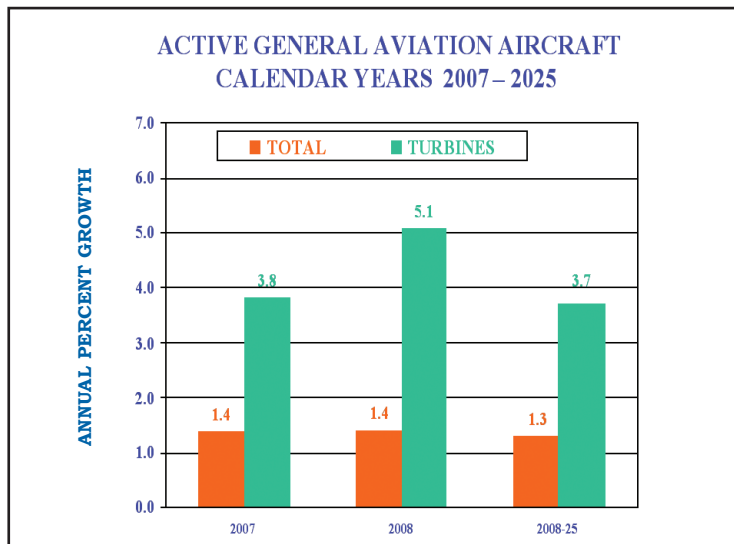
Cargo large jet aircraft are forecast to increase by 52 aircraft over the next 2 years (from 1,008 to 1,060 aircraft in 2009), and total 1,950 aircraft in 2025. The narrow-body jet fleet is projected to decline by 14 aircraft a year over the 17-year forecast period. The wide-body jet fleet is projected to increase by 40 aircraft yearly.

## General Aviation

The FAA forecasts the fleet and hours flown for single-engine piston aircraft, multi-engine piston, turbo-props, turbojets, rotorcraft (piston, turbine), sport, experiment and other (glider, balloon). The FAA forecasts “active aircraft,”<sup>10</sup> not total aircraft. The FAA uses estimates of fleet size, hours flown, and utilization from the General Aviation and Air Taxi Activity and Avionics Survey (GA Survey) as baseline figures upon which assumed growth rates can be applied. Beginning with the 2004 GA Survey there were significant improvements to the survey methodology. At the same time the survey methodology changed, large changes in both the number of aircraft and hours in many categories occurred. The results of the 2006 Survey are consistent with the results of the 2004 and 2005 Surveys reinforcing our belief that the methodological improvements have resulted in superior estimates relative to those in the past. Thus, they are used as the basis for our forecast. Because the Survey is on a calendar year basis, the 2006 statistics are the latest available. Figures for 2007 are estimated based on other activity indicators and the forecasts of activity begin in 2008 and continue through 2025.

As the demand for business jets has grown over the past several years, the current forecast assumes that business use of general aviation aircraft will expand at a more rapid pace than that for personal/sport use. The business/corporate side of general aviation should also continue to benefit from a growing market for new very light jets (VLJs). In addition, corporate safety/security concerns for corporate staff, combined with increasing flight delays at some U.S. airports have made fractional, corporate, and on-demand charter flights practical alternatives to travel on commercial flights.

The active general aviation fleet is projected to increase at an average annual rate of 1.3 percent over the 18-year forecast period, growing from an estimated 225,007 in 2007 to 286,500 aircraft by 2025. The more expensive and sophisticated turbine-powered fleet (including rotorcraft) is projected to grow at an average of 3.7 percent a year over the forecast period with the turbine jet fleet increasing at 5.6 percent a year.



<sup>10</sup> An active aircraft is one that flies at least one hour during the year.



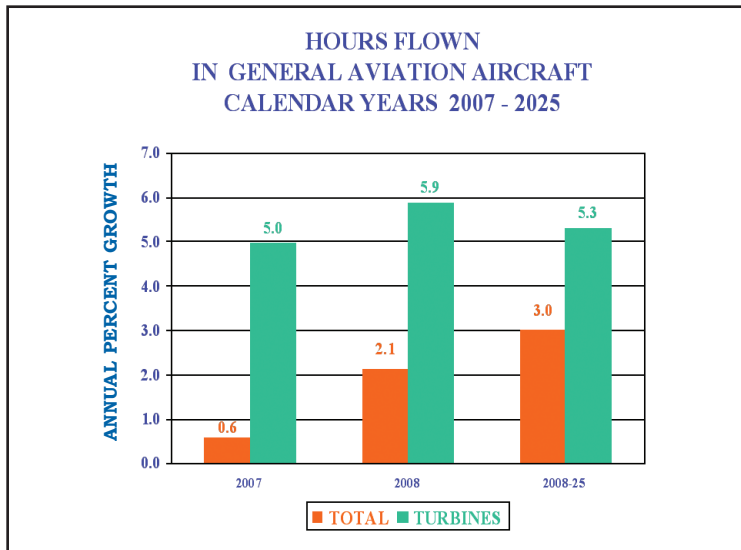
At the October 2006 TRB/FAA workshop, industry experts suggested the market for new VLJs could add 500 aircraft a year to the active fleet by 2010. The relatively inexpensive twin-engine VLJs (priced between \$1 and \$2 million) are believed by many to have the potential to redefine the business jet segment by expanding business jet flying and offering performance that could support a true on-demand air-taxi business service. The actual number of VLJ deliveries in 2007 fell short of our assumption in last years forecast (143 vs 350). However, the current forecast assumes that they will continue to enter the active fleet at a rate of 400 to 500 aircraft a year, reaching 8,145 aircraft by 2025.

The number of active piston-powered aircraft (including rotorcraft) is projected to decrease from the 2006 total of 167,008 through 2008 and then increase gradually to 181,345 by 2025. Over the forecast period, the average annual increase in piston-powered aircraft is 0.5 percent. Although piston rotorcraft are projected to increase rapidly (4.7 percent a year) they are a relatively small part of this segment of general aviation aircraft. Single-engine fixed-wing piston aircraft, which are much more numerous, are projected to grow at much slower rates (0.5 percent respectively) while multi-engine fixed wing piston aircraft are projected to decline 0.9 percent a year. In addition, it is assumed that relatively inexpensive VLJs and new light sport aircraft could erode the replacement market for traditional piston aircraft at the high and low ends of the market respectively.

Starting in 2005, a new category of aircraft (previously not included in the FAA's aircraft registry counts) was created: "light sport" aircraft. At the end of 2006 a total of 1,273 aircraft were estimated to be in this category. The forecast assumes registration of 5,600 aircraft over a 5-year period beginning in 2005 including both newly built aircraft and conversions from ultralight trainers. By 2025 a total of 14,700 light sport aircraft are projected to be in the fleet.

The number of general aviation hours flown is projected to increase by 3.0 percent yearly over the forecast period. Much of the increase reflects increased flying by business and corporate aircraft as well as steady if relatively small annual percentage increases in utilization rates for piston aircraft. Hours flown by turbine aircraft (including rotorcraft) are forecast to increase 5.3 percent yearly over the forecast period, compared with 1.1 percent for piston-powered aircraft. Jet aircraft are forecast to account for most of the increase, with hours flown expanding at an average annual rate of 7.7 percent over the forecast period. The large increases in jet hours result mainly from the introduction of VLJs, as well as increases in the fractional ownership fleet and its activity levels. Fractional ownership aircraft fly about 1,200 hours annually compared to approximately 350 hours for all business jets in all applications.

Very light jets (VLJs) are expected to be used much differently than traditional turbojets. Because of this, FAA has made separate assumptions for traditional turbojets and VLJs. The assumptions underlying the VLJ forecast are vital for both fleet and hours flown. Assumptions are made for the entire VLJ fleet and also for the distribution of that fleet among air taxi use, private use and shared ownership use. For the various uses, assumptions are made about utilization rates which, along with fleet sizes, determine hours flown. Utilization rates for VLJs will vary by mission. VLJ air taxis are expected to average approximately 1,500 hours per year, shared ownership users about 525 and private use 375. By 2025 the annual utilization rate for all VLJs is forecast to be 1,014 hours. Traditional (non-VLJ) turbojets are expected to average approximately 397 hours per year by 2025, as VLJs are expected to have a greater share of their use in on-demand air taxi than the traditional turbojets.



The number of active general aviation pilots (excluding air transport pilots) is projected to be 507,930 in 2025, an increase of almost 61,000 (up 0.7 percent yearly) over the forecast period. Commercial pilots are projected to increase from 115,127 in 2007 to 126,150 in 2025, an average annual increase of 0.5 percent. The number of student pilots is forecast to increase at an average annual rate of 1.0 percent over the forecast period, growing from 84,339 in 2007 to 100,200 in 2025. In addition, FAA is projecting that 20,600 new sport pilots will be certified during the forecast period. As of December 31, 2007, the number of sport pilot certificates issued was 2,031 reflecting a growing interest in this new “entry level” pilot certificate that was only created in 2005. The number of private pilots is projected to increase an average of 0.2 percent a year over the forecast period to total 220,550 in 2025.

## FAA Workload Forecasts

There were 499 towered airports at the end of September 2007--264 FAA towers and 235 contract towers. While the number of FAA towers is expected to remain constant at 264 in 2008, the number of FAA contract towered airports is forecast to increase by 9 to 244. In 2007, aircraft activity at these 9 airports totaled roughly 1.06 million operations, with general aviation accounting for 93.7 percent of the total activity.

### FAA and Contract Towers

Activity at the combined FAA and contract towers totaled 61.1 million operations in 2007, essentially the same as in 2006. Activity is projected to increase only 0.4 percent in 2008, as commercial operations remain flat. Growth in activity picks up in 2009 (2.3 percent) as commercial activity rises 2.6 percent. For the balance of the forecast activity growth varies between 1.8 and 1.9 percent per year, reaching 84.0 million operations in 2025.

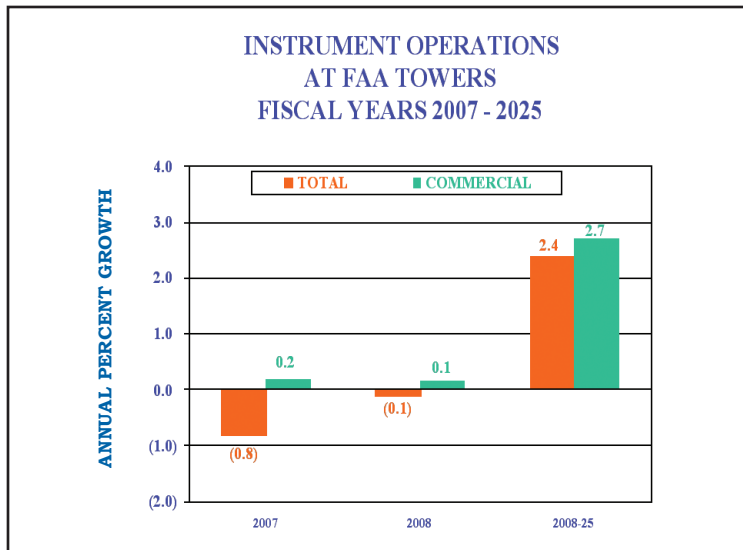
Most of the growth over the forecast period results from increased commercial aircraft activity (up 2.5 percent annually). Air carrier activity is projected to increase 1.1 percent in 2008 as carriers slowly add capacity in an environment of record high fuel prices and slowing economic growth. In 2009, air carrier

activity is projected to increase 2.6 percent as airline capacity increases, and rises an average of 2.3 percent a year over the forecast period. Commuter/air taxi operations are forecast to fall 1.4 percent in 2008 then rise 2.7 percent in 2009 as increased air taxi activity is expected to stimulate growth in this user category. Over the entire duration of the forecast, commuter/air taxi operations are projected to increase 2.7 percent a year.

In 2007 general aviation activity increased for the first time since 1999 (up 0.1 percent) and is forecast to increase 0.9 percent in 2008 and 2.3 percent in 2009. For the forecast period, general aviation activity at towered airports is projected to increase an average of 1.3 percent a year, to 41.9 million operations in 2025. Much of the total growth in 2008 and 2009 results from the extra activity at the 9 new contract towers that was not in the previous database. General aviation activity at combined FAA/contract towers grows in line with the modest increase forecast for general aviation piston hours already cited. Most operations at the smaller towers are piston in nature, while those at the largest airports tend to be turbine operations.

Military activity, which fell 2 percent in 2007, is forecast to fall 0.5 percent in 2008. We do not forecast military operations but instead assume a constant level of activity over the forecast period.

Instrument operations<sup>11</sup> at FAA towered airports (45.4 million) in 2007 fell (0.8 percent) for the third year in a row. They are projected to fall slightly (down 0.1 percent) in 2008 as increases in air carrier activity are offset by declines in commuter/air taxi and general aviation activity. Instrument activity is then forecast to rise 1.4 percent in 2009 as all non-military categories see an increase. For the entire forecast period, instrument operations grow an average of 2.3 percent a year, totaling 68.0 million in 2025.

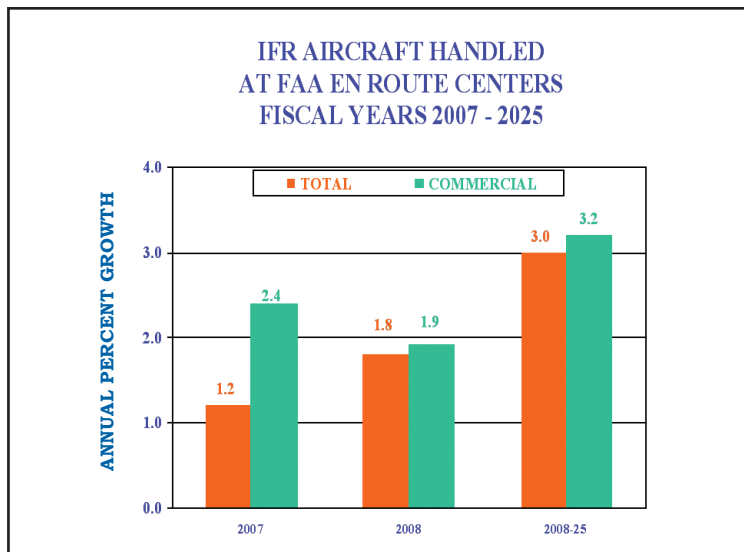


Over the forecast period, commercial aircraft instrument operations are forecast to increase at 2.5 percent per year with increases in commuter/air taxi activity surpassing air carrier activity. General aviation instrument operations are projected to grow 2.1 percent a year, reflecting in part the expected impact of the introduction of VLJs to the general aviation fleet. Military activity is expected to fall slightly in 2008 (down 0.8 percent) and remain at its 2008 level (2.5 million) of activity throughout the forecast period.

<sup>11</sup> Instrument operations are defined as arrivals or departures of an aircraft in accordance with an IFR flight plan or special VFR procedures or an operation where IFR separation between aircraft is provided by the terminal control facility.

**En Route Centers**

The number of IFR aircraft handled at FAA en route traffic control centers increased 1.2 percent to 46.8 million in 2007, as all user groups except military posted increases in activity. Activity at en route centers is forecast to increase by 1.8 percent in 2008 and 1.9 percent in 2009, respectively, with increases in air carrier and general aviation activity. After 2010 through the balance of the forecast period, en route activity increases by more than 3 percent annually, reaching 78.0 million aircraft handled in 2025. Over the entire forecast period, commercial activity is projected to increase at an average annual rate of 3.1 percent, reflecting increases in the commercial fleet and aircraft stage lengths. During the same period, general aviation activity is projected to grow almost as fast, 2.9 percent a year, reflecting the expected impact of VLJs and additional business aviation activity. Military activity is held constant at the 2007 activity level throughout the forecast period.



Activity at FAA en route centers is growing faster than at FAA towered airports because more of the activity in en route centers is from the faster growing commercial sector and high-end (mainly turbine) general aviation flying. Much of general aviation activity at FAA towered airports, which is growing more slowly, is local in nature, and does not impact the centers.