Forecast Uncertainties

The forecasts in this document are forecasts of aviation demand, driven by models built on forecasts of economic activity. There are many assumptions in both the economic forecasts and in the FAA models that could affect the degree to which these forecasts are realized. This year’s forecast is powered, at least in the short-term, by a number of factors including the strength of the U.S. and global economies. Shifting international dynamics and impacts resulting from the U.S. administration’s economic policies could drive further changes. Also, as numerous incidents in the past few years remind us, terrorism remains among the greatest worldwide risks to aviation growth. Any terrorist incident aimed at aviation could have an immediate and significant impact on the demand for aviation services that could be greater than its impact on overall economic activity.

Although oil prices remained below $50 per barrel for most of 2017, the recent volatility reminds us there is still considerable uncertainty as to the future direction of oil prices. The FAA’s baseline forecast (derived from economic assumptions in IHS Global Insight’s January 2018 U.S. macro forecast and 30-Year Focus released during the fourth quarter of 2017) calls for oil prices to increase to $54 per barrel in 2018 and rise steadily after 2020. By 2030 oil prices exceed $100 per barrel and approach $120 per barrel by the end of the forecast period in 2038. Some forecasters are calling for a more gradual rebound in the price of oil. In October 2017, the World Bank released its latest commodity price forecast. The forecast calls for oil prices to rise to $56 per barrel in 2018, remaining below $65 until 2025, and reaching $70 per barrel by 2030. The International Monetary Fund (IMF) also sees oil prices increasing at more moderate rates than the FAA’s base forecast. In its July 2017 release, the IMF forecast had oil prices increasing from $49 per barrel in 2017 to only $54.80 per barrel by 2022. Over the long run, lower oil prices give consumers an impetus for additional spending, including air travel, and should enhance industry profitability.

The baseline forecast incorporates the December 2017 U.S. tax cuts and some additional infrastructure spending in 2018 and beyond. However, there is considerable uncertainty as to the magnitude, timing, and nature of these programs that ultimately determines the impact on the future growth of the U.S. economy. In addition, how the U.S. will engage with the rest of the global economy over the next several years continues to be evolve. Under the right conditions, a period of sustained high and more inclusive growth along with increased financial stability could occur but there is also the possibility of an outcome that leads to greater global economic fragmentation, slower growth, and increased financial instability.

The baseline forecast assumes that global economic growth will accelerate after 2017, but weakness in certain regions may threaten the strength and sustainability of the expansion. The baseline forecast assumes that China and India will be growth engines for emerging economies as China successfully transitions the economy from reliance on heavy manufacturing and resource industries to one more oriented towards the services and technology sectors and India continues to implement reforms to make its economy more competitive. While economic
growth appears to be accelerating in the U.S., there are concerns about the strength of demand in Japan and in the European Union as these areas continue to be constrained by structural economic problems (high debt, slow population growth, weak public finances for example) and the outcome of political elections. Furthermore, the actions taken to stabilize the global economy during the Great Recession continue to hamper economic policy makers. There are concerns that central banks may not raise interest rates in time to contain asset bubbles and inflationary expectations or raise rates too fast and undermine the recovery. In advanced economies, governments need to shore up their finances and recent actions have many analysts concerned that policy makers will not take the steps needed. There exists a non-trivial possibility that authorities will either act prematurely or be excessively timid and late in taking necessary steps to maintain a healthy global economy. The current forecasts assume strong passenger growth for travel between the United States and other world regions. Any slowing of worldwide economic activity could seriously inhibit the growth in global passenger demand.

With the approval of the Alaska Airlines/Virgin America merger, the outlook for further consolidation via mergers and acquisitions (M&A) appears to be rather limited. Based on FY 2017 data, the top 6 (American, Delta, United, Southwest) plus Alaska/Virgin and JetBlue accounted for more than 85% of the U.S. airline industry capacity and traffic. For many low cost carriers, the sheer size of merger transactions or the amount of risk associated with a merger makes further merger activity unlikely. For the network carriers, it is unclear how regulatory authorities will respond to any future proposed mergers.

The forecast assumes the addition of sizable numbers of large regional jets (70 to 90 seats) into the fleet of regional carriers. However, network carrier consolidation and new rules on pilot training have left regional carriers saddled with either excess capacity or a lack of pilots. Although air travel demand continues to recover, the bankruptcy filing of Republic Airlines in February 2016 is a reminder that financial pressures on regional operators have not abated. Network carriers continue to adjust the size and breadth of their networks. In many cases there are not opportunities for regional carriers to backfill the loss of the mainline service. Delta is well along in its plans to reduce its small (read 50 seat) regional jet fleet and plans to retire another 50 to bring its total to just 125 by 2018, down from almost 500 at the end of 2009. United has reduced the number of small regional jets flown by its partners from an estimated 380 in 2012 to 256 by the end of 2017. However, it plans to add 40 more small regional jets to its fleet in 2018 as part of its latest expansion plan. Meanwhile American has trimmed its small regional jet fleet by 90 aircraft since the beginning of 2015 from 297 to 207 aircraft and has plans to reduce an additional 5 aircraft in 2018. At the same time the carrier plans to add 15 larger regional jets to its fleet in 2018, on top of the 86 that have been added since 2015. While these actions may provide some opportunities for well positioned regional carriers, the overall impact of consolidation so far has been to reduce opportunities for regional flying substantially.

After suffering through a significant downturn in 2009, business and corporate aviation have seen a partial recovery during the past eight years. The future pace of the recovery in business and corporate aviation is based largely upon the prospects for economic growth and corporate profits. Uncertainty in
these leading indicators poses a risk to the forecast, but the risk is not limited to these factors. Other influences, such as potential environmental regulations and taxes do not seem to be as much of a concern in the short term, but over the long term, uncertainties about the direction of these influences may place downward pressure on the forecast. On the other hand, there could be a pent-up demand for business jets in the near term that could push the forecast higher. While corporate profits have been high for several years, perceived economic and political uncertainties have caused companies to postpone their purchase of new business aircraft. With the U.S. administration’s emphasis on policies designed to stimulate economic growth and limit regulation, and the favorable terms of the new tax law, companies are feeling more optimistic about their future prospects that can translate into additional business jet sales. The impact of fuel price movements on business aircraft demand is also uncertain. Overall, the positive effect of declining fuel prices on corporate profits translates to increased demand for business aircraft. However, business aircraft demand from energy related industries will be negatively impacted if fuel prices remain low (by historic standards) for an extended period in the future.

Other factors, such as new and more efficient product offerings and increased competition from new entrant manufacturers, serve to broaden the potential of the industry. Raising the level of security restrictions, and the subsequent travel hassles placed on airline passengers, could make corporate jet travel look increasingly appealing.

Not only is the volume of aircraft operating at most large hubs expected to increase over the next 20 years, but the mix of aircraft is changing for this same period. The expected increases in the numbers of regional jets and business jets as well as the anticipated widespread deployment of UAS into the national airspace system will make the FAA’s job more challenging. This change in the mix of aircraft will most likely add to workload above and beyond the increasing demand for aviation services resulting from the growth in operations over the forecast period.

While overall activity at FAA and contract towers increased 0.7 percent in 2017, activity at large and medium hub airports (60 in total) increased 0.4 percent in 2017 and delays remained at historically high levels at many U.S. airports. FAA forecasts operations at these airports to grow substantially faster than the overall national trend. As demand continues to grow and workload increases, congestion and delays could become critical limits to growth over the forecast period. FAA’s forecasts of both demand and operations are unconstrained in that they assume that there will be sufficient infrastructure to handle the projected levels of activity. Should the infrastructure be inadequate and result in even more congestion and delays, it is likely that the forecasts of both demand and operations would not be achieved.

Increasing concerns about aviation environmental impacts could potentially limit or delay the ability of the aviation sector to grow to meet national economic and mobility needs. Airspace modernization and airport expansion or new construction are often contentious because of concerns over noise, air quality, and water quality. Community concerns about aviation noise have led to increasing levels of public debate, political interest, and even litigation. Without effective measures to mitigate and abate aviation noise, the infrastructure projects needed to achieve aviation growth may be delayed.
The environmental noise and emissions issues associated with overflight operations also present global challenges. In addition to providing economic benefits, technologies to improve aircraft fuel efficiency and reduce fuel consumption provide benefits in terms of reduced noise and emissions. A global market-based measure for international carbon dioxide emissions will help ensure an approach that is economically preferable to a patchwork of State or Regional-level regulations around the world. Continued advancements in technologies that result in improved fuel efficiency, reduced fuel consumption, noise reduction and reduced emissions are also required to ensure that access restrictions or operating limitations are not imposed on the in-service fleet, which in turn may depress growth.