

## ▶▶▶ RISKS TO THE FORECAST

In the short term the FAA is confident that its current outlook for aviation demand and activity can be achieved. However, this year's forecast is driven by a number of factors including security, as well as the strength of the economic recovery. As numerous recent incidents (the attempted bombing of a Northwest airliner on Christmas Day 2009, the discovery of multiple devices on cargo flights out of Europe in October, 2010) remind us, terrorism remains among the greatest risks to achieving the forecast. Because of aviation's high visibility and global reach, concerns remain about international terrorism. Any terrorist incident aimed at aviation would have an immediate and significant impact on the demand for aviation services.

While oil prices were considerably higher in 2010 than they were in 2009 (though lower than in 2008), there is still considerable uncertainty as to the level of oil prices once the economic recovery is on firmer ground. FAA's baseline forecast (derived from economic assumptions in Global Insight's 30-Year Focus released third quarter 2010) calls for steady increases in oil prices after 2010. The increases are relatively modest, with the price of oil approaching \$100/barrel by 2018 and remaining around that level through 2026, and then increasing gradually for the remainder of the forecast. Some forecasters are calling for a much sharper increase in the price of oil. The U.S. Energy Information Administration (EIA) in its 2011 Annual Energy Outlook is projecting oil prices to exceed \$100/barrel by 2015-2016 and continue rising over the next 20 years, reaching \$165-\$175 per barrel in 2030. While lower oil prices give consumers an impetus for additional spending, including air travel, and increases the chances for industry profitability, higher oil prices could lead to further shifts in consumer expenditures away from aviation, dampening a recovery in air transport demand. Furthermore, higher oil prices, especially in the near term, could wipe out any chance of industry profitability, continue to pressure airline costs, delay balance sheet improvement and discourage expansion plans or new orders for aircraft as carriers focus on maintaining and increasing cash balances.

Although the global economy has begun to grow again, data suggest that a two track recovery is emerging, with growth concentrated in a relatively few countries. As a result, the ensuing economic recovery may not be a balanced one and there is considerable doubt about the strength and sustainability of the expansion. The baseline forecast assumes that growth in China will be significantly higher than in the other large economies – U.S., Japan and the European Union. Doubts remain over the strength of demand in the U.S., Japan and in the European Union as these areas continue to be constrained by structural economic problems and institutional constraints. In addition, many countries in the European Union are beginning to implement contractionary policies, aimed at reducing the growth in government and personal debt, which could hamper the economic recovery in the region. Furthermore the steps that were taken to turn the global economy around may prove to be excessive, since the resulting surge in liquidity growth seems to be inflating asset bubbles and exacerbating existing global imbalances. Once the global economy recovers from the current downturn, there could be an increasing risk from asset bubbles and macroeconomic imbalances, which could end up in a deeper, more prolonged, and less manageable recession and financial crisis. The current forecasts assume strong passenger growth for travel between the United States and other world regions. Any slowing of global economic activity could seriously inhibit the growth in world passenger demand.

The outlook for further consolidation via mergers and acquisition (M&A) is mixed. For network carriers, aside from American and USAirways, there is little scope for further consolidation. Much excitement has been generated in the low cost carrier sector with the announced merger between Southwest and

AirTran, and lots of material has been written about additional possible combinations involving other low cost carriers. But there are significant obstacles to further consolidation in the low cost carrier sector. In particular the financial condition of many low cost carriers limits the possibilities of additional merger activity. For many low cost carriers, the sheer size of a merger transaction or the amount of financial risk associated with a merger makes further merger activity unlikely, in our view. However, US airlines are exploring other options including global alliances. Many of the major carriers in the US are members of global alliances that operate with some measure of anti-trust immunity from the US DOT. While anti-trust immunity may provide flexibility to airline operators across borders, it may create an anti-competitive environment in the marketplace. These market consolidating vehicles, particularly the anti-trust immunity provisions, may invite increased regulatory scrutiny. If such oversights are launched in the future, this will complicate the evolving structure of the airline industry and may impact demand via new regulations.

The forecast assumes the addition of sizable numbers of regional jets into the fleet of regional carriers. However, the regional carriers' future is closely linked to those of the larger network carriers. As demand continues to slowly recover, increased financial pressures on regional operators have appeared. Furthermore, as consolidation has occurred among the network carriers, certain regional carriers have found themselves either saddled with excess capacity or lack of sufficient capacity, or lack of feed traffic. The experience of the Delta/Northwest combination and the impending United/Continental combination may see opportunities for regional flying substantially reduced.

After suffering through a significant downturn in 2009, business and corporate aviation saw a partial recovery in 2010. The pace of the recovery in business and corporate aviation are largely based upon the future prospects of economic growth and corporate profits. Future uncertainty in these leading indicators could pose a risk to the forecast, but the risk is not limited to these factors. Public perception of business and corporate aviation, potential environmental regulations and taxes, along with increased security measures placed on business jets, will place downward pressure on the forecast.

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. Estimates show that a record number of new business jet deliveries are overseas and, with the potential easing of regulations on the use of airspace in foreign countries, the scenario for business jet manufacturers looks all the more promising. Raising the amount of security restrictions, and subsequent travel hassles placed on airline passengers, could make corporate jet travel increasingly appealing.

The mix of aircraft operating at most large hubs is also expected to become increasingly complex over the forecast period. The expected increases in the numbers of regional jets and business jets will increase the complexities of the national airspace system and make the FAA's job more challenging. The increased complexity of the mix of aircraft serves to compound the increases in workload strictly due to the increasing demand for aviation services projected over the forecast period.

Although activity at most U.S. airports fell in 2010, delays remained at historically high levels at many U.S. airports. As demand recovers and workload increases, congestion and delays could become a critical limit to growth over the forecast period. FAA's forecasts of both demand and workload 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 workload would not be achieved. The Department of Transportation and the FAA are examining a number of options to manage congestion, but the specific measures to be implemented, and therefore their impact, are unknown at this time.

There are concerns that aviation’s impact on the environment could potentially restrict the ability of the aviation sector to grow to meet national economic and mobility needs. Airport expansion or new construction is often a contentious issue because of noise, air quality, and water quality concerns. Concerns about the climate impacts of aviation emissions continue to grow. Although aviation currently accounts for 2 to 3 percent of climate change impacts, greenhouse emissions from the sector are expected to increase with the growth in operations unless aggressively mitigated with new technology, renewable fuels, operational improvements and market measures. Some market measures intended to control emissions, e.g., various emissions trading systems and charges being discussed, could add significant costs to the aviation sector that could effectively reduce available funds for needed investments in new technology. Energy concerns are also rising, driven by spikes in fuel prices, supply and security issues, and concerns about fossil fuel emissions contributing to global climate change. Lack of progress on improving the environmental and energy outlook for the future fleet can drive more restrictions via standards or operating limitations on the fleet in service--which in turn can depress growth. By contrast, breakthroughs in quieter, cleaner aircraft technologies and renewable fuels could reduce environmental and energy constraints on the forecast, and enable sustainable growth.