

## Why GAO Did This Study

Over 66,000 airline pilot jobs exist for larger mainline and smaller regional airlines that operate over 7,000 commercial aircraft. After a decade of turmoil that curtailed growth in the industry and resulted in fewer pilots employed at airlines since 2000, recent industry forecasts indicate that the global aviation industry is poised for growth. However, stakeholders have voiced concerns that imminent retirements, fewer pilots exiting the military, and new rules increasing the number of flight hours required to become a first officer for an airline, could result in a shortage of qualified airline pilots.

GAO was asked to examine pilot supply and demand issues. This report describes (1) what available data and forecasts reveal about the need for and potential availability of airline pilots and (2) what actions industry and government are taking or could take to attract and retain airline pilots. GAO collected and analyzed data from 2000 through 2012, forecasts from 2013 through 2022, and literature relevant to the labor market for airline pilots and reviewed documents and interviewed agency officials about programs that support training. GAO interviewed and collected data from associations representing airlines or their pilots, and pilot schools that accounted for about half of the students who graduated with professional pilot majors in 2012. GAO selected the airlines and schools based on factors such as size and location. GAO is not making recommendations in this report. The Department of Transportation and others provided technical clarifications on a draft of the report, which GAO incorporated.

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## AVIATION WORKFORCE

### Current and Future Availability of Airline Pilots

## What GAO Found

GAO found mixed evidence regarding the extent of a shortage of airline pilots, although regional airlines have reported difficulties finding sufficient numbers of qualified pilots over the past year. Specifically, looking at broad economic indicators, airline pilots have experienced a low unemployment rate—the most direct measure of a labor shortage; however, both employment and earnings have decreased since 2000, suggesting that demand for these occupations has not outstripped supply. Looking forward, industry forecasts and the Bureau of Labor Statistics' employment projections suggest the need for pilots to be between roughly 1,900 and 4,500 pilots per year, on average, over the next decade, which is consistent with airlines' reported expectations for hiring over this period. Yet studies GAO reviewed examining whether the future supply of pilots will be sufficient to meet this need had varying conclusions. Two studies point to the large number of qualified pilots that exists, but who may be working abroad, in the military, or in another occupation, as evidence that there is adequate supply. However, whether these pilots choose to seek employment with U.S. airlines depends on the extent to which pilot job opportunities arise, and on the wages and benefits airlines offer. Another study concludes that future supply will be insufficient, absent any actions taken, largely resulting from accelerating costs of pilot education and training. Such costs deter individuals from pursuing a pilot career. Pilot schools that GAO interviewed reported fewer students entering their programs resulting from concerns over the high costs of education and low entry-level pay at regional airlines. As airlines have recently started hiring, nearly all of the regional airlines that GAO interviewed reported difficulties finding sufficient numbers of qualified entry-level first officers. However, mainline airlines, because they hire from the ranks of experienced pilots, have not reported similar concerns, although some mainline airlines expressed concerns that entry-level hiring problems could affect their regional airline partners' ability to provide service to some locations.

Airlines are taking several actions to attract and retain qualified commercial airline pilots. For example, airlines that GAO interviewed have increased recruiting efforts, and developed partnerships with schools to provide incentives and clearer career paths for new pilots. Some regional airlines have offered new first officers signing bonuses or tuition reimbursement to attract more pilots. However, some airlines found these actions insufficient to attract more pilots, and some actions, such as raising wages, have associated costs that have implications for the industry. Airline representatives and pilot schools suggested FAA could do more to give credit for various kinds of flight experience in order to meet the higher flight-hour requirement, and could consider developing alternative pathways to becoming an airline pilot. Stakeholders were also concerned that available financial assistance may not be sufficient, given the high costs of pilot training and relatively low entry-level wages.