WRITTEN STATEMENT OF

CAPTAIN JASON AMBROSI, PRESIDENT

AIR LINE PILOTS ASSOCIATION, INTERNATIONAL (ALPA)

BEFORE THE

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"FAA Reauthorization: Enhancing America's Gold Standard in Aviation Safety"

Air Line Pilots Association, International
304 Pennsylvania Avenue, SE
Washington, DC 20003
(202) 689-2270

Mr. Chairman and members of the committee, thank you for giving me the opportunity to join you today to talk about FAA reauthorization and enhancing America's gold standard in aviation safety. We believe there's great opportunity for industry stakeholders to work together on new policy priorities, solve problems, improve the aviation system, launch new projects, and ensure our continued role as global aviation leader. We look forward to collaborating in this first reauthorization meeting through the successful passage of the bill.

I'm a current international captain on the Boeing 767 and the president of the Air Line Pilots Association, International (ALPA), which represents more than 67,000 professional airline pilots flying for 39 airlines in the United States and Canada. ALPA is the world's largest pilot union and non-governmental aviation safety organization. We are the recognized voice of the airline piloting profession in North America, with a history of safety and security advocacy spanning nearly 92 years. As the sole U.S. member of the International Federation of Air Line Pilots Associations (IFALPA), ALPA has the unique ability to provide airline pilot expertise to aviation safety issues worldwide, collaborate on global improvements, and to incorporate an international dimension to safety advocacy.

The U.S. is the gold standard when it comes to aviation safety. We not only *have* the safest aviation system in the world, but it is also seen by others around the globe as the best. This perception has been tested in recent years, but U.S. aviation remains on top. While today is the safest period in air transportation, that outcome is not guaranteed moving forward. We must remain constantly vigilant and identify every opportunity for improvement and steadfastly advocate for implementation. Sadly, we are nearing the 14th anniversary of the Continental Connection, Colgan Air, Flight 3407 accident in Clarence Center, New York that fatally injured all 49 passengers and crew on board and one person on the ground. The Colgan accident was a turning point in the airline industry[1]—a point to which we must never return. Remarkably, since the Airline Safety and Federal Aviation Administration Extension Act of 2010, triggered by this accident, was signed into law, more than 10 billion passengers[2] have traveled safely in our skies to their destinations.[3]

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[1] The Colgan Air accident was the last in a series of high-profile fatal regional airline accidents including Comair 5191, August 27, 2006 in Lexington, KY; Corporate Airlines 5966, October19, 2004 in Kirksville, MO; and Pinnacle 3701, October 14, 2004 in Jefferson City, MO, that highlighted deficiencies in pilot training and flight experience.

[2] According to the United States Bureau of Transportation Statistics. See, https://www.transtats.bts.gov/Data_Elements.aspx?Data=4 for passengers.

[3] While airline accidents are rare in the U.S., even one fatal injury is one too many. The U.S. airline industry has experienced two passenger fatalities since 2009. The first occurred in 2018 on a Southwest Airlines flight when the

This remarkable safety achievement was not accomplished by chance or any one action. This success results from decades of industry-wide work and commitment to create the safest air transportation system in the world. There are numerous significant parts of aviation safety that have and continue to directly contribute to the gold standard and the benefits are immeasurable. Becoming the gold standard in aviation safety is the result of decades of stakeholder collaboration; data collection and analysis; hazard identification and risk mitigation; as well as critical changes and improvements to regulations, pilot qualification and training, airline operations and maintenance, technology, safety, security, and oversight.

Prior to the passage of the Aviation Safety and FAA Reauthorization Act of 2010 (the "Act") the passenger airline industry lost approximately 1100 passengers in airline accidents over a 20-year period. Since the unanimous passage of that landmark safety legislation, the airline passenger fatality rate has reduced by 99.8 percent. The numerous congressional mandates in the bill created comprehensive changes to how airlines do business and significantly raised the safety bar. The Act resulted in regulations that improved the collection of and access to pilot records to help provide employers a more complete picture of new hires; established a training requirement for crewmember mentoring and leadership to help captains more effectively mentor first officers; and forced government and industry to reexamine pilot fatigue resulting in science-based flight and duty limitations and rest requirements for all part 121 passenger operations along with Fatigue Risk Management Plans for all airlines. Mistakenly, cargo operations were carved-out from these life-saving requirements and correcting this error remains one of ALPA's top priorities.

In the years following the passage of the Act, the airline industry ushered in sweeping changes to pilot qualifications and training and aviation safety that have profoundly improved airline operations and directly contribute to the U.S. gold standard in aviation safety. One of the most significant changes was the requirement that each flight crewmember for a part 121 air carrier hold an airline transport pilot certificate. The previous standard for first officers to possess only a commercial certificate was established decades prior and did not keep pace with the changes to and increased complexity of

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engine cowling failed and punctured the aircraft fuselage. The second occurred in 2019 when a PenAir flight, Alaska's second-largest regional/commuter airline, overran the runway on landing sending debris into the fuselage fatally injuring a passenger.

aircraft and airline operations. Congress recognized the critical importance for both pilots on the flight deck to possess an airline transport pilot certificate and the experience commensurate with the responsibility of transporting passengers.[4] We are grateful for Congress's unwavering commitment to maintaining higher standards for first officers and rejecting attempts to return to a point in our aviation history when first officers were held to lower safety standards.

Additionally, Congress directed the FAA to modify the requirements for an ATP to improve operating in a multi-pilot flight deck environment, in adverse weather and at high altitudes, stall and upset recovery training, and remedial training programs for flight crewmembers with a history of training deficiencies. Rule changes also required first officers to have a type rating for the aircraft they will operate, have additional flight time requirements, and complete an ATP Certification Training Program designed to prepare the applicant to operate safely in those operations which require an ATP. The same rulemaking that established the ATP/R-ATP requirements, also ensured minimum experience requirements for first officers before serving as pilot-in-command in part 121 airline operations.

The Act also required part 121 airlines to establish a Safety Management System (SMS) that would include, at a minimum, an aviation safety action program, a flight operational quality assurance program, a line operations safety audit, and an advanced qualification program. SMS is used to identify, address, and reduce organizational and systemic risks. The goal of SMS is to identify active failures and inadequate defenses so that hazards can be contained while preventative measures can be reinforced. SMS adds value to an organization's safety structure by identifying hazards and mitigating risks before they develop into full accidents. The systems are complex and require assessments of human factors and their relation to other workplace components. A successful SMS incorporates a collaborative effort between the organization, labor, regulator, manufacturers, and other stakeholders to build a robust and diverse SMS team. The team's objective is to leverage data and knowledge to collectively build risk assessments, design systemic improvements, and support a positive safety culture. The U.S. airline industry is a leader in using data not only to understand what happened in a past event, but also to

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[4] The "1,500 Hour Rule" is a distracting misnomer. It is important to note that in parallel with the requirement that all airline pilots possess an ATP, Congress gave the FAA discretion to grant credit toward the 1,500 hours required for an ATP for certain academic training courses. As a result, the FAA created the ATP with restricted privileges (R-ATP), which allows first officers to fly airline operations with fewer than 1500 hours. Miliary pilots are hired with 750 hours, pilots with four-year aviation degrees are hired with 1,000 hours, and pilots with two-year aviation degrees are hired at 1,250 hours of flight experience time.

prevent that same event from happening again. The aviation industry expertly uses data to achieve long term risk reduction and monitor emerging safety trends. A positive safety culture encourages and supports employees to report safety issues that may not otherwise be discovered.

In the airline segment, we see safety culture driven by the FAA through compliance philosophy, which emphasizes compliance actions over enforcement for correcting unintentional deviations and its dedication to programs such as Aviation Safety Information Analysis and Sharing (ASIAS) program. SMS thrives on voluntary safety reporting programs that collect information on day-to-day operations. Voluntary safety reporting programs are the core of aviation safety risk management that provide critical data and unique information. These programs allow us to identify risk in the system before an accident occurs so that the changes necessary to mitigate the risks can be implemented. Analysis is done at individual organizations but the greatest value stems from large-scale industry-wide data sharing programs like ASIAS that analyzes that has analyzed millions of reports and other data.

The transition in ASIAS to use data fusion, matching data from multiple sources on the same event, has been an incredible advancement for safety analysis. The program is now able to thread together multiple data points from airlines, manufacturers, maintenance, in-flight, dispatchers, Air Traffic Control, airports, and various sectors of the FAA. Data points can be fused together to create a cohesive picture of the operating environment including pilot reports, ATC reports, flight data, and other external datapoints such as weather. There is risk in aviation and we must develop organizational resilience through proactive safety enhancements. The clear path to make these enhancements is through large scale collaborative data collection and analysis. In aviation, we focus on the safety of the complete system. By bringing all components of the operation together, we can develop better risk management techniques, effectively mitigating risks by designing the entire system to be safer rather than focusing on a single component.

Last year marked the 25th anniversary of the Commercial Aviation Safety Team (CAST), which embodies the power and purpose of safety data collection and industry collaboration. ALPA is a proud founding member of and strong leader in CAST. CAST is the catalyst behind the industry transition from a forensic approach to safety to a data-driven, nonpunitive, risk-predictive model—a proactive approach that has changed the way safety work is conducted in the U.S. Analysis is done to identify opportunities for improvement within areas such as training, procedural designs, and other aspects of an operation.

Voluntary safety reporting programs are the core of aviation safety risk management within the U.S. of the unique information they are capable of providing. The transition to data-based analysis and large-scale information sharing through ASIAS referenced above is due to the efforts in CAST.

The collaboration between government, labor, and industry that CAST made possible has improved aviation safety and reduced the U.S. commercial aviation fatality risk by more than 83 percent. Data and collaboration - coupled with two, highly-trained and well-rested pilots - are keys to creating and maintaining the safest air transportation system in the world. These programs are built upon a collaborative model that differentiates U.S. aviation safety from the rest of the world. Government, labor, and industry share data and other information in a manner and at a level that no other country does. This is, in part, due to the protection of aviation safety data that has helped these programs thrive. In the U.S., there are legal protections regarding the use of safety related data. Protections need to be stronger and go further to protect today's data and for future evolution of data sharing programs, the U.S. is unique in protecting aviation safety data.

An example of the critical work done by CAST and ASIAS is the Airplane State Awareness (ASA) report and studies. The goal of this initiative was to reduce Loss of Control- Inflight (LOC-I) accidents and incidents, historically one of the highest fatal accident categories. CAST chartered various working groups of experts to analyze a subset of accidents and incidents related to LOC-I events specifically involving attitude and energy complications. After thorough review, 11 actionable Safety Enhancements (SEs) were developed through the CAST process to reduce the risk of LOC-I events through training, operations, and design changes while adding redundancy to the overall system. By addressing risks and hazards through a systemic view, CAST has been able to help design a safer operational environment. This is only possible through the voluntary data submitted by front-line workers through programs like ASAP and FOQA. CAST takes a data driven approach to tackle risks like ASA and develop mitigation strategies based on real experiences from pilots.

The safety enhancements are currently implemented at part 121 airlines and primarily focus on enhancing training to include more real-world scenarios and nonstandard situations. Four of the SEs target training opportunities to verify that pilots have the skills necessary to recognize situations that may lead to undesirable aircraft states and ample experience correcting these scenarios in a training environment. Other enhancements focus on the design of visual displays and indicators on the flight

deck to effectively communicate aircraft state to pilots to proactively prevent loss of control. Industry collaborated on these solutions to ensure they are not only effective but also can be realistically implemented. Other SEs were developed from this safety topic to look at the future of managing this risk through research and design initiatives.

The goal of this work was to reduce the risk of these types of accidents in the U.S. by 70% in 2018 and 80% by 2025. Data from the NTSB can confirm that LOC-I is not a defining cause of an accident in 2021 and is no longer considered a leading defining cause of accidents for part 121 air carriers in the U.S. CAST successfully leverages industry input and data to reduce risk. To effectively manage ASA and other risks, a structured, systemic approach is necessary, as one mitigation will not be a complete or failsafe solution. Equally important is input from industry during each phase of the development process to ensure that proposed solutions are realistic in the operating environment. Our pilots are the single voice for this part of the process. An oversimplification of this extremely detailed and complex work, but hopefully enough explanation that demonstrates how labor, industry, and government work together to develop safety solutions that prevent accidents.

There are a multitude of factors that work in parallel and in conjunction with all other parts of system safety that get us where we are today. Removing or modifying requirements, without implementing an equivalent level of safety or higher, will disrupt the system and cause gaps where risks can slip through. Only changes that maintain or improve the current level of safety can be made to the aviation safety system we rely on today. Given the extraordinary safety track record we have achieved together, that should be the lens through which we evaluate any proposal to modify our existing gold standard safety system.

The future of aviation holds many changes in aircraft, technology, new entrants, types of operations, etc. and there will always be pursuit of innovation, especially with the development of UAS, RPAS, and Advanced Air Mobility aircraft. We must ensure that any introduction of new technology, new systems, and changes in procedures or regulations result in an improvement to the current level of safety in our aviation system. One constant, above all, must remain—safety first. The airline safety system works and everything we do to change, modernize, be more innovative, or increase efficiency must be done with a commitment to safety first. Safety is not mutually exclusive from any of these endeavors. We have the

foundation, experience, expertise, and tools to welcome the next generation of aviation without compromising on safety.

One thing we know for sure is that aviation is fluid and often fragile in the wake of dynamic change as demonstrated during the pandemic. Despite the rapid changes to the industry, safety remained the first priority and CAST stakeholders quickly pivoted to focus on changes and what new risks might be introduced to the system. In short order, CAST created a new resource, "Safety Elements to Monitor During a Period of Dynamic Change" that gave operators direction and support related to new risks caused by the pandemic while managing other operational risks. While the aviation safety system that we have developed over several decades remains unmatched, there will always be challenges and opportunity for improvement.

Today is a very exciting time in aviation as we build for the future. Aircraft and product certification, as well as standards development in the U.S., will continue to be challenged by the number and types of projects to date and those expected consistently for years ahead. We acknowledge the importance of keeping pace with global aviation and the need to complete certification projects more efficiently, but that can never happen at the expense of safety. The FAA must be appropriately funded and resourced so that it is equipped to handle certification and crucial standards work without pressures to move faster.

As the global aviation leader, other countries nip at our heels in efforts to assert a leadership role. Recent issues with our certification system left us vulnerable to those attacks. That's why we thank the Committee for passing the Aircraft Certification, Safety, and Accountability Act (ACSAA) of 2020. ACSAA mandated changes to improve the entire aircraft certification system. While that work is underway, we must work together to ensure we do not move more quickly on certification projects simply to avoid criticism. Rather, we must work together to improve the system so that it is both safe and efficient.

The ACSAA contained safety improvements such as requiring aircraft manufacturers to implement SMS in their lines of business and therefore ensuring that any changes in process and design are thoroughly evaluated and risks are identified and mitigated. This requirement aligns with FAA proposals to expand SMS to other domains. The FAA is in the process of finalizing rules for SMS at our nation's airports,

which we fully support, and recently proposed to expand the requirement to operators such as charter and on-demand operators, tour operators, and others.

Congress can continue to help improve the safety level of our National Airspace. Continued modernization of our air traffic infrastructure and NOTAM system is critical. In the past, Congress has given direction on modernization but only provided partial funding for resources necessary to start but not enough to finish the modernization needed. Congress should consider modernization funding mechanisms that may span multiple reauthorization and appropriation cycles that would provide the FAA adequate resources needed to complete specific tasks such as modernization. Congress should consider whether use of the Airport and Airways Trust Fund may be such a funding mechanism. Congress has the authority to task and authorize the FAA to utilize the trust fund available as a funding source for a specific task independent of annual appropriations.

Another challenge we face is continued attempts to solve market issues with solutions that negatively impact safety. For example, the most vital safety feature on any airliner is having at least two experienced, highly-trained, and well-rested pilots on the flight deck. Yet, some stakeholders actually try to claim that there would be no safety impact if one or both pilots were removed to lower operational costs. This is an absurdity that we will continue to fight. Additionally, business models and practices abroad impinge on our safety standards when carriers not meeting our safety threshold are permitted to enter U.S. airspace and land at our airports. Safety should never give way to competitive advantage. Similarly, here in the U.S., an air carrier is attempting to circumvent the regulations for a business advantage by setting up an alter ego operator to transport passengers under a different standard rather than remaining under the highest, most stringent standard under FAR part 121.[5] Collectively, we all must continue to call out these deceptive attempts to gain a competitive edge while sacrificing safety.

Lastly, because we have become incredibly safe for so long, complacency is an ever-present risk. We must remain watchful, and safety-focused to prevent complacency and notions that we are "safe enough" from entering the system. Mass-scale information and data sharing helps prevent complacency from setting in. Awareness of issues in all parts of the system informs stakeholders that risks exist even

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[5] See, application of SkyWest Charter, LLC for a Commuter Air Carrier Authorization at DOT-OST-2022-0071.

if not experienced by a particular stakeholder. We all must be constantly reminded that our safety record could change in an instant by one event: that's why we must fight complacency just as fiercely as any other threat. Through hard, often tragic, lessons learned and cutting-edge safety data analysis, we have developed the global gold standard for aviation safety here in the United States. It is our solemn responsibility--lawmakers, pilots, and citizens to ensure we enjoy this standing for decades to come. Thank you for this opportunity to participate in this important discussion today.