

Chesley "Sully" Sullenberger on the 737 MAX

I. The FAA

Chesley "Sully" Sullenberger, an airline safety advocate and retired airline pilot best known for successfully landing a damaged aircraft on the Hudson River in 2009, has criticized both Boeing and the FAA for their roles in the 737 MAX crisis. In testimony given to the House Committee on Transportation and Infrastructure's Subcommittee on Aviation on June 19, Sullenberger stated that the October 29 crash of Lion Air Flight 610 and the March 10 crash of Ethiopian Airlines Flight 302 should "never have happened."¹ Sullenberger elaborated that these crashes would have been avoided had proper pilot training and safety procedures been in place, saying "These crashes are demonstrable evidence that our current system of aircraft design and certification has failed us."²

The Lion Air and Ethiopian Airlines crashes, both of which involved the Boeing 737 MAX, resulted because of a defective Angle of Attack (AOA) sensor, which triggered the Maneuvering Characteristics Augmentation System (MCAS), a piece of software Boeing inserted into the aircraft to force the plane's nose down in cases where its pitch was hazardously high.³ After the Lion Air crash, Boeing stated that pilots have the ability to override MCAS and act as a backup in cases where MCAS failed or malfunctioned.⁴ However, up until that point, pilots were unaware of the presence of MCAS.⁵

In his testimony, Sullenberger raised concerns about the aircraft certification process, citing reports from GAO, DOT OIG, and Congressional committees stretching back to 1992.⁶ He stated that "We must look closely at the certification process."⁷ Sullenberger questioned whether the FAA had outsourced too much certification work and recommended that the FAA be responsible for choosing the employees that conduct its oversight. Currently, the manufacturer chooses the employees that conduct the certification procedures.⁸

In response to claims that the crashes were a result of human error, Sullenberger quoted M.I.T.'s Dr. Nancy Leveson: "Human error is a symptom of a system that needs to be redesigned."⁹

¹ United States. Cong. House Subcommittee on Aviation of The United States House Committee on Transportation and Infrastructure. *Hearing on the Status of the Boeing 737 MAX: Stakeholder Perspectives*. June 19, 2019. 116th Cong. 1st sess. Washington: GPO, 2019 (Statement of Chesley B. "Sully" Sullenberger III).

² *Ibid.*

³ Darryl Campbell, "[The Many Human Errors That Brought Down the Boeing 737 MAX](#)," *The Verge*. May 2, 2019

⁴ Michael Laris, "[Changes To Flawed Boeing 737 MAX Were Kept From Pilots, Defazio Says](#)," *The Washington Post*. June 19, 2019.

⁵ *Ibid.*

⁶ United States. Cong. House Subcommittee on Aviation of The United States House Committee on Transportation and Infrastructure. *Hearing on the Status of the Boeing 737 MAX: Stakeholder Perspectives*. June 19, 2019. 116th Cong. 1st sess. Washington: GPO, 2019 (Statement of Chesley B. "Sully" Sullenberger III).

⁷ *Ibid.*

⁸ *Ibid.*

⁹ *Ibid.*

In an op-ed for MarketWatch, Sullenberger wrote that “For too many years, the FAA has not been provided budgets sufficient to ensure appropriate oversight of a rapidly growing global aviation industry. Staffing has not been adequate for FAA employees to oversee much of the critically important work of validating and approving aircraft certification. Instead, much of the work has been outsourced by designating aircraft manufacturer employees to do the work on behalf of the FAA . . . There simply are not nearly enough FAA employees to do this important work in-house.”¹⁰ In his testimony on June 19, Sullenberger again reiterated his belief that the FAA must consistently be provided sufficient budgets to allow it to fulfill its regulatory obligations.¹¹

Sullenberger has accused the airline industry and its regulators of having a “cozy relationship,” writing that “in too many cases, FAA employees who rightly called for stricter compliance with safety standards and more rigorous design choices have been overruled by FAA management, often under corporate or political pressure.”¹²

FAA incentives must be oriented with its mission. In his June 19th testimony, Sullenberger recommended that the FAA realign incentives to prioritize thoroughness and safety over economy and efficiency.¹³ He cited the ability of manufacturers, rather than the FAA, to choose the engineers that certify their planes as evidence of these misaligned priorities.¹⁴

II. Boeing

Sullenberger has written that in implementing MCAS, Boeing “mitigat[ed] one risk, [while] creat[ing] another, greater risk.”¹⁵ Boeing, in an attempt to “protect its product,” resisted early attempts to ground the MAX.¹⁶ On March 12, Boeing CEO Dennis Muilenburg personally called Pres. Donald Trump to assure him that the 737 MAX was safe and there was no need to ground it.¹⁷ This despite the fact that the MAX was grounded in nearly every country in the world at that point.¹⁸

Sullenberger also pointed out design changes made to the plane which changed the dynamics and geometry of the MAX from the 737 NG. For instance, takeoff and landing speeds

¹⁰ Chesley "Sully" Sullenberger, “[Our Credibility As Leaders In Aviation Is Being Damaged.](#)” *MarketWatch*. March 20, 2019.

¹¹ United States. Cong. House Subcommittee on Aviation of The United States House Committee on Transportation and Infrastructure. *Hearing on the Status of the Boeing 737 MAX: Stakeholder Perspectives*. June 19, 2019. 116th Cong. 1st sess. Washington: GPO, 2019 (Statement of Chesley B. “Sully” Sullenberger III).

¹² Chesley "Sully" Sullenberger, “[Our Credibility As Leaders In Aviation Is Being Damaged.](#)” *MarketWatch*. March 20, 2019.

¹³ United States. Cong. House Subcommittee on Aviation of The United States House Committee on Transportation and Infrastructure. *Hearing on the Status of the Boeing 737 MAX: Stakeholder Perspectives*. June 19, 2019. 116th Cong. 1st sess. Washington: GPO, 2019 (Statement of Chesley B. “Sully” Sullenberger III).

¹⁴ *Ibid.*

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ David Shepardson and Jeff Mason, “[Ties Between Boeing And Trump Run Deep.](#)” *Reuters*. March 12, 2019.

¹⁸ Graham Rapiere, Bill Bostock and Rosie Perper, “[Canada, Europe And More Than 50 Countries Have Grounded The Boeing 737 Max 8 After Its 2 Deadly Crashes — Here's Who's Taken Action So Far.](#)” *Business Insider*. March 13, 2019.

for the MAX are approximately 20 knots (about 23 miles per hour) higher than on previous 737s, which heightened the chances of a runway overrun. At airports like LaGuardia and Chicago Midway, which have notoriously short runways, this change fundamentally alters the takeoff and landing calculus.¹⁹

On March 14, immediately after the Ethiopian Airlines crash, Sullenberger wrote in a Facebook post that “It has been obvious since the Lion Air crash that a redesign of the 737 MAX 8 has been urgently needed, yet has still not been done, and the announced proposed fixes do not go far enough.”²⁰

¹⁹ United States. Cong. House Subcommittee on Aviation of The United States House Committee on Transportation and Infrastructure. *Hearing on the Status of the Boeing 737 MAX: Stakeholder Perspectives*. June 19, 2019. 116th Cong. 1st sess. Washington: GPO, 2019 (Statement of Chesley B. “Sully” Sullenberger III).

²⁰ J. Scott Clark, “[Capt. Sully Weighs in on Boeing 737 MAX Disaster](#).” *The Points Guy*. March 16, 2019.