

2018

ATC Privatization: A Solution in Search of a Problem

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Recommended Citation

Ross W. Neher, *ATC Privatization: A Solution in Search of a Problem*, 83 J. Air L. & Com. 521 (2018)
<https://scholar.smu.edu/jalc/vol83/iss3/3>

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**ATC PRIVITIZATION: A SOLUTION IN SEARCH
OF A PROBLEM**

ROSS W. NEHER*

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I. INTRODUCTION

WITH RECENT HEADLINES such as “Trump Budget Includes ATC Giveaway” and “Trump Calls for Air Traffic Control Spin-Off in Budget,” privatization of air traffic control (ATC) services in the United States is a hot-button political issue.¹ Indeed, *USA Today* reports that President Donald Trump’s call to privatize ATC was “one of his top priorities” in his 2017 budget.² And, for the first time, legislation (H.R. 2997) privatizing the ATC made it out of committee.³

¹ Thomas B. Haines, *Trump Budget Includes ATC Giveaway*, AIRCRAFT OWNERS & PILOTS ASS’N (Feb. 12, 2018), <https://www.aopa.org/news-and-media/all-news/2018/february/12/trump-budget-includes-atc-giveaway> [https://perma.cc/H99M-KP4E]; Melanie Zanona, *Trump Calls for Air Traffic Control Spin-Off in Budget*, THE HILL (Mar. 16, 2017), <http://thehill.com/policy/transportation/324274-trump-calls-for-air-traffic-control-spin-off-in-budget> [https://perma.cc/9EQ3-GQHJ].

² Bart Jansen, *Trump Budget Continues to Support Air-Traffic Control Privatization*, USA TODAY (Feb. 12, 2018), <https://www.usatoday.com/story/news/2018/02/12/trump-budget-continues-support-air-traffic-control-privatization/324331002/> [https://perma.cc/CPJ6-2S2W].

³ H.R. 2997, 115th Cong. (2017). The 2017 bill, known as the “21st Century Aviation Innovation, Reform, and Reauthorization Act” or the “21st Century AIRR Act” (H.R. 2997), was approved by the House Transportation and Infra-

The discussion of ATC privatization is nothing new. Since the 1980s, several countries have privatized the management and funding of their respective ATC services. And over the past two decades, Congress, sitting Presidents, and aviation stakeholders in the United States have debated whether the Federal Aviation Administration (FAA) should continue to operate and modernize the country's ATC system or whether an independent, self-financed organization, either public or private, should take on this role.⁴

This article addresses whether a privatized ATC, as supported by President Trump and the U.S. airlines, among others, is a solution to a recognized problem or whether a privatized ATC system would instead create a host of new problems, including reducing equity, increasing costs, and compromising safety.

II. ATC: WHERE WE ARE AND WHERE WE ARE GOING

A. THE EXPONENTIAL GROWTH OF AIR TRAFFIC NECESSITATES A STRONG ATC

In 1914, the first commercial plane flight occurred on an eighteen-mile run of the St. Petersburg-Tampa Airboat Line carrying one paying passenger.⁵ Now, over one hundred years later, approximately three-quarters of a billion passengers board commercial flights in the United States each year.⁶ Going forward, the FAA projects that domestic passenger enplanements will increase by 2.4% a year between 2017 and 2037.⁷ The FAA also forecasts that global enplanements will grow at 3.4% a year.⁸ These forecasts reflect the fact that commercial aviation is essential to our modern way of life and a driving force of the global

structure Committee with a 32–25 vote and is the first privatized ATC proposal to make it out of committee. See *H.R. 2997 – 115th Congress: 21st Century AIRR Act*, GOVTRACK, <https://www.govtrack.us/congress/bills/115/hr2997> [https://perma.cc/F975-US77].

⁴ U.S. GOV'T ACCOUNTABILITY OFF., GAO-17-131, AIR TRAFFIC CONTROL: EXPERTS' AND STAKEHOLDERS' VIEWS ON KEY ISSUES TO CONSIDER IN A POTENTIAL RESTRUCTURING I (2016) [hereinafter AIR TRAFFIC CONTROL: EXPERTS' AND STAKEHOLDERS' VIEWS].

⁵ CLIFFORD WINSTON, LAST EXIT: PRIVATIZATION AND DEREGULATION OF THE U.S. TRANSPORTATION SYSTEM 76 (2010).

⁶ *FAA Aerospace Forecast Fiscal Years 2017–2037*, FED. AVIATION ADMIN. 1, 10 (2016), https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2017-37_FAA_Aerospace_Forecast.pdf [https://perma.cc/S53K-UKU9].

⁷ *Id.*

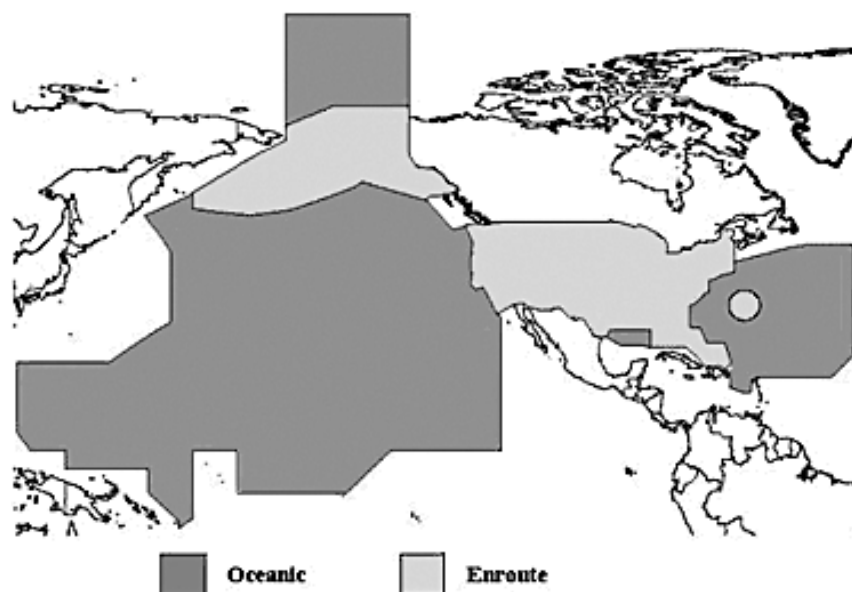
⁸ *Id.*

economy.⁹ Entire industries rely on the successful operation of the national airspace system. Aviation accounts for more than eleven million jobs and is responsible for more than 5% of the gross domestic product of the United States.¹⁰ This large market, its projected growth, and its worldwide dependency necessitate a safe, efficient, and capable ATC system, both now and in the years ahead.

B. U.S. AIRSPACE, THE BUSIEST AND ONE OF THE LARGEST
IN THE WORLD

The Air Traffic Organization (ATO) is the ATC operational arm of the FAA and provides safe and efficient air navigation services in the “busiest airspace” in the world.¹¹ The ATO is responsible for 29.4 million square miles of airspace.¹² The ATO’s airspace covers more than 17% of the world and includes all of the United States, large portions of the Atlantic and Pacific Oceans, and the Gulf of Mexico.¹³

FIGURE 1



⁹ *Air Traffic Organization*, FED. AVIATION ADMIN., https://www.faa.gov/about/office_org/headquarters_offices/ato/ [https://perma.cc/L5RH-KDYV].

¹⁰ *Id.*

¹¹ *Air Traffic*, FED. AVIATION ADMIN., https://www.faa.gov/air_traffic/ [https://perma.cc/9ML7-2TD8].

¹² *Air Traffic Organization*, *supra* note 9.

¹³ *Id.*

General depiction of the airspace controlled by the ATO¹⁴

The ATO employs more than 35,000 personnel, of which more than 14,500 are air traffic controllers.¹⁵ The ATO operates 315 air traffic facilities, including twenty-one “enroute”¹⁶ control centers, twenty-four stand-alone terminal radar approach control facilities, and more than 260 airport control towers across the country.¹⁷

Some privatization has already taken place in the U.S. ATC system. The Federal Contract Tower Program (also overseen by ATO) comprises more than 250 airport towers run by private operators in 46 states and four U.S. territories.¹⁸ Controllers and other staff in contract towers are employees of the contractor, not of the federal government. The FAA also has contracted out operations at flight service stations that provide weather briefings and flight planning services to pilots.¹⁹

C. THE FAA FUNDS ATC THROUGH TAXES AND USER FEES

ATC and the modernization of air traffic facilities are funded through two FAA accounts with a total budget of nearly \$13 billion in 2016.²⁰ The first, an operations and maintenance account, funds air traffic operations as well as aviation safety programs unrelated to air traffic control. That account had a fiscal year 2016 authorization of \$9.91 billion.²¹ The second, a facilities and equipment account, had a \$2.85 billion authorization in fiscal year 2016. The second account provides funding for the acquisition and maintenance of air traffic facilities,

¹⁴ See *Overflight Fees*, FED. AVIATION ADMIN., https://www.faa.gov/air_traffic/international_aviation/overflight_fees/ [https://perma.cc/8Z52-5REP].

¹⁵ *Air Traffic Organization*, *supra* note 9.

¹⁶ “En route” is frequently spelled “enroute” in aviation parlance. See, e.g., *Digital Products*, FED. AVIATION ADMIN., https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/ifr/ [https://perma.cc/79L4-US5Z].

¹⁷ *A Plan for the Future: 10-Year Strategy for the Air Traffic Control Workforce, 2014–2023*, FED. AVIATION ADMIN. 9–10 (2014), https://www.faa.gov/air_traffic/publications/controller_staffing/media/2017_CWP.pdf [https://perma.cc/FN6S-2BAT] [hereinafter *FAA Plan for the Future*].

¹⁸ Bart Elias, *Air Traffic Inc.: Considerations Regarding the Corporatization of Air Traffic Control*, CONG. RES. SERV. 2 (May 16, 2017), <https://fas.org/sgp/crs/misc/R43844.pdf> [https://perma.cc/8SQK-ULC3].

¹⁹ Dan Namowitz, *Privatizing Flight Service Saved Money, Faces New Challenges*, AOPA ONLINE (Dec. 8, 2016), <https://www.aopa.org/news-and-media/all-news/2016/december/08/privatizing-flight-service-saved-money-faces-new-challenges> [https://perma.cc/8J2A-B55G].

²⁰ *FAA Plan for the Future*, *supra* note 17, at 48.

²¹ Elias, *supra* note 18, at 2.

equipment, engineering, research and development, and the evaluation of innovative technologies.²²

Slightly over two-thirds of the FAA's total funding, and all funding for the facilities and equipment account, is provided through the Airport and Airway Trust Fund.²³ Revenue sources for the trust fund include "a 7.5% passenger ticket tax, a 4.3 cent-per-gallon tax on commercial jet fuel, a 21.8 cent-per-gallon tax on general aviation jet fuel, and other taxes on cargo, frequent flyer awards, [and] international departures and arrivals."²⁴ The FAA also "collects user fees from aircraft that fly in U.S.-controlled airspace but do not take off from or land in the United States."²⁵ A portion of these fees, which are "similar to overflight fees charged by other countries in conformance with agreements of the International Civil Aviation Organization (ICAO)," are also used to fund ATC services.²⁶

D. NEXTGEN: THE FAA'S MODERNIZATION PROGRAM FOR THE U.S. AIRSPACE SYSTEM

Since the early 2000s, the FAA has been working to modernize the U.S. airspace system through a program called Next Generation Air Transportation System (NextGen).²⁷ NextGen deployment has been progressing steadily over the last few years.²⁸ "[The FAA] is about halfway through [its] multi-year investment and implementation plan" for NextGen and reports that NextGen will make flying safer, more efficient, and more predictable.²⁹ "NextGen is not one technology, product, or goal[,] but dozens of new technologies that the FAA is developing and implementing."³⁰ The interconnected systems of NextGen are designed to fundamentally change and improve

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ Fees are charged in conformance with agreements of the International Civil Aviation Organization (ICAO). *See id.*

²⁷ *NextGen Frequently Asked Questions*, FED. AVIATION ADMIN., <https://www.faa.gov/nextgen/faqs/> [<https://perma.cc/9HFU-NXBW>].

²⁸ *See Where We Are Now*, FED. AVIATION ADMIN., https://www.faa.gov/nextgen/where_we_are_now/ [<https://perma.cc/SDF4-ZA2M>].

²⁹ *NextGen Frequently Asked Questions*, *supra* note 27; *see also Modernization of U.S. Airspace*, FED. AVIATION ADMIN., <https://www.faa.gov/nextgen/> [<https://perma.cc/G43D-44B8>].

³⁰ *NextGen Frequently Asked Questions*, *supra* note 27; *see also Modernization of U.S. Airspace*, *supra* note 29.

how U.S. airspace system users see, navigate, and communicate. As Michael Huerta, former FAA Administrator, put it: “NextGen is like going from an impressionist painting to HDTV.”³¹

One of the FAA’s key NextGen modernizations is the adoption of Automatic Dependent Surveillance-Broadcast (ADS-B) technology.³² ADS-B is an innovational satellite-enabled navigation system that far surpasses the capabilities of traditional ground-based navigation.³³ Aircraft equipped with ADS-B will greatly enhance awareness of aircraft location and movement for pilots and ATC.³⁴ Current radar technology can take anywhere from five to twelve seconds to update an aircraft’s position due to the rotation of radar equipment and associated processing time.³⁵ By contrast, “ADS-B equipment provides [ATC] with updated aircraft information almost every second” thereby enabling controllers to identify and resolve aircraft conflicts far more quickly and effectively.³⁶ In addition, ADS-B can provide aircraft positions at low altitudes where current ground-based systems provide limited or no coverage due to terrain and system limitations. Departure, enroute, arrival, and approach procedures developed utilizing ADS-B reduce flying time, fuel use, and aircraft exhaust emissions while getting passengers to their destinations faster and at more predictable times.³⁷

Moreover, pilots flying ADS-B equipped aircraft are provided with weather and traffic position information that can be displayed or otherwise integrated into pilot or flight crew information and alerts.³⁸ The ADS-B system is currently active and providing services to aircraft equipped with ADS-B receivers.³⁹

³¹ *How NextGen Works*, FED. AVIATION ADMIN., https://www.faa.gov/nextgen/how_nextgen_works/ [<https://perma.cc/QSV7-JVJE>]. According to the FAA, Michael Huerta was FAA Administrator from January 7, 2013 to January 6, 2018. *Key Officials*, FED. AVIATION ADMIN., https://www.faa.gov/about/key_officials/ [<https://perma.cc/9A2B-8LNX>].

³² *New Technology*, FED. AVIATION ADMIN., https://www.faa.gov/nextgen/how_nextgen_works/new_technology/ [<https://perma.cc/U8PB-F6B5>].

³³ *Id.*

³⁴ *Benefits*, FED. AVIATION ADMIN., <https://www.faa.gov/nextgen/equipadsb/capabilities/benefits/> [<https://perma.cc/C4J3-5EHM>].

³⁵ *Id.*

³⁶ *Id.*

³⁷ *New Technology*, *supra* note 32.

³⁸ *Ins and Outs*, FED. AVIATION ADMIN., https://www.faa.gov/nextgen/equipadsb/capabilities/ins_outs/ [<https://perma.cc/3VDV-HWWA>].

³⁹ *Id.*

Operations within a large majority of U.S.-controlled airspace will require ADS-B equipage by January 1, 2020.⁴⁰

NextGen also upgrades communication systems utilizing technologies similar to text messaging. New Data Communications (Data Comm) systems have already begun assisting pilots and ATC in communicating more quickly, easily, and with less risk of miscommunication than voice radio communication over busy frequencies.⁴¹ Standard VHF air band radio voice transmissions take up significant air time because once ATC verbalizes the information to a flight, the pilot must repeat it back correctly.⁴² If the read-back of information is incorrect, ATC and the pilot must continue to trade voice exchanges until both confirm the same information.⁴³ “Meanwhile, other flight crews [must wait] for the radio frequency to clear so they can have their turn to receive, repeat, and confirm clearances.”⁴⁴ By contrast, Data Comm allows ATC to send instructions that pilots can then “read, accept, and load into flight computers with the push of a button.”⁴⁵ Data Comm helps enable equipped operators to stay on schedule and ensure passengers meet connecting flights.⁴⁶ Data Comm also reduces the dangers associated with task saturation, allowing both ATC and pilots to spend more time on other critical tasks.⁴⁷

The NextGen program has and will continue to significantly improve overall capacity, performance, efficiency, and predictability throughout U.S. airspace, allowing for increased traffic, and, from the perspective of commercial passengers, more airspace capacity (i.e., more flights), shorter flights, and fewer delays.⁴⁸

⁴⁰ *Equip ADS-B*, FED. AVIATION ADMIN., <https://www.faa.gov/nextgen/equip/adsb/> [<https://perma.cc/N3CX-L2AZ>].

⁴¹ *See Performance Success Stories*, FED. AVIATION ADMIN., <https://www.faa.gov/nextgen/snapshots/stories/?slide=66> [<https://perma.cc/59RM-X9VS>].

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*; see Joshua A. Kirsh, *What is the Flight Management System? A Pilot Explains*, POPULAR MECHANICS (Mar. 18, 2014), <https://www.popularmechanics.com/flight/a10234/what-is-the-flight-management-system-a-pilot-explains-16606556/> [<https://perma.cc/G23V-H6WS>] (offering a description of flight management systems).

⁴⁶ *Performance Success Stories*, *supra* note 41.

⁴⁷ *Id.*

⁴⁸ *See Modernization of U.S. Airspace*, *supra* note 29.

III. THE STATUS OF PRIVATIZATION IN THE UNITED STATES AND GLOBALLY

A. OTHER COUNTRIES USE PRIVATIZED ATC

Many nations, including Canada, the United Kingdom (U.K.), France, Germany, Switzerland, and Australia have privatized or partially privatized ATC systems.⁴⁹ Nav Canada, the most popular model for proponents of privatization in the United States, was established over two decades ago.⁵⁰ Nav Canada operates independently of government funding and must be funded only by publicly traded debt and service charges to ATC system users.⁵¹ Nav Canada employs approximately 1,900 air traffic controllers, 650 flight service specialists, and 700 technologists, and manages approximately twelve million flights per year over eighteen million square miles of air space, making it the world's second largest air navigation service by traffic volume—one-ninth the size of the U.S. system.⁵²

In the U.K., the regulatory oversight of civil aviation has been licensed to a non-profit corporation, the Civil Aviation Authority (UK CAA), since 2001.⁵³ Within UK CAA is a private-public company called the National Air Traffic Control Services Company (NATS), which “is a public private partnership between the Airline Group, which holds 42%, NATS staff who hold 5%, UK airport operator LHR Airports Limited with 4%, and the government which holds 49%, and a golden share.”⁵⁴

NATS is generally self-funded by revenue collected through a complex system of air passenger duties that are updated yearly

⁴⁹ See Aarian Marshall, *So What's the Deal With Air Traffic Control Reform?*, WIRED (June 6, 2017), <https://www.wired.com/2017/06/trump-air-traffic-control-explained/> [<https://perma.cc/DY6F-5ARB>].

⁵⁰ See *About Us*, NAV CANADA, <http://www.navcanada.ca/EN/about-us> [<https://perma.cc/49TK-VKE9>].

⁵¹ *Investor Relations*, NAV CANADA, <http://www.navcanada.ca/EN/about-us/Pages/investor-relations.aspx> [<https://perma.cc/EU3U-67TF>].

⁵² *About Us*, *supra* note 50; see Robert Poole, *U.S., Canadian Air-Traffic Control Compared*, WALL ST. J. (June 29, 2016), <https://www.wsj.com/articles/u-s-canadian-air-traffic-control-compared-1467219369> (for size comparison information).

⁵³ See CIVIL AVIATION AUTHORITY, <https://www.gov.uk/government/organisations/civil-aviation-authority> [<https://perma.cc/BLQ8-SLCB>].

⁵⁴ *Our Ownership*, NAT'L AIR TRAFFIC CONTROL SERVS. CO., <https://www.nats.aero/about-us/what-we-do/our-ownership-2014/> [<https://perma.cc/LWS3-RJS6>]. A “golden share” is a type of share that gives its holder veto power over changes to the company's charter. A golden share holds special voting rights, giving its holder the ability to block another shareholder from taking more than a specific ratio of ordinary shares. See *Golden Share*, INVESTOPEDIA, <https://www.investopedia.com/terms/g/goldenshare.asp> [<https://perma.cc/XZ8B-MXLQ>].

and calculated based upon ticket type and distance from London to the destination country's capital city.⁵⁵ In 2002, however, because of the slowed pace and bookings of airline flights after September 11, 2001, NATS required a financial bailout of £130 million, half of which came from taxpayer subsidies and the other half from "airline contributions" (fare increases).⁵⁶

Additionally, significant parts of U.K. airspace have been outsourced to a foreign private ATC service company. In 2016, ATC services at Gatwick Airport, the country's second largest airport, was contracted out to German-based Air Navigation Solutions, which is wholly owned by the German government, under a ten-year contract ending in 2025.⁵⁷

B. THE ONGOING EFFORTS TO PRIVATIZE ATC IN THE UNITED STATES

The idea of privatizing ATC services in the United States is not new. Since the 1970s, proponents have made numerous proposals to restructure ATC services.⁵⁸ These proposals have differed significantly and were introduced in different economic and political climates.⁵⁹

Privatization has again started to gain traction due, in part, to the election of President Trump, one of the most vocal proponents of privatization. On February 9, 2017, at a gathering of airline and airport executives, President Trump stated that the current FAA-run ATC system is "a system that's totally out of whack. It's way over budget. It's way behind schedule. And when [NextGen] is complete, it's not going to be a good system. Other than that, it's fantastic."⁶⁰ On June 5, 2017, during what was dubbed "Infrastructure Week," President Trump gave a speech on ATC privatization, which was followed by a faux sign-

⁵⁵ See *Rates for Air Passenger Duty*, GOV.UK, <https://www.gov.uk/guidance/rates-and-allowances-for-air-passenger-duty> [https://perma.cc/JZF7-LDVD].

⁵⁶ *NATS Arranges £130m Bailout*, AERO-NEWS NETWORK (June 13, 2002), www.aero-news.net/index.cfm?do=main.textpost&id=f06d64ad-e065-48e4-aba2-5e762302259e [https://perma.cc/9GJ4-9TYJ].

⁵⁷ Bill Carey, *German-Owned ATC Provider Takes Control of Gatwick Tower*, AIN TRANSPORT NEWS (Mar. 1, 2016), <https://www.ainonline.com/aviation-news/air-transport/2016-03-01/german-owned-atc-provider-takes-control-gatwick-tower> [https://perma.cc/R2KD-N934].

⁵⁸ Elias, *supra* note 18, at 2–3.

⁵⁹ *Id.*

⁶⁰ Lauren Gardner, *Trump Slams 'Out of Whack' FAA in Meeting with Airlines*, POLITICO (Feb. 9, 2017), <https://www.politico.com/story/2017/02/trump-criticize-faa-234849> [https://perma.cc/NZY3-7JWG].

ing ceremony of airspace “principles” that were sent to Congress.⁶¹ The President’s speech outlined what he called an “air travel revolution,” which included handing over control of ATC services to a private board that was part of a not-for-profit, federally chartered corporation that he professed would save the government money, reduce the cost of flying, and make air travel more efficient.⁶²

C. PROPONENTS OF PRIVATIZATION GAIN NOMINAL SUCCESS WITH H.R. 2997

Just over two weeks after President Trump outlined his air travel revolution, Congressman Bill Shuster, chairman of the House Transportation & Infrastructure Committee, introduced the 2017 21st Century Aviation Innovation, Reform, and Reauthorization Act, or the 21st Century AIRR Act (H.R. 2997).⁶³ If enacted, H.R. 2997 would establish “the American Air Navigation Services Corporation as a federally chartered, not-for-profit corporation” to take over “operational control of FAA air traffic services.”⁶⁴ H.R. 2997 is the first bill privatizing the U.S. ATC system to make it out of committee.⁶⁵

The proposed American Air Navigation Services Corporation (AANS) would be operated without investors, authorized to charge fees to users of ATC services,⁶⁶ and allowed to issue bonds and other debt instruments to raise money for capital investments.⁶⁷ According to Congressman Shuster, AANS would:

- Be independent of the federal government;
- Provide ATC services;

⁶¹ Henry Grabar, *Trump Thinks Privatizing Air Traffic Control Is a No-Brainer. Hardly.*, SLATE (June 5, 2017), http://www.slate.com/blogs/moneybox/2017/06/05/trump_thinks_privatizing_air_traffic_control_is_a_no_brainer_hardly.html [<https://perma.cc/X2AK-URQJ>].

⁶² *Id.*

⁶³ H.R. 2997, 115th Cong. (2017). H.R. 2997 would also address certification of commercial transport of property by unmanned aircraft systems (UAS), a.k.a. drones. See H.R. 2997, Subtitle B—Unmanned Aircraft Systems.

⁶⁴ See H.R. 2997 – 115th Congress: 21st Century AIRR Act, GOVTRACK, <https://www.govtrack.us/congress/bills/115/hr2997> [<https://perma.cc/JD7L-TLRB>].

⁶⁵ *Id.*

⁶⁶ H.R. 2997 does exempt general aviation, including both piston and turbine powered aircraft. However, H.R. 2997 does not provide an appeal process to airspace or traffic routing changes unless the appeal involves a concern about safety, as opposed to one based upon access to facilities. Telephone Interview with Christa Lucas, NBAA Vice President of Government Affairs (Jan. 1, 2018).

⁶⁷ Elias, *supra* note 18, at 11.

- Be governed by a board of directors nominated by system users but with a fiduciary duty only to the new entity;
- Be directly regulated by the FAA and the DOT in addition to being subject to congressional oversight like every other transportation business;
- Recoup its costs through user fees;
- Have access to capital markets to finance capital projects and other business requirements; and
- Comply with presidential orders for the Department of Defense to assume control of the airspace in times of war.⁶⁸

A Board of Directors (BoD) and a Board of Advisors (BoA) would govern AANS.⁶⁹ The BoA would have “up to 15 members representing commercial service airports, general aviation interests, aerospace manufacturers, operators of commercial unmanned aircraft, appropriate labor organizations, small communities, and the Department of Defense.”⁷⁰

The thirteen-member BoD would be primarily composed of individuals representing certain aviation stakeholder groups.⁷¹ Specifically, the BoD would have the following structure:⁷²

- (1) A CEO (selected by the rest of the BoD);
- (2) Two directors appointed by the Secretary of Transportation;
- (3) Four directors nominated by the “principal organization representing mainline air carriers” (i.e., A4A);
- (4) Two directors nominated by the “principal organization representing noncommercial owner and recreational operators of general aviation aircraft” (e.g., AOPA);
- (5) One director nominated by the “principal organization representing owners, operators and users of general aviation aircraft used exclusively in furtherance of business enterprises” (e.g., National Business Aviation Association (NBAA));
- (6) One director nominated by the “principal organization representing aerospace manufacturers” (e.g., Aerospace Industries Association);
- (7) One director nominated by the “principal organization engaged in collective bargaining on behalf of air traffic

⁶⁸ Bill Shuster, *The Case for ATC Reform*, 30 AIR & SPACE LAW. 3 (2017).

⁶⁹ Elias, *supra* note 18, at 12.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *See id.*

controllers employed by the Corporation” (e.g., National Air Traffic Controllers Association);

- (8) One director nominated by the “certified collective bargaining representatives of airline pilots with the appointment of representing organization rotating every 3 years.” (e.g., Air Line Pilots Association).

Each director would serve a three-year term and could not be a government employee or work for AANS or any of the customers, bargaining agents, or suppliers of the corporation.⁷³

A key responsibility of the BoD under this proposal would be to set charges and fees for air navigation services. The bill specifies that fees would be set in compliance with International Civil Aviation Organization (ICAO) policies and would not be imposed on military aircraft, piston engine-powered aircraft, non-commercial jets, or commuter air taxi flights operated in remote locations, effectively limiting fees to passenger and cargo airline operations and some commuter flights or air taxis in turboprops and turbojets.⁷⁴

D. PRIVATIZATION PROPONENTS ARGUE THAT U.S. ATC IS TECHNOLOGICALLY BEHIND AND SUPPORTED BY UNPREDICTABLE FUNDING

Advocates of ATC privatization, such as President Trump, most U.S. airlines (with the notable exception of Delta Air Lines), and the National Air Traffic Controls Association (NATCA),⁷⁵ contend that “efforts to modernize ATC in the United States are over budget, behind schedule, and far less ad-

⁷³ Robert Puentes & Rui Neiva, *Time for Reform: Delivering Modern Air Traffic Control*, ENO CENTER FOR TRANSP., Feb. 17–18, 2017.

⁷⁴ See H.R. 2997, 115th Cong. (2017).

⁷⁵ While NATCA currently supports ATC privatization through H.R. 2997, it is worth noting that seven unions representing thousands of FAA employee do not. In fact, on May 16, 2017, these seven unions sent a joint letter to the House Transportation and Infrastructure Committee, which stated that “overhauling the entire aviation system by removing air traffic control from federal oversight and funding will be a serious setback for its development and growth. Our air traffic control system is a national public asset and we strongly believe it should remain in the public trust.” Letter from Am. Fed. of Gov’t Emps. et al., to the Hon. Bill Shuster, U.S.H.R. et al. (May 16, 2017), available at <https://www.afge.org/globalassets/documents/generalreports/faa-privatization-letter.pdf> [<https://perma.cc/NV7A-UAD8>].

vanced than in other countries.”⁷⁶ Proponents also argue that U.S. ATC relies on old technology, including 1930s-style radio beacons and 1950s radar surveillance. In addition, privatization supporters maintain that federal funding for ATC is both unstable and unpredictable, highlighting the recent government shutdowns and the frequent Congressional budgetary show-downs that seem to have become commonplace over the last several years.⁷⁷ Furthermore, some pro-privatization advocates believe that having the same agency operate the system and regulate its safety is a conflict of interest, which compromises safety.⁷⁸ Thus, the creation of the AANS would separate and establish an arm’s-length relationship between the air navigation services provider and the regulator.⁷⁹

Proponents are also quick to point out that the FAA has already contracted out air traffic control functions under the FAA’s Federal Contract Tower program. Under this program, which is overseen by the FAA, more than 250 low-activity towers are currently being operated by one of three private companies under contract with the FAA: Midwest Air Traffic Control, RVA Robinson Aviation, and Serco.⁸⁰ A 2003 audit by the DOT Inspector General found that average operating costs at twelve contract towers were each \$917,000 per year lower than those at comparable FAA-run towers.⁸¹ Those cost savings were attributed primarily to lower staffing levels and lower salaries at contract towers.⁸²

⁷⁶ Robert Poole, *A Vote to Modernize the Air Traffic Control System*, OC REGISTER (Oct. 13, 2017), <https://www.ocreger.com/2017/10/06/a-vote-to-modernize-the-air-traffic-control-system/> [https://perma.cc/9RCT-DVBH].

⁷⁷ See Jansen, *supra* note 2.

⁷⁸ Poole, *A Vote to Modernize the Air Traffic Control System*, *supra* note 76.

⁷⁹ *Id.*

⁸⁰ See *About USCTA*, U.S. CONTRACT TOWER ASSOC., <https://www.aaae.org/aaae/USCTA/About/USCTA/About/About.aspx> (last visited Dec. 26, 2017).

⁸¹ Kenneth M. Mead, Inspector General, U.S. Dep’t of Transp., *Safety, Cost, and Operational Metrics of the Federal Aviation Administration’s Visual Flight Rules Towers 2* (2003), <https://www.oig.dot.gov/sites/default/files/cc2003156.pdf> [https://perma.cc/JA48-AX24].

⁸² *Id.*

E. OPPONENTS OF PRIVATIZATION DO NOT WANT ATC
DECISIONS MADE BY PRIVATE INTERESTS WITH
ONLY PROFIT MARGINS IN MIND

Opponents of privatization include more than thirty general aviation (GA) groups,⁸³ labor unions,⁸⁴ Delta Air Lines,⁸⁵ Captain Sully Sullenberger and a number of other notable pilots, and former NASA astronauts.⁸⁶ Opponents contend that privatization would negatively impact safety and fair access to U.S. airspace by shifting control of ATC to private interests and substantial influence by the airlines.⁸⁷ Under H.R. 2997, opponents argue that private interests that control the AANS BoD would make the critical decisions that shape the ATC system, and that these decisions would be made to benefit private interests and their profit margins at the expense of the American public.⁸⁸

Captain Sullenberger is a vocal opponent of ATC privatization:

We have a wonderful, unique freedom and privilege in this country—an unfettered aviation system that anyone can participate in safely and efficiently. Simply put, our aviation system is the biggest, the best and the most diverse in the world. And it is constantly improving. In most other countries, it's either too restrictive or too expensive for an average person to fly, and the only way one can fly is to go on an airliner or a military flight.

⁸³ *General Aviation Groups United in Opposition to HR 2997*, NAT'L BUS. AVIATION ASSOC. (June 30, 2017), <https://www.nbaa.org/advocacy/letters/20170630-general-aviation-groups-united-in-opposition-to-hr-2997.pdf> [<https://perma.cc/AW9T-HPFZ>].

⁸⁴ Letter from Dep't for Prof'l Employees AFL-CIO to Congress (July 13, 2017), available at <http://dpeaflcio.org/wp-content/uploads/Anti-ATC-Privatization-Labor-Letter-2017.07.13.pdf> [<https://perma.cc/DBX6-7YYF>].

⁸⁵ *The Costs of Privatizing Air Traffic Control and How It Will Impact Airline Travelers*, DELTA AIRLINES (Feb. 1, 2016), https://news.delta.com/sites/default/files/The%20Costs%20of%20Privatizing%20Air%20Traffic%20Control_0.pdf [<https://perma.cc/3QTY-6X8D>] [hereinafter *Delta Study*].

⁸⁶ Sully Sullenberger, *Miracle on Hudson Pilot: Don't Privatize Air Traffic Control*, USA TODAY (Oct. 18, 2017), <https://www.usatoday.com/story/opinion/2017/10/18/miracle-hudson-pilot-dont-privatize-air-traffic-control-sully-sullenberger-column/774063001/> [<https://perma.cc/TYF2-2E69>]; see also *Former NASA Astronauts: Abort Mission to Privatize ATC*, AIRCRAFT OWNERS & PILOTS ASS'N (Sept. 6, 2017), <https://www.aopa.org/news-and-media/all-news/2017/september/06/former-nasa-astronauts-abort-mission-to-privatize-atc> [<https://perma.cc/SW7K-GZKA>].

⁸⁷ Justin Morrow, *Don't Privatize Air Traffic Control*, TIMES FREE PRESS (Dec. 7, 2017), <http://www.timesfreepress.com/news/opinion/columns/story/2017/dec/07/morrow/458677/> (last visited Aug. 30, 2018).

⁸⁸ *Id.*

Yet, if you hear the commercial airlines lately, they are telling all of us that these are exactly the types of systems they want to emulate in their drive to privatize air traffic control.

The airlines are making a push in Congress to take this big, diverse, national asset that serves so many different communities, aircraft and purposes and put it under the control of a narrow board that would run air traffic control according to their own interest. They say it would be easier to manage—but easier for whom? They want to remove oversight of the air traffic control system from the Federal Aviation Administration (FAA) and Congress, and give it to a narrow group of stakeholders dominated by the largest airlines. That benefits only the largest airlines, not the American people.

If we go down this road, I'm worried about access. I'm worried about equitability. And I'm worried about safety. Why would we give our air traffic control system—the keys to the kingdom—to the same people who shrink your airline seats, nickel-and-dime you, and set sky-high prices for people trying to flee a hurricane? Are these the people we want running our country's aviation system that oversees over 87,000 flights per day? The same people who charge you an arm and a leg to check your bags and then lose them?

.....

The airlines, as a business, have their own agenda, but it is not our American agenda. There is a reason that local communities, consumer groups and voters overwhelmingly oppose the idea of air traffic control privatization. It is a bad idea, and it would benefit only one industry.

Passengers deserve better. Our communities deserve better. America deserves better. We must protect and preserve our aviation system's basic sense of fairness, safety, security and access.⁸⁹

While NATCA has recently changed its position regarding ATC privatization, a 2003 report commissioned by NATCA contends that a privatized system cannot properly address the main concerns advanced by its advocates. The report found that private ATC monopolies fail to deliver effective results “in any of the three criteria that prompt privatization consideration: reducing cost, increasing the speed of modernization, and stabiliz-

⁸⁹ Sullenberger, *supra* note 86.

ing funding.”⁹⁰ Furthermore, privatized ATC systems tend to impose greater costs on the flying public and are prone to technological failure, and privatizers ultimately rely on government backing to costly effect.⁹¹

IV. IS THERE AN ATC “PROBLEM” IN THE U.S. FOR WHICH PRIVATIZATION WOULD PROVIDE A “SOLUTION”?

Proponents of ATC privatization argue the current FAA-operated ATC system is inefficient and claim privatization would increase efficiency. The two key assumptions privatization proponents rely on are: (1) that FAA-operated ATC is not doing a good or efficient job; and (2) that privatized ATC would do a much better and more efficient job. Both of those assumptions, which are not often challenged in the public debate, are questionable.

First, the asserted lack of efficiency in the FAA-operated system is overstated and raises the important question of whether a complete ATC overhaul by privatization is an outsized “solution” when compared with the current system’s more minor problems. Proponents appear to ignore the technological upgrades and savings in both cost and time already realized through NextGen.⁹² Numerous pilot and aerospace groups have taken the position that the FAA is not “bleeding money” and point out that modernizations through NextGen have “saved our nation \$2.72 billion in passenger time, fuel and operating costs [and that] dismantling the current ATC will cost far more money.”⁹³ Most importantly, the safety of the current FAA-operated ATC system in the United States is widely accepted. U.S. air carriers, despite now being major proponents of privatization,

⁹⁰ Elliott Sclar, *Pitfalls of Air Traffic Control Privatization* 4 (2003), <http://afgelocal200.org/wp-content/uploads/2017/01/2003-Pitfalls-Of-Air-Traffic-Control-Privatization-Columbia-University.pdf> [<https://perma.cc/7QN6-ZRVD>].

⁹¹ *Id.*

⁹² See *The Truth About ATC Privatization*, NAT’L BUS. AVIATION ASSOC., <https://www.nbaa.org/advocacy/issues/modernization/truth-about-atc-privatization/> [<https://perma.cc/6SZ7-J4KK>].

⁹³ Col. Keith Zuegel (Ret.), *Congress Risks National Security and U.S. Aviation*, FED. TIMES (Jan. 16, 2018), <https://www.federaltimes.com/opinions/2018/01/16/congress-risks-national-security-and-us-aviation/> [<https://perma.cc/CTE8-SABR>]. Colonel Keith Zuegel is a retired Air Force officer and is currently the Air Force Association’s senior director of government relations. See *id.*

once heralded the U.S. system as the “safest ATC system in the world.”⁹⁴

Moreover, according to DOT data, the travel delays that airlines have blamed on the current ATC system are mostly due to the poor scheduling practices of the airlines themselves that do not account for weather, among other things.⁹⁵ In fact, the majority of “ATC delays” do not actually stem from poor ATC performance. Delays occur when too many airplanes attempt to use the same runway for the given weather conditions.⁹⁶ Obviously, ATC has no control over the weather, airline scheduling, or the number of runways at an airport, yet the airlines have so regularly beaten “ATC delays” into everyone’s heads that most people do not know what that phrase means.⁹⁷ The FAA already has systems like ADS-B and Data Comm in place to assist airlines as well as other operators and to minimize routing and procedural delays.⁹⁸ Unfortunately, the airlines have been excessively slow to equip their aircraft to take advantage of these new systems and, instead, routinely shift the unwarranted blame for delays upon ATC.⁹⁹ Currently, only 2–5% of the airline fleet is equipped for ADS-B, despite the FAA mandate that aircraft operating in U.S. airspace be equipped with ADS-B by January 1, 2020.¹⁰⁰ Many airlines have requested extensions of up to five years to equip their aircraft with ADS-B.¹⁰¹ Unlike the airlines, many private and business aircraft have been equipped with ADS-B and Data Comm for years and routinely make use of the technology to save time, money, and fuel.¹⁰²

⁹⁴ *AAA CEO Calio: The United States has the World’s Safest ATC System, but It Needs Improvement*, AIRLINES FOR AM. (Nov. 18, 2014), <http://airlines.org/news/faa-reauthorization-hearing/> [<https://perma.cc/T42K-LMTG>].

⁹⁵ Robert W. Mann, Jr., *Opinion: The Case For ATC Privatization in U.S. is Weak*, AVIATION WK. (Mar. 17, 2017), <http://aviationweek.com/commercial-aviation/opinion-case-atc-privatization-us-weak> [<https://perma.cc/3J7V-ZV2U>].

⁹⁶ *See id.*

⁹⁷ *See id.*

⁹⁸ *Equip ADS-B*, *supra* note 40.

⁹⁹ Joe Kildea, *ATC Privatization Pitfalls: Point by Point*, AIRCRAFT OWNERS & PILOTS ASS’N (July 12, 2017), <https://www.aopa.org/news-and-media/all-news/2017/july/12/get-the-facts-about-atc-privatization> [<https://perma.cc/J6TL-7PZN>].

¹⁰⁰ *Equip ADS-B*, *supra* note 40.

¹⁰¹ Paul Bertorelli, *Airline Foot Dragging on ADS-B*, AVWEB (May 17, 2015), <https://www.avweb.com/blogs/insider/Airline-Foot-Dragging-on-ADS-B-224099-1.html> [<https://perma.cc/46QE-JKBS>].

¹⁰² *It Pays to Plan Ahead for ADS-B Equipage*, NAT’L BUS. AVIATION ASSOC. (June 13, 2017), <https://www.nbaa.org/ops/cns/adsb/it-pays-to-plan-ahead-for-ads-b-equipage.php> [<https://perma.cc/69LS-WCVC>].

While the current FAA-operated ATC system is not perfect and, as is the case with almost any organization, could find ways to improve its efficiency, the proponents of privatization have overstated the purported “problems” by ignoring the significant improvements of NextGen and inappropriately scapegoating ATC for delays and inefficiencies that are the fault of the airlines and their refusal to utilize the best available technology. In doing so, proponents of ATC privatization have inaccurately cast the situation as such a significant problem that a massive overhaul in the form of privatization would not be out of proportion. In reality, privatization is a far-out-of-proportion “solution” to any real inefficiencies in the FAA-operated system. The much smaller scale of actual ATC inefficiencies can likely be readily addressed through ordinary means such as audits and Congressional oversight with a focus on addressing and remedying inefficiencies.

While the wholesale overhaul and privatization of ATC in the United States presents a far outsized solution to the purported problems with the current system, there are very legitimate reasons to question the belief that privatization will actually improve efficiency of the system. In the debate over privatization, the efficiency of a wholesale privatized system is often held out and regarded as a given—but it should not be.

The first potential problem is with the scale of the wholesale privatization of ATC in the United States. The U.S. ATC system is enormous in comparison to other ATC systems in the world and privatizing the entire system would be an undertaking on an unprecedented scale. Successful transitions to private operation of ATC on much smaller scales in other countries and the small privatization of the FAA’s Federal Contract Tower program does not guarantee a successful transition of the entire U.S. ATC system. Though Canada has the second largest ATC system in the world, even proponents of privatization admit the U.S. system handles nine times more traffic than NAV Canada.¹⁰³ In regard to the size of U.S. ATC in comparison to other countries, “[o]ur ATC system is so much larger and more complex than anyone else’s that it would be hard to compare. For example, most other nations don’t have much, if any, general aviation activ-

¹⁰³ Poole, *U.S., Canadian Air-Traffic Control Compared*, *supra* note 52.

ity.”¹⁰⁴ In its 2016 report about Privatization of ATC, the U.S. Government Accountability Office stated that “[a]ny ATC restructuring would be a difficult, complex, challenging multi-year effort.”¹⁰⁵ Comparing and contrasting what has worked elsewhere with the U.S. ATC system is like comparing construction of a small-town courthouse to that of a skyscraper.¹⁰⁶

Privatizing ATC in the United States will likely pose a monumental challenge and introduce many unanticipated problems. Adoption of a privatized model will presumably put NextGen modernization on hold for a significant amount of time while the FAA transfers control to the new privatized entity. This delay would not address the problems proponents argue is the fault of the FAA, and the United States will risk losing precious time and money in its current drive through NextGen, among other things, to improve its ATC system. More importantly, ATC privatization “risks degradation rather than improvement of the ATC system.”¹⁰⁷ Potential problems arising in such a monumental transition should, of course, be considered in relation to the comparatively small scale purported “problems” the transition is intended to address.

Additionally, privatization is not entitled to a presumption that a privatized ATC system will inherently improve efficiency over the current government-run system. As discussed above, the FAA-operated system is funded through a combination of taxes and appropriations as determined by Congress. All the foreign ATC privatizations, and the one proposed in H.R. 2997, have one element in common: they are all based on the assumption that the system will be self-supporting through user fees.¹⁰⁸

In Canada, “ATC operations are primarily funded through “user fees,” which are paid by aircraft owners or operators based on the weight of the aircraft and the distance traveled.”¹⁰⁹ “From 1996 to 2012, Canada saw an additional 59 percent increase in ATC fees.”¹¹⁰ Privatization supporters have argued for a shift to

¹⁰⁴ Ron Rapp, *NBAA Interview*, THE HOUSE OF RAPP (Sept. 20, 2017), <http://www.rapp.org/archives/2017/09/nbaa-interview/> [https://perma.cc/PX6K-G9Y3].

¹⁰⁵ AIR TRAFFIC CONTROL: EXPERTS’ AND STAKEHOLDERS’ VIEWS, *supra* note 4, at 2.

¹⁰⁶ See generally BURJ KHALIFA, <http://www.burjkhalifa.ae/en/index.aspx> [https://perma.cc/2YU7-FAPR] (describing the world’s tallest skyscraper).

¹⁰⁷ Sclar, *supra* note 90, at 13.

¹⁰⁸ *Id.*

¹⁰⁹ *Delta Study*, *supra* note 85, at 7.

¹¹⁰ *Id.* at 2.

user fees as the primary source of ATC revenue, claiming it will eliminate federal fuel and ticket taxes.¹¹¹ Yet industry reports in Canada have shown that ATC privatization does not prevent airline tax increases at either federal or local levels.¹¹² One example is the aviation fuel tax in Ontario, Canada: in 2014 the Ontario government approved a plan to increase the tax from its previous rate of 2.7 cents per liter to a new rate of 6.7 cents by 2017—a total increase of approximately 148%.¹¹³ Even so, the private ATC funding source of user fees did not dissuade Ontario officials from raising a tax that would have supported ATC under a publicly funded system.¹¹⁴

In Canada, the cost increases resulting from privatization have forced many Canadians to cross the border into the United States to seek lower fares.¹¹⁵ In a 2012 interview, Canadian traveler Dennis Linton of Langley, British Columbia, who drove thirty miles across the border for his flight to Vegas, stated, “There is a significant cost savings for us to actually come to the likes of Bellingham airport rather than flying out of our Vancouver International I’d say it was in the neighborhood of about 35–40 percent. It actually is quite a significant savings.”¹¹⁶ Due to the influx of Canadian passengers, the airport in Bellingham, Washington, has nearly quadrupled its business in the past five years.¹¹⁷ As the Conference Board of Canada reported in 2012, factors including air navigation fees of \$20–25 per round-trip passenger (on trips over 800 miles) gave a 30% cost advantage to U.S. air carriers.¹¹⁸

“The labor intensive[] and inherently monopolistic nature of [ATC] provision undermines effective private provision.”¹¹⁹ Such a monopolistic entity, regardless of its profit or not-for-

¹¹¹ *Id.* at 7.

¹¹² *Id.*

¹¹³ *Id.*; *Gasoline Tax*, ONTARIO MINISTRY OF FINANCE, <https://www.fin.gov.on.ca/en/tax/gt/> [<https://perma.cc/AER8-MWA8>].

¹¹⁴ *Delta Study*, *supra* note 85, at 7.

¹¹⁵ John Ryan, *Small US Airports Attracting Bargain-Hunting Canadians*, PUB. RADIO INT’L (June 14, 2012), <https://www.pri.org/stories/2012-06-14/small-us-airports-attracting-bargain-hunting-canadians>.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ Vijay Gill, *Driven Away: Why More Canadians are Choosing Cross Border Airports*, CONF. BD. OF CANADA (Oct. 2012), <http://www.cacairports.ca/sites/default/files/Driven%20Away%20-%20Why%20More%20Canadians%20are%20Choosing%20Border%20Airports%20-%20FINAL.pdf> [<https://perma.cc/6YDW-VLA8>].

¹¹⁹ Sclar, *supra* note 90, at 4.

profit status, would have little incentive to keep fees at a minimum, as evidenced by the cost increases for ATC in both Europe and Canada.¹²⁰ Significantly, and based on the FAA's proprietary cost model and analysis, it is estimated that U.S. ATC privatization could lead to a 30% or greater cost increase if equivalent levels of ATC services were provided by private contractors.¹²¹ Also, the time to transition to a privatized system could take five years.¹²² Ultimately, according to the research of Columbia University Professor Elliott Sclar, "once cost of training and liability expenses are appropriately taken into account, the [United States] will spend more in its efforts to privatize ATC than the FAA would spend to provide the same service."¹²³ In addition, as the Congressional Budget Office calculated, H.R. 2997 would increase the nation's deficit by \$98.5 billion over ten years.¹²⁴ While privation proponents tout the success and cost savings associated with the FAA's Federal Contract Tower program as a justification for ATC privatization, privatization of the U.S. ATC system with the same level of service currently provided by the FAA would not save money.

Even worse, fluctuating fees or mismanagement of a privatized ATC could lead to fiscal crises that the FAA-operated system is largely shielded from. As noted, in 2002, NATS required a financial bailout of £130 million from taxpayers and a raise in fees after the global decline in air travel after September 11, 2001.¹²⁵ Additionally, contention regarding user fees and operating costs are presently forcing Switzerland's privatized ATC operator, skyguide, to further reduce its operating costs, which in the past had disastrous consequences for skyguide, as addressed below.¹²⁶ In labor-intensive service industries like ATC, reductions in operating costs customarily require staff minimization strategies. Bailouts and cost reductions to the point of inadequate ATC services are far from the improved efficiency that privatization is typically presumed to bring in the U.S. debate.

¹²⁰ *Id.*

¹²¹ *Id.* at 5.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ CONG. BUDGET OFFICE, H.R. 2997: 21ST CENTURY AVIATION INNOVATION, REFORM, AND REAUTHORIZATION ACT 2 (2017), https://www.cbo.gov/system/files?file=115th-congress-2017-2018/costestimate/hr2997_1.pdf [<https://perma.cc/54DT-PKZS>].

¹²⁵ NATS Arranges £130m Bailout, *supra* note 56.

¹²⁶ Elias, *supra* note 18, at 19.

V. ATC PRIVATIZATION MAY INTRODUCE NEW PROBLEMS OF FAIRNESS IN HOW ATC COSTS ARE BORNE AND IN OPEN ACCESS TO U.S. AIRSPACE

The U.S. government presently finances ATC in part through an excise tax based upon the value of airline tickets, resulting in a progressive tax model.¹²⁷ A switch to a flat per-seat fee structure would change the system to one where all travelers pay the same user fee, so as a proportion of a lower fare ticket, an ATC user fee would be higher.¹²⁸ To the extent that air travel is price elastic, this switch means that the most budget-conscious travelers bear the highest proportion of air travel costs for a privatized ATC system, either out of pocket or by simply cutting back on air travel.¹²⁹ That, in turn, means that the low cost carriers will bear a disproportionate share of the costs and will undoubtedly protest the loudest over any attempt to raise fees. Simply put, the move towards privatization represents a move toward a firmer hold on the industry by the largest oligopolic carriers that are not as sensitive to pass-through user fees as low-cost operators, and, as a matter of equity, the cost will be borne by those least able to pay.¹³⁰

Instead of a regressive user fee system, opponents of ATC privatization believe that “the fuel tax is the best possible mechanism for the aviation community to pay for its use of the system.”¹³¹ “The fuel tax is easy to understand, easy to pay, and there’s no recordkeeping or policy burden,” said Ed Bolen, CEO of NBAA, in a 2015 expert panel discussion.¹³² “Contrast that with user fees in the rest of the world. Everywhere we see a privatized ATC, it’s funded with user fees. We haven’t seen a privatized ATC that works in the way we would like [i.e., not potentially disruptive to fair access to airspace] in the United States.”¹³³

Under H.R. 2997, airline stakeholders would appoint one-third of the AANS board members while the government would

¹²⁷ Sclar, *supra* note 90, at 22.

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Panelists Address the Whys and Wherefores of Privatization*, AIR TRAFFIC CONTROL ASS’N (Nov. 2015), https://www.faa.gov/air_traffic/technology/swim/news/media/ATCA_Highlights_SWIM_60_Annual.pdf [<https://perma.cc/C47Y-29R7>].

¹³² *Id.*

¹³³ *Id.*

appoint only three of fifteen available board seats.¹³⁴ Delta Air Lines argues that under the proposed privatized model, control of ATC would be “ceded to airlines and corporate entities that would then have a larger say in priorities.”¹³⁵ AANS likely would set its own priorities, which may or may not be the same as those of either the FAA, which is charged with responsibility for the safety and security of the national air space, or the users who pay fees to the proposed AANS.

This airline control could disrupt fair access to U.S. airspace, a defining characteristic of aviation in the United States as compared to most other countries in the world. It could result in greater financial strain on smaller airports that serve rural communities and other populations located outside major urban centers because priority by the AANS would be given to support ATC infrastructure at airports that service airlines versus those that do not.¹³⁶ Pilot organizations, members of Congress, and personnel at smaller airports are concerned that under a privatized system, the focus on ATC and critical infrastructure maintenance and improvements would shift away from balancing the needs of both smaller and larger airports.¹³⁷ Senator Moran (R-KS), an opponent of ATC privatization, recently stated:

From an aviation point of view, it means that they [the airlines] would have positions on the board of this private organization I have no doubt that what they would emphasize is commercial air traffic in large megacities. So it means the commercial side would receive the emphasis, not the general aviation side.¹³⁸

While the impact of an airline-centric privatized ATC on smaller U.S. airports is not known, it is foreseeable that, given the AANS would be funded by airlines through pass-through user fees, smaller airports without a large airline presence may struggle with infrastructure improvements and thus may not be

¹³⁴ *Delta Study*, *supra* note 85, at 2.

¹³⁵ *Id.*

¹³⁶ *Id.* at 9.

¹³⁷ Barney Helmick, *Coconino Voices: Air Traffic Control Privatization Would Cut Off Northern Arizona*, ARIZONA DAILY SUN (Jan. 10, 2018), https://azdailysun.com/opinion/columnists/coconino-voices-air-traffic-control-privatization-would-cut-off-northern/article_a5a5c50b-0e4d-5648-9f6b-5b588552ca8f.html, *see also* Jake Hoffner, *My Voice: Yankton Airport Critical to Community*, ARGUS LEADER (Jan. 26, 2018), www.argusleader.com/story/opinion/voices/2018/01/26/voice-yankton-airport-critical-community/109847380/ [<https://perma.cc/9LZH-CQEB>].

¹³⁸ Don Lefler, *Moran Defies Trump, Says Private Air Traffic Control Would Harm Wichita Industry*, WICHITA EAGLE (Jan. 31, 2018) <https://www.kansas.com/news/politics-government/article197662894.html> [<https://perma.cc/CD6C-4Y38>].

able to support commercial operations, which in turn may force air travelers in the community to venture out to large urban airports to access the same commercial air service currently available close to home.¹³⁹ Accordingly, ATC privatization under H.R. 2997 could reduce fair access to U.S. airspace and fundamentally change how aviation works in the United States.

VI. A PRIVATIZED ATC MAY REDUCE SAFETY AS THE SKIES BECOME MORE CROWDED

The form of ATC privatization currently being proposed in the United States is problematic in numerous respects and may detrimentally impact air traffic efficiency and deny fair access to the skies. But all of those issues must take a back seat to the paramount issue of safety.

Aircraft travel is our era's safest mode of transportation, particularly in the United States. Regardless of whether government or private entities render ATC services, there will always be a risk of system failures due to human error. Tragically, there have been numerous aircraft crashes and untold numbers of near misses that have been at least partially attributed to ATC acts or omissions, irrespective of whether those services were provided by governments or private companies.

However, in the United States, ATC services are standardized and controlled by the FAA with enhancement of procedures and services, from a safety standpoint, taking place incrementally over time. This is due to the United States' National Transportation Safety Board (NTSB)/FAA relationship wherein prior accidents and incidents result in lessons learned and changes implemented that, over time, result in the increased safety of the entire aviation system. This system of incremental improvement following from these lessons and corrections, through the interplay of the NTSB and FAA, is largely responsible for the amazing safety record of U.S. airlines over the past several years. There have been no passenger deaths on a Part 121¹⁴⁰ U.S. airline flight since the 2009 Colgan Air crash in upstate New York.¹⁴¹ Even proponents of privatization agree that

¹³⁹ *See id.*

¹⁴⁰ *See Sarah Fritts, What is the Difference Between Part 91.121 and 135?*, THINK AVIATION (June 1, 2018), www.thinkaviation.net/difference-between-part-91-121-135 [<https://perma.cc/5EPK-SXCB>].

¹⁴¹ The February 12, 2009, Colgan Air Flight 3407 was a U.S. airline crash involving passenger fatalities. *See* NAT'L TRANSP. SAFETY BD., LOSS OF CONTROL ON APPROACH, COLGAN AIR, INC., OPERATING AS CONTINENTAL CONNECTION FLIGHT

the ATC system operated by the FAA in the United States, while not perfect, is the safest ATC system in the world.

Will passing control of ATC services from the FAA to private operators have a negative effect on safety as the skies get even more crowded? The answer to this question is complex, and some proponents of ATC privatization contend that shifting away from government-controlled ATC would actually improve safety by removing what they see as an internal conflict in a system both operated and regulated by the FAA.¹⁴² However, private ATC service providers can be susceptible to unique economic forces with the potential to impact quality, effectiveness, and safety. Privatized ATC services have raised concerns that the desire to maximize economic efficiency could compromise safety. The ATC services provided by skyguide¹⁴³ (Swiss Air Navigation Services Limited), one of many privatized air navigation service providers (ANSPs)¹⁴⁴ worldwide, led to the 2002 crash of Bashkirian 2937 because of an attempt to lower costs by increasing controller hours while simultaneously mismanaging critical ATC technology.¹⁴⁵

3407, BOMBARDIER DHC 8 400, N200WQ, <https://www.nts.gov/investigations/AccidentReports/Pages/AAR1001.aspx> [<https://perma.cc/MQ85-WCJZ>].

¹⁴² Shuster, *supra* note 68.

¹⁴³ The company name “skyguide” is officially written in lower-case. See *About Us*, SKYGUIDE, <https://www.skyguide.ch/en/company/about-us/> [<https://perma.cc/EY6X-SYQT>].

¹⁴⁴ According to the Civil Air Navigation Services Organisation, an ANSP typically provides air traffic services that include (1) air traffic control functions to maintain safe separation between aircraft; (2) acquisition and maintenance of air navigation equipment; (3) development and dissemination of procedures and data for safe navigation of the airspace; and (4) air traffic management techniques to make efficient use of available airports and airspace, improve traffic flow, and expand airspace and airport capacity. The term “air navigation services” encompasses all of these components and has been adopted internationally to refer to the activities carried out by entities performing these functions, which are known globally as air navigation service providers (ANSPs). See <https://www.canso.org> [<https://perma.cc/ULM8-Y4RM>].

¹⁴⁵ See GER. FED. BUREAU OF AIRCRAFT ACCIDENTS INVESTIGATION (BUNDESSTELLE FÜR FLUGUNFALLUNTERSUCHUNG), AX001-1-2/02, INVESTIGATION REPORT 110 (2004), available at https://www.bfu-web.de/EN/Publications/Investigation%20Report/2002/Report_02_AX001-1-2_Ueberlingen_Report.pdf?__blob=publicationFile [<https://perma.cc/89KS-X6QM>] [hereinafter GERMAN INVESTIGATIVE REPORT].

A. 2002 ÜBERLINGEN MID-AIR COLLISION – A FAILURE OF
PRIVATIZED ATC SERVICES

On July 1, 2002, Bashkirian Airlines Tupolev TU154M¹⁴⁶ charter flight 2937 (Bashkirian 2937) took off from Moscow, Russia, to Barcelona, Spain, carrying sixty passengers and five crew members.¹⁴⁷ Forty-five of the passengers on the flight were Russian schoolchildren on a school trip to the sunny beaches of Spain's Costa Dorada¹⁴⁸ organized by the United Nations Educational, Scientific, and Cultural Organization committee.¹⁴⁹ Bashkirian 2937 departed Moscow under instrument flight rules (IFR) and flew on a southwest trajectory, heading over Belarus, Poland, the Czech Republic, and Austria.¹⁵⁰ While cruising at 36,000 feet near Vienna, Austria, the aircraft turned west, then entered German airspace and headed towards Switzerland and the vicinity of Lake Constance, a region where the borders of Austria, Germany, and Switzerland meet.¹⁵¹

That same evening, DHL International Flight 611 (DHL 611), a Boeing 757-200¹⁵² cargo flight to Brussels, Belgium, took off from Bergamo, Italy.¹⁵³ The DHL flight from Bergamo to Brussels was also conducted under IFR with a planned cruise altitude of 36,000 feet with two crewmembers and no passengers.¹⁵⁴ After departing Bergamo, DHL 611 headed northwest, crossing the Swiss border. DHL 611 planned to fly north until reaching a navigational aid near Stuttgart, Germany, then turn northwest

¹⁴⁶ *Id.* at 6; see also *Aircraft Technical Data & Specifications*, AIRLINERS, <http://www.airliners.net/aircraft-data/tupolev-tu-154/376> [<https://perma.cc/Q2T8-M7PH>] (describing the aircraft as a popular Russian tri-jet transport aircraft typically configured to carry 150–190 passengers).

¹⁴⁷ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 7.

¹⁴⁸ The English translation of Costa Dorada is “Golden Coast” according to a translation from <http://dictionary.reverso.net/spanish-english/costa%20dorada> [<https://perma.cc/GV7H-AFX9>].

¹⁴⁹ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 6–7.

¹⁵⁰ *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, FED. AVIATION ADMIN., http://lessonslearned.faa.gov/11_main.cfm?TabID=1&LLID=84&LLTypeID=2 (last visited Dec. 12, 2017).

¹⁵¹ *Id.*

¹⁵² The airplane involved in the crash was an all-cargo configuration of the Boeing 757-200 airliner. For further specifications, see *Aircraft Technical Data & Specifications*, *supra* note 146; see also GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 16.

¹⁵³ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 6.

¹⁵⁴ *Id.*

to Brussels.¹⁵⁵ This flight plan put DHL 611 at 36,000 feet somewhere in the vicinity of Lake Constance at the same time as Bashkirian 2937.¹⁵⁶

Both flights were in airspace controlled by Area Control Center (ACC) Zurich, run by skyguide in accordance with the requirements of ICAO¹⁵⁷ and the “Letters of Agreement (LoA)” between skyguide and the Swiss government.¹⁵⁸ Skyguide is a private joint-stock corporation under Swiss law responsible for ensuring the safety of Swiss and adjoining airspace areas in Germany, Austria, France, and Italy.¹⁵⁹ Skyguide was created in 1996 when the Swiss government privatized its ATC services.¹⁶⁰ Though skyguide’s stock is primarily owned by the Swiss government, it is financially independent and does not receive public funds; instead, skyguide is financed through user fees it collects.¹⁶¹ Amongst the popular selling points associated with the formation of skyguide was the promise of lower labor costs, accelerated adoption of new and more reliable technology and innovation, and fewer ATC delays.¹⁶² However, such a system can only be beneficial if the necessary regulatory mechanisms and institutions are put into place.¹⁶³ Unfortunately, those critical components were missing and, due to a combination of stakeholder pressure from the BoD and a lack of regulatory supervision, skyguide started to cut costs beyond a level acceptable from a safety perspective.¹⁶⁴

On the night of the collision, only one air traffic controller, Peter Nielsen, was controlling the entire Zurich sector for overflight aircraft along with controlling arrivals and departures

¹⁵⁵ *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, *supra* note 150.

¹⁵⁶ *Id.*

¹⁵⁷ INT’L CIVIL AVIATION ORG., ANNEX 11 TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION: AIR TRAFFIC SERVICES § 3.5 (2001), <https://www.theairlinepilots.com/forumarchive/quickref/icao/annex11.pdf> [<https://perma.cc/JRS9-9WTK>].

¹⁵⁸ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 35.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*; see also *History*, SKYGUIDE, <https://www.skyguide.ch/en/company/about-us/history/> [<https://perma.cc/RF4U-8SH4>].

¹⁶¹ See ERNST U. VON WEIZSÄCKER ET AL., LIMITS TO PRIVATIZATION: HOW TO AVOID TOO MUCH OF A GOOD THING: A REPORT TO THE CLUB OF ROME 106 (2005).

¹⁶² Anthony Adams, *The Effects of Air Traffic Control Privatization on Operating Cost and Flight Safety*, 14 J. AVIATION/AEROSPACE ED. & RES. 21, 26 (2005).

¹⁶³ VON WEIZSÄCKER ET AL., *supra* note 161, at 106.

¹⁶⁴ *Id.*

from the nearby Friedrichshafen airport.¹⁶⁵ The arrivals and departures were controlled from a workstation approximately ten feet from the overflight control station.¹⁶⁶ While skyguide regulations required two controllers be on duty at all times, the other controller on duty had left his work station to take an extended rest.¹⁶⁷ According to a Swiss newspaper, skyguide's management allowed employees to take breaks in violation of regulations because skyguide budget cuts led to unfilled positions and increased workloads for controllers.¹⁶⁸

As a result of the maintenance work on the Zurich facility's main radar system and phone lines, controllers were required to utilize secondary systems that did not provide the same level of sophistication as the primary systems.¹⁶⁹ One of the systems that was rendered completely inoperable was the visual Short-Term Conflict Alert (STCA) system,¹⁷⁰ which would visually alert a controller to a possible impending collision approximately two and a half minutes before a collision is forecast to occur.¹⁷¹ Additionally, the maintenance work interfered with the proper operation of the main and backup phone systems.¹⁷²

Near the time Mr. Nielsen was controlling the Bashkirian 2937 and DHL 611 flights, an unexpected and unscheduled

¹⁶⁵ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 75; *see also* *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, *supra* note 150.

¹⁶⁶ *See* *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, *supra* note 150.

¹⁶⁷ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 75; *see also* *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, *supra* note 150.

¹⁶⁸ Edmund L. Andrews, *Swiss Tell of Error Before Air Crash*, N.Y. TIMES (July 4, 2002) <https://www.nytimes.com/2002/07/04/world/swiss-tell-of-controller-error-before-air-crash.html>; *see also* GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 90–92.

¹⁶⁹ *See* GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 38–39.

¹⁷⁰ This system is crucial for the monitoring of air traffic by ATC. If aircraft come onto a collision course, they usually appear on the monitoring screen as blinking red dots instead of green dots in normal circumstances, and an acoustic signal is given. Without this system, traffic control demands considerably more attention, and air safety is radically reduced when the slightest diversion or problem arises for the controller.

¹⁷¹ STCA is an ATC system that provides alerts of impending aircraft collisions based on algorithmic software computational forecasts in ways similar to the alerts provided to pilots and aircrews from onboard Traffic Collision Avoidance Systems (TCAS), but at greater range. *See* GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 88–89.

¹⁷² GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 39.

flight contacted Friedrichshafen airport to land.¹⁷³ Because Nielsen was the only controller, this additional flight required him to get up from one workstation and move to another.¹⁷⁴ Operational procedures in place at the time required Nielsen to phone the tower at Friedrichshafen to advise personnel there of the approaching aircraft.¹⁷⁵ But because the phone systems were not working, a fact Nielsen did not know, he was unable to contact the Friedrichshafen tower.¹⁷⁶ After numerous unsuccessful and time-consuming attempts to contact the tower, Nielsen finally asked the Friedrichshafen-bound flight to contact the tower directly.¹⁷⁷ This prolonged interruption from his duties at his primary workstation for overflight traffic caused a significant lapse in attention to Bashkirian 2937 and DHL 611, which were now on a fatal collision course.¹⁷⁸

A controller at Upper Area Control Karlsruhe, a nearby sector that overlapped with ACC Zurich, was alerted by his properly functioning STCA equipment that Bashkirian 2937 and DHL 611 were on a collision course and unsuccessfully attempted to warn Nielsen by phone at the Zurich station no fewer than eleven times.¹⁷⁹ The Karlsruhe controller could have warned both aircraft of the impending collision, but that action would have violated published protocol requiring approval from the controlling facility (i.e., ACC Zurich) before doing so.¹⁸⁰ The Karlsruhe controller followed the established protocol and did not warn Bashkirian 2937 or DHL 611.¹⁸¹

Having dealt with the Friedrichshafen aircraft, Nielsen returned to his station less than a minute before the collision and only then became aware of the impending crash.¹⁸² In a scram-

¹⁷³ *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, *supra* note 150.

¹⁷⁴ *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, *supra* note 150.

¹⁷⁵ Mayday Aircrash Investigate, *DHL Flight 611 Deadly Mid Air Crash "The Überlingen Disaster"*, YouTube (May 13, 2015), <https://www.youtube.com/watch?v=q1pkhobL1Tw&t=5s> (originally broadcast by National Geographic on September 26, 2011).

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ Ashley Nunes & Todd Laursen, *Identifying the Factors that Contributed to the Überlingen Midair Collision: Implications for Overall System Safety*, in HUMAN FACTORS AND ERGONOMICS SOCIETY 48TH ANNUAL MEETING PROCEEDINGS 4 (2004).

¹⁸¹ *DHL Flight 611 Deadly Mid Air Crash "The Überlingen Disaster"*, *supra* note 175.

¹⁸² *Id.*

ble to respond, just forty-four seconds prior to the collision, Nielsen issued an instruction to Bashkirian 2937 to expedite a descent to 35,000 feet, which directly conflicted with conflict avoidance resolution instructions from the Tupolev's Traffic Collision Avoidance System's (TCAS), and also mistakenly advised the pilots to look for DHL 611 in the opposite direction from which the aircraft was approaching.¹⁸³ At approximately 9:35 p.m. local time, while both aircraft were operating under IFR and in positive contact with ACC Zurich, Bashkirian 2937 and DHL 611 collided¹⁸⁴ over the German town of Üeberlingen.¹⁸⁵ The collision caused DHL 611 to lose nearly all of its vertical stabilizer.¹⁸⁶ Bashkirian 2937 broke into several pieces after being nearly severed in half by DHL 611's tail.¹⁸⁷ Neither aircraft was controllable following the collision and both airplanes hit the ground north of Üeberlingen, killing everyone aboard both aircraft, including all forty-five school children.¹⁸⁸

B. SKYGUIDE'S PRIVATIZED STRUCTURE CAUSED THE ÜEBERLINGEN MID-AIR COLLISION

A major international effort ensued to investigate the crash. Swiss, German, Russian, and American entities all took part, and their reports revealed numerous shortcomings in skyguide that contributed to the crash.¹⁸⁹ Eight skyguide managers were indicted for negligent homicide, among other charges.¹⁹⁰ Nielsen was blamed for not following proper procedures, though prosecutors, noting a "culture of negligence and lack of risk awareness at skyguide," maintained that the collision was not solely

¹⁸³ *Id.*

¹⁸⁴ See *Accident Overview of Midair Collision of Bashkirian Airlines TU154 and DHL Boeing 757 over Germany*, *supra* note 150.

¹⁸⁵ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 6.

¹⁸⁶ DHL 611 lost approximately 80% of its vertical stabilizer. Boeing later stated that the loss caused the airplane to become aerodynamically unstable in the yaw axis. See GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 24.

¹⁸⁷ GERMAN INVESTIGATIVE REPORT, *supra* note 145, at 9.

¹⁸⁸ *Id.* at 6. Sixty-nine people were aboard Bashkirian 2937, and two people were aboard DHL 611 for a total of seventy-one deaths attributable to the mid-air collision.

¹⁸⁹ *Plane Crash Killing Trial Starts*, BBC NEWS (Oct. 25, 2005), <http://news.bbc.co.uk/2/hi/europe/4375338.stm> [<https://perma.cc/69AW-YC8V>].

¹⁹⁰ Harry Rosenbaum, *4 European Air Traffic Controllers Convicted of Negligent Homicide in 2002 Crash*, SEATTLE TIMES (Sept. 4, 2007, 5:48 PM), <https://www.seattletimes.com/business/4-european-air-traffic-controllers-convicted-of-negligent-homicide-in-2002-crash/>.

Nielsen's fault.¹⁹¹ Though skyguide initially blamed the collision on the crew of Bashkirian 2937, it eventually accepted responsibility and asked relatives of the victims for forgiveness.¹⁹² Ultimately, four skyguide middle managers were later convicted of negligent homicide.¹⁹³ Tragically, Nielsen was later stabbed to death by a Russian man, Vitaly Kaloyev, whose wife and two children were passengers on Bashkirian 2937.¹⁹⁴ On its website, skyguide describes the crash, stating, in part, that "[t]he tragic dimension of this accident and of the subsequent events profoundly changes the understanding of safety in Swiss and international aviation."¹⁹⁵

There is no dispute that skyguide's cost-cutting measures contributed to the crash. And it is apparent that the privatized nature of skyguide was the driving force in the fatal cost cutting. Certainly, skyguide's privatized corporate structure resulted in unique pressures to cut costs that do not apply to the FAA's provision of ATC services in the United States. Skyguide is financially independent of the Swiss government and does not operate on public funds. Instead, skyguide is funded through user fees, receiving the majority of its revenue from charges on overflights and additional revenue from approach charges paid by aircraft using Swiss airports.¹⁹⁶

Additionally, skyguide's board was appointed by the Swiss government and comprised of representatives of the major players in Swiss air transport, including a representative of Swissair.¹⁹⁷ These operators, including Swissair's representative, put pressure on skyguide to reduce costs in order to keep down the fees that the operators would pay for skyguide's ATC services. Consequently, despite greatly increased air traffic in Switzerland in the years before the 2002 mid-air crash, skyguide barely increased personnel levels.

¹⁹¹ *4 Swiss Air Traffic Controllers Found Guilty in 2002 Crash*, CANADIAN BROADCAST. CORP. (Sept. 4, 2007), <http://www.cbc.ca/news/world/4-swiss-air-traffic-controllers-found-guilty-in-2002-crash-1.676488> [<https://perma.cc/78ZR-84VM>].

¹⁹² *Plane Crash Killing Trial Starts*, *supra* note 189.

¹⁹³ Rosenbaum, *supra* note 190.

¹⁹⁴ The 2017 film, *Aftermath*, is loosely based on the disaster and the ensuing actions of Vitaly Kaloyev. *Aftermath*, IMDb, <http://www.imdb.com/title/tt4581576/> [<https://perma.cc/H5VX-LNNG>]; see generally *AFTERMATH* (Protozoa Pictures 2017).

¹⁹⁵ *History*, *supra* note 160.

¹⁹⁶ Elias, *supra* note 18, at 18.

¹⁹⁷ See VON WEIZSÄCKER ET AL., *supra* note 161, at 104–05.

Notably, the skyguide structural features that would have been held out as selling points—independence from public funding and competitive ATC service fees—ultimately led to cost cutting to the point of compromised safety. In addition to the 2002 mid-air crash, air traffic control incidents in Switzerland around the same time were increasing and above the average of the European Union.¹⁹⁸

Skyguide continues to be vulnerable to economic pressures with significant potential to compromise safety. For example, in 2004, Swiss officials ordered skyguide to make significant financial cuts, even with many controller positions still left unfilled.¹⁹⁹ Three years later, skyguide continued to be under political pressure to fill forty-five vacant controller positions while simultaneously raising fees to plug holes in its finances.²⁰⁰ In recent years, the revenue raised by skyguide's user fees has suffered from declining traffic, resulting in more cost-cutting measures and increased user fees.²⁰¹

In August 2016, skyguide controllers again caused an aircraft crash resulting in the loss of life. Skyguide controllers assigned a Swiss F/A-18 fighter bomber aircraft operating IFR an altitude too low for surrounding terrain, and the aircraft crashed, killing the pilot.²⁰² Skyguide responded that “it will assume its responsibility in the affair.”²⁰³ What precisely skyguide did or did not do “in the affair” is unclear.

VII. AVOIDING SAFETY ISSUES IN A PRIVATIZED U.S. SYSTEM

Privatized ATC services in the United States would not necessarily be immune from the same economic pressures that impacted skyguide and ultimately compromised safety. One of the fundamental flaws in H.R. 2997 is that ATC cannot be competitively bid because the profit-making, market-based incentives for

¹⁹⁸ *Id.* at 106.

¹⁹⁹ Matthew Allen, *Skyguide Braced for Fresh Challenges*, SWISSINFO (Apr. 25, 2007), <https://www.swissinfo.ch/eng/Skyguide-braced-for-fresh-challenges/5853402> [<https://perma.cc/9RX9-K9FH>].

²⁰⁰ *Id.*

²⁰¹ Elias, *supra* note 18, at 18–19.

²⁰² *Jet Ordered to Fly Too Low, Investigators Say*, SWISSINFO (Sept. 6, 2016), https://www.swissinfo.ch/eng/tragic-accident_military-jet-was-flying-too-low-investigators-say/42425380 [<https://perma.cc/8GW7-F393>].

²⁰³ *Id.*

efficiency and economy do not parallel the government's overwhelming interest in ensuring safety and security.²⁰⁴

AANS would, like skyguide, be funded by user fees. Additionally, four of AANS's directors would be nominated by the airlines, which are impacted by the user fees that AANS charges. While H.R. 2997 would not permit the board members nominated by the airlines to actually work for the airlines, is that enough to avoid the situation that occurred with skyguide, where pressure exerted by Swissair and other carriers to keep user fees low resulted in cost cutting to the point safety was compromised? It does not seem too much of a stretch to think that board members nominated by the airlines might advance the airlines' interests, notwithstanding not being direct employees of the airlines. As noted above, Delta has stated that under the current proposed model, control of ATC would be "ceded to airlines and corporate entities that would then have a larger say in priorities."²⁰⁵

Moreover, a fee-based sustainment structure would create a whole new budget-balancing problem that is different from how the FAA-operated ATC system is presently funded. Assuming the budget can be initially worked out to result in adequate funding so that safety is not compromised, the revenue source is bound to fluctuate, as it has with skyguide, and budgets are likely to be inefficiently managed so as to compromise the level of services needed to ensure the U.S. ATC system remains the safest system in the world. Indeed, skyguide is not the only example of the compromises resulting from cost cutting in privatized ATC. Evidence from Canada's and Australia's ANSPs suggests that safety ultimately pays the price.²⁰⁶ Nav Canada, the pro-privatization's darling exemplar, has only been successful at keeping costs low by negotiating with controllers for lower pay and longer hours, resulting in controllers being stretched to the point of being unable to effectively perform their jobs.²⁰⁷

VIII. ATC PRIVATIZATION WOULD HAMPER THE PRACTICE OF AVIATION LAW

Aviation law practitioners regularly need to gather data collected by the FAA-operated ATC system, such as ATC accident

²⁰⁴ Sclar, *supra* note 90, at 4.

²⁰⁵ *Delta Study*, *supra* note 85, at 2.

²⁰⁶ Sclar, *supra* note 90, at 10.

²⁰⁷ *Id.*

packages, ATC communications, radar data, weather briefings, personnel and staffing information, and incident reports. That data is vital evidence in litigation arising out of aviation accidents. Privatization threatens preservation of and access to such evidence.

Under the current FAA-operated ATC system, the public can request FAA records under the Freedom of Information Act (FOIA) system. FOIA is often described as the law that keeps citizens in the know about their government.²⁰⁸ Under FOIA, agencies must disclose any information that is requested—unless that information is protected from public disclosure by a FOIA exemption.²⁰⁹ This right to disclosure grants the public access to a system that provides a consistent set of rules and procedures for information requests regarding aircraft, airmen, and other records. Practitioners in aviation law regularly rely on FOIA for preservation of and access to critical evidence in aviation cases.

Under a privatized scheme, there may not be any protections for or guarantees of information requested by the public.²¹⁰ In Canada, requests sent to Nav Canada for ATC-related data do not go through a system like FOIA. Nav Canada sends all of the requests “to the legal department” and encourages requestors to instead request information from the Transportation Safety Board of Canada.²¹¹ Nav Canada does not per se deny all requests but does not regularly receive nor respond to requests for ATC data.²¹² If the United States adopted a system like the one in place in Canada, ATC documents and data might have to be obtained through the NTSB docket and FOIA system, not the FAA. This could be problematic in light of the fact that the NTSB docket is often missing many items accessed and utilized by, and otherwise available to, the NTSB in its investigations, and the fact that the NTSB currently believes its FOIA obligations begin and end at what it decides to include in its dockets.

Preservation is also a concern. H.R. 2997 does not address record retention policies/procedures. Thus, AANS could set retention policies/procedures that are not favorable to the public

²⁰⁸ FREEDOM OF INFORMATION ACT, <http://www.foia.gov> [<https://perma.cc/2Q8U-4QC9>].

²⁰⁹ *What is FOIA?*, FREEDOM OF INFORMATION ACT, www.foia.gov/about.html [<https://perma.cc/V9JG-HQTG>].

²¹⁰ Telephone Interview with Christa Lucas, *supra* note 66.

²¹¹ Telephone Interview with John Fleming, Nav Canada (Nov. 2017).

²¹² *Id.*

interest. For example, under the Contract Tower Program in the United States, regional FOIA offices receive FOIA requests for information from or involving contract towers. However, according to the Renton, Washington, FOIA office, these requests are forwarded onto the contractor running the tower and not answered directly by the FAA's FOIA office.²¹³ Despite the FOIA office's statement that requests are forwarded, this author has found that such requests are not typically forwarded but returned with occasional contact information for the contractor. In 2014, a FOIA request was sent to the Renton FAA Regional FOIA office for records "substantiating events before, during and after the rescue and recovery operations" of a fatal Cessna 208B crash that occurred the previous year in Hawaii.²¹⁴ In response, the requester received the following:

In an email dated June 5, 2014, you were provided with contact information for Serco Inc., for any available records from the Molokai Federal Contract Tower. The State of Hawaii's Department of Transportation operates the Hana Airport, Kalaupapa Airport, and Kapalua Airport and may also have records responsive to your request. However, please be advised that the State of Hawaii has no statutory obligation to respond to a FOIA request.²¹⁵

The tone and information in the FOIA response is far from a positive indication that records would be forthcoming from private ATC providers.

For purposes of this article, in November 2017, this author sent out multiple FOIA requests to known contract towers for documented aircraft gear-up landing incidents over the last twenty-four months. While an FAA FOIA office did state that there was a landing accident in August 2016 at the Arlington Municipal Airport in Arlington, Texas (KGKY), it claimed to have "no records" regarding this accident because KGKY was a contract tower controlled by a private contractor. The email received from the FAA FOIA office stated, in part:

²¹³ Telephone Interview with unknown Renton, Wash., FOIA office personnel (Nov. 2017).

²¹⁴ See e-mail to Dianna Pfeifle, FOIA Officer, AJV-W52, Air Traffic Organization (Mar. 20, 2014), available at <https://butterdezillion.files.wordpress.com/2014/07/faa-foia-request-2-and-disclosure-letter.pdf> [<https://perma.cc/NRY8-8U5P>].

²¹⁵ Response to FOIA Request 2014-008224WS from Kathryn M. Vernon, Regional Administrator, FAA Nw. Mountain Region (June 6, 2014) (on file with author).

I am e-mailing to inform you that you have requested information from a federal contract tower, Arlington Airport Traffic Control Tower (ATCT). For these type of FOIA's our office will generate a "no records" response, as this is not an FAA facility. However, please be advised that Arlington ATCT has no statutory obligation to respond to a FOIA request. Please let me know if you would like to continue with your request with a no records response, or contact the Arlington ATCT to try to obtain the information from them and with your concurrence withdraw this FOIA request. The Arlington Airport Traffic Control Tower should have some data on this since it happened at their field. Here is the Kathryn's Report on the accident²¹⁶

The privately-owned website Kathryn's Report typically gathers and hosts a compilation of news reports and NTSB documents for aircraft accidents.²¹⁷ However, for this particular incident, all the site had available was the NTSB report.²¹⁸ If the only publicly available information for contract towers is from news and NTSB reports, aviation practitioners will have to resort to requesting information from the contractor or by subpoena. Even if documents are subpoenaed, it is unclear what, if any, controls exist to ensure the preservation of data and information gathered by privatized or contract ATC providers.

The FAA has also privatized weather briefing services by contract with Lockheed Martin and by corporate merger with Leidos.²¹⁹ According to Leidos corporate personnel, it is not subject to FOIA but is willing to respond to requests from the public for flight briefings on a case-by-case basis if submitted from an e-mail link on its "Flight Service" homepage.²²⁰ No information is provided as to how Lockheed Martin decides whether it is "willing" to provide information, and it is unclear what legal standards may apply to its preservation and disclosure obligations.

²¹⁶ E-mail from FAA FOIA office to Ross Neher (Feb. 2, 2018) (on file with author).

²¹⁷ See KATHRYN'S REPORT, www.kathrynsreport.com (last visited Aug. 1, 2018).

²¹⁸ See *Cessna 172S Skyhawk Skymates, Inc., N544SP: Accident Occurred August 09, 2016 in Arlington, Tarrant County, Texas*, KATHRYN'S REPORT, www.kathrynsreport.com/2016/08/cessna-172s-skyhawk-skymates-inc-n544sp.html (last visited Feb. 10, 2018).

²¹⁹ See Loren Thompson, *Leidos Deal Closes, Spawning Vast Solutions Enterprise*, FORBES (Aug. 17, 2016), <https://www.forbes.com/sites/lorenthompson/2016/08/17/leidos-deal-closes-spawning-vast-solutions-enterprise/#5ab89f2d66e9> [<https://perma.cc/L3LR-NRWK>].

²²⁰ Telephone Interview with unknown Leidos personnel (Nov. 2017).

H.R. 2997 does not contain any provisions addressing retention and disclosure of information and data under the privatized system it purports to create. Arguably, like the National Railroad Passenger Corporation, a.k.a. Amtrak, a privatized ATC service provider in the United States might still be subject to FOIA provisions, but it is far from certain how privatized ATC service providers would respond to records requests, if at all.²²¹

Additionally, ATC negligence claims against AANS would be handled far differently from those involving ATC under the FAA. Under H.R. 2997, employees of AANS would not be subject to the Federal Tort Claims Act (FTCA).²²² Instead, H.R. 2997 would require that the corporation obtain and maintain “adequate liability insurance policies and coverages, as determined by the Secretary, including complete indemnification of employees of the Corporation for acts within the scope of employment.”²²³ This insurance requirement is similar to the current requirement for Amtrak. Amtrak’s insurance has been a recent matter of debate due to two recent high-profile train crashes—Amtrak 501 in Washington and Amtrak 188 in Pennsylvania.²²⁴ Proponents of H.R. 2997 highlight that the speed of handling potential claims could be faster in a non-governmental structure versus the current FTCA system. However, opponents of H.R. 2997 point out that, like Amtrak, claims handling could require acts of Congress and result in prolonged civil actions.²²⁵

IX. CURRENT STATUS OF H.R. 2997 AND FUTURE PROSPECTS FOR ATC PRIVATIZATION

Privatization of U.S. ATC would be a major undertaking requiring significant political and financial capital. At the time of this article, sponsors of H.R. 2997 had not yet brought the bill to

²²¹ FOIA, AMTRAK, <https://www.amtrak.com/about-amtrak/foia> (last visited Jan. 22, 2018).

²²² 21st Century Aviation Innovation, Reform, and Reauthorization Act, H.R. 2997, 115th Cong. § 90506 (2017).

²²³ *Id.*

²²⁴ See Chris Mondics, *Amtrak Settles Train Crash Claims for \$265 Million*, PHIL. INQUIRER (Oct. 27, 2016, 6:12 PM), http://www.philly.com/philly/business/transportation/20161028_Amtrak_settles_derailment_claims_for_265m.html [<https://perma.cc/9F6Z-DQG9>].

²²⁵ See Josh Farley et al., *Amtrak Train Going 81 Mph Just Before Derailing Around 30-Mph Curve; 3 Dead*, USA TODAY (Dec. 19, 2017, 5:17 AM), <https://www.usatoday.com/story/news/nation-now/2017/12/18/amtrak-train-derails-dangles-over-interstate-washington-state/960946001/> [<https://perma.cc/V5WB-D6EP>].

the floor of the House of Representatives because they did not have the necessary votes for passage.²²⁶ If action does not take place on H.R. 2997 before the end of the session, it will die but may re-emerge in a new version in a later session.²²⁷ While there is still support in the House of Representatives and from President Trump for H.R. 2997, there are some Republican Senators opposed to privatization. Senator Jerry Moran (R-KS) has stated publicly, “I think we’ve got the Senate solidly lined up against the administration and the House,” in regard to support for H.R. 2997.²²⁸ If members of the same political party are not on board with privatization, such an immense undertaking will likely not be getting off the ground anytime soon. However, the President’s budget blueprint continues to support privatization of ATC as part of his \$1.5 trillion infrastructure investment plan.²²⁹

X. CONCLUSION

The modernization and advanced technology being implemented through NextGen will save and enhance the lives of U.S. taxpayers. The FAA’s ATC is presently imperfect, but even proponents of privatization agree that it is the safest system in the world. Privatizing ATC “would put the traveling public at unnecessary risk.”²³⁰ Any changes to such an immense and complex system must focus on safety first and not the bottom line. While President Trump, most airlines, and the other proponents of ATC privatization are very vocal in supporting privatization of ATC, their claims that the FAA-operated ATC is inefficient and outdated are overstated at best. The United States’ current ATC system is the safest ATC system in the world and has made significant improvements in technology in the last decade. While the current ATC system is not perfect, an entirely new privatized ATC system is not the answer. Any inefficiencies in the current ATC system can be remedied through efficiency audits and congressional oversight, not by implementing an entirely untested ATC system that is estimated to increase the nation’s deficit by \$98.5 billion over ten years. The presumption that a privatized

²²⁶ Telephone Interview with Christa Lucas, *supra* note 66.

²²⁷ See *What Happens to Bills After Congress Adjourns?*, POP VOX (Dec. 4, 2016), <https://blog.popvox.com/2016/12/04/what-happens-bill-after-congress-adjourns-updated/> [https://perma.cc/J3E6-R6J5].

²²⁸ Lefler, *supra* note 138.

²²⁹ Jansen, *supra* note 2.

²³⁰ *Former NASA Astronauts: Abort Mission to Privatize ATC*, *supra* note 86.

system will inherently result in improved efficiency over a government-run system is unfounded: privatization based on a user fee system may result in the need for government bailouts and cost reductions to the point of inadequate ATC services and safety reductions as occurred with skyguide. The current U.S. ATC system is a public asset that should remain under public control, not ceded to a corporation made up of a board “dominated by the airlines and their allies, [with] the power to tax the public, make industry-wide regulatory changes, and initiate system changes without Federal oversight.”²³¹

²³¹ Press Release, House Committee on Transportation and Infrastructure, CRS Finds Air Traffic Control Privatization Plan Likely Violates U.S. Constitution (July 25, 2017), <https://democrats-transportation.house.gov/news/press-releases/crs-finds-air-traffic-control-privatization-plan-likely-violates-us-constitution> [<https://perma.cc/8G97-B2A6>].