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SQUEEZED OUT OF THE MARKETPLACE: LEGAL AND POLICY ISSUES PERTAINING TO AIRLINE SEATING CONFIGURATIONS

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I. INTRODUCTION

The quality of airline service in the United States has received a significant amount of attention since the Airline Deregulation Act of 1978 went into effect. Much of that attention has been negative due to efforts by the airlines to find ways to increase revenue by charging for services that were once included in the price of a ticket, such as charging for checked luggage[1] and other add-on fees for passengers.[2] Given the high level of competition during much of this period, it was certainly expected, and to some extent understandable, that carriers would attempt to find new revenue streams.

During this time, the federal government has also continued to play a role in ensuring that the needs of passengers are addressed, both in terms of legislation passed by Congress as well as through regulations enacted by executive branch agencies, such as the U.S. Department of Transportation and the Federal Aviation Administration. For example, over the past several years, the DOT has enacted regulations regarding holding passengers on de-

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[1] Kelly Yamanouchi, *Airline Baggage Fees: How Much Did Delta, Southwest Collect in 2017?*, ATLANTA J.-CONST. (May 7, 2018), https://www.ajc.com/business/airline-baggage-fees-bring-billions-dollars/ddQEyGvWE5BNGrttGUs90M/.

[2] Examples include early boarding privileges, seat selection, and meals. *See* U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-17-756, COMMERCIAL AVIATION: INFORMATION ON AIRLINE FEES FOR OPTIONAL SERVICES (2017).

layed aircraft[3] and rules related to denied boarding.[4]

One issue that has dramatically impacted the airline industry and its customers pertains to aircraft seating configurations. Over the past 20 years, the average seat pitch on aircraft operated by the four largest U.S. carriers "has decreased from an average of 35 inches to 31 inches, and in some airplanes has fallen as low as 28 inches."[5] Less passenger space has led to increased complaints about lack of comfort[6] and potential impacts on health and safety, including the argument that the continued reduction in average seat size has compromised the safety of passengers because a higher number of passengers on an aircraft may result in slower evacuation times during emergencies.[7] This debate has intensified as airlines have continued to reduce seat widths and seat pitch to increase passenger loads and maximize revenue.[8] The airlines argue that market economics, *vis-à-vis* passenger demand and pricing, should determine what they offer their customers in terms of aircraft seating and pricing options.[9]

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[3] *See* U.S. DEP'T OF TRANSP., DOT 199-09, NEW DOT CONSUMER RULE LIMITS AIRLINE TARMAC DELAYS, PROVIDES OTHER PASSENGER PROTECTIONS (2009); *see also infra*, Section IV(A).

[4] *See* U.S. DEP'T OF TRANSP., FLY RIGHTS: A CONSUMER GUIDE TO AIR TRAVEL, https://www.transportation.gov/airconsumer/fly-rights (updated 2018).

[5] Flyers Rights Educ. Fund, Inc., v. Fed. Aviation Admin., 864 F.3d 738, 743 (D.C. Cir. 2017); *see also* Bill McGee, *Think Airline Seats Have Gotten Smaller? They Have,* USA TODAY (Sept. 24, 2014, 7:56 AM), https://www.usatoday.com/story/travel/columnist/mcgee/2014/09/24/airplane-reclining-seat-pitch-width/16105491/.

[6] The importance of traveling in comfort is so important that entire websites are dedicated to providing air travelers information about airlines seats on specific aircraft. *See, e.g.*, SEATGURU: AIRLINE SEAT MAPS, FLIGHTS SHOPPING AND FLIGHT INFORMATION, https://www.seatguru.com (last visited May 14, 2019).

[7] *See, e.g.*, Tim Wu, *Why Airlines Want to Make You Suffer*, NEW YORKER (Dec. 26, 2014), https://www.newyorker.com/business/currency/airlines-want-you-to-suffer; Martha C. White, *Air Travelers Resisting the 'Incredible Shrinking Airline Seat'*, N.Y. TIMES (Nov. 6, 2017), https://www.nytimes.com/2017/11/06/business/airline-seat.html.

[8] *See Aviation Experts Debate FAA Authorization Provisions Including Added Fees, Minimum Seat Sizes*, (Washington Post Live June 7, 2018), https://www.washingtonpost.com/video/postlive/aviation-experts-debate-faa-reauthorization-provisions-including-added-fees-and-a-minimum-seat-size/2018/06/07/0ee52196-6a64-11e8-a335-c4503d041eaf_video.html?utm_term=.54277c540eae.

[9] *See e.g.*, *Seat Density Impact on Route Economics*, PLANESTATS.COM , https://www.planestats.com/seat_density (last visited May 14, 2019) (stating increasing seat density is a sure way to reduce costs). In a 2017 national op-ed, a former airline executive argued regulation was not needed because consumers should be able to choose instead of having the "nanny state protect them from something already proven safe." B. Ben Baldanza, *Opposing View: More Seats Mean Lower Airfares*, USA TODAY: OPINION (Aug. 10, 2017, 5:51 PM), https://www.usatoday.com/story/opinion/2017/08/10/more-airline-seats-mean-

Besides the matter of passenger safety and comfort related to shrinking airline seating, evidence also increasingly indicates that a significant number of potential passengers may not be flying, or at least flying less often than they otherwise would, due to their height and weight.[10] It is not just the shrinking seat that is creating the problem but the increasing size of travelers. Americans in particular have gotten much larger over the last few decades.[11] Many of these passengers are literally being squeezed out of the marketplace for air travel. Why? Because they are being forced into an unpleasant or economically unfeasible choice. This Hobson's choice[12] requires larger passengers to either purchase seats that will provide them with

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lower-fares-editorials-debates/104476470/.

[10] Articles abound about the negative emotional and physical experiences of flying overweight passengers. *See, e.g.*, Laura Delarato, *You Should Be Angry At Shrinking Airline Seats, Not Fat People*, TRAVEL & LEISURE (May 24, 2017), https://www.travelandleisure.com/airlines-airports/shrinking-airline-seats ("What I'm about to say is far from news: Being a fat person on a plane is dreadful"); Nikki Vargas, *Are Airlines Fat Shaming Their Passengers?*, CULTURETRIP.COM (Apr. 11, 2017), https://theculturetrip.com/north-america/usa/articles/are-airlines-fat-shaming-their-passengers/; Alysse Dalessandro, *How One Airline Made Flying While Fat Even Worse*, MEDIUM.COM: DOSE.COM (Oct. 26, 2016), https://medium.com/dose/how-one-airline-made-flying -while-fat-even-worse-23b5cd6e63f5. *See also,* Jennie Small & Candice Harris, *OBESITY AND TOURISM: Rights and Responsibilities*, 39 ANNALS OF TOURISM RES. 686-707 (2012).

[11] According to a 2002 report by the Centers for Disease Control and Prevention, National Center for Health Statistics, the average weight for American men aged 20-74 rose dramatically from 166.3 pounds in 1960 to 191 pounds in 2002, while the average weight for women, aged 20-74 rose from 140.2 pounds to 164.3 pounds during the same period. Both men and women have also grown an average of one inch. *See* Robert Longley, *Americans Getting Taller, Bigger, Fatter, Says CDC*, THOUGHTCO.: HUMANITIES ISSUES (June 2, 2016), https://www.thoughtco.com/americans-taller-bigger-fatter-says-cdc-3321552 (hereinafter "2002 Report"). That trend has continued with the most recent data showing the average man weighting 195.7 pounds and the average woman weighing 168.5 pounds. *See* National Center for Health Statistics, *FastStats, Measured Average Height, Weight, And Waist Circumference For Adults Aged 20 And Over*, CDC.GOV, https://www.cdc.gov/nchs/fastats/body-measurements.htm (last visited Sept. 8, 2018). The percentage of overweight Americans aged 20 and over is 70.7% with 37.9% of all American adults considered obese. *See* National Center for Health Statistics, *FastStats, Obesity and Overweight*, CDC.GOV, https://www.cdc.gov/nchs/fastats/obesity-overweight.htm (last visited Sept. 8, 2018).

[12] The term, first used in 1649, refers to either an apparently free choice when there is no real alternative, or the necessity of accepting one of two or more equally objectionable alternatives. *See* Definition of Hobson's Choice, MERRIAM-WEBSTER DICTIONARY, https://www.merriam-webster.com/dictionary/Hobson's%20choice (last visited May 14, 2019). Thomas Hobson kept horses in Cambridge England in the late 16th and early 17th centuries. In order to prevent the overuse of particular horses by the university students, Hobson gave the students the choice of renting the horse nearest the stable door or none at all.

adequate room to fit in the seat—such as a business class seat or two adjacent passenger seats, options that many such passengers may not be able to afford—or face the obvious social problem inherent with having to sit in the small and ever-shrinking economy seats. This creates a problem for both the larger passenger as well as for passengers adjacent to them, whose already-limited space is invaded and made even smaller.[13] One only need think of their own experiences while flying to know this is the case.

This debate over airline seating configurations has raised the concerns of interest groups, policymakers, and the judicial branch. Beginning in 2016, members in both the U.S. House of Representatives and Senate introduced legislation called, among other titles, the SEAT Act, which required the Federal Aviation Administration (FAA) to establish a minimum seat pitch.[14] Although that legislation failed to pass, a recent FAA reauthorization bill passed by the House contains a requirement that the FAA study and set minimum seat dimensions on commercial aircraft for purposes of health and safety within one year.[15]

The FAA has been faced with recent efforts to enact a rule to consider seat pitch issues. The airline passenger advocacy group, FlyersRights.org, filed a petition for rulemaking with the agency requesting rules governing size limitations for aircraft seats on the basis of passenger safety. The FAA denied the group's petition. FlyersRights.org challenged the FAA's denial by seeking relief with the United States Court of Appeals for the District of Columbia. On July 28, 2017, the appellate court issued its opinion, denying certain portions of the plaintiff's petition for review but remanding other portions of the petition to the FAA for the agency to demonstrate its factual reasoning for its original denial of the petition.[16] Several months later, the FAA sent a response letter to FlyersRights.org again denying its request for rulemaking and reiterating its position that aircraft safety was not impaired by seat dimensions and increased passenger sizes.[17]

This article looks at the history of this debate with a view toward offering options for consideration by the parties involved. Part Two of the article

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[13] It is not just the overweight or obese passengers who impacted but adjacent passengers, also. One such passenger complained that his "rights were being violated." He went on to say "I'm not against large people but I don't sit in their seat. Why should they sit in mine." Small & Harris, *supra* note 10, at 695.

[14] H.R. 1467, 115th Cong. §§ 1-2 (2017); *see also* S. 1405, 115th Cong. § 3116 (2017).

[15] *See* H.R. 4, 115th Cong. § 541 (2018).

[16] Flyers Rights Educ. Fund, Inc. v. Fed. Aviation Admin., 864 F.3d 738, 747 (D.C. Cir. 2017).

[17] *See* U.S. Dep't of Transp. Fed. Aviation Admin., Decision Letter on Proposed Petition for Rulemaking, FAA-2015-4011-0160 (July 2, 2018), https://www.regulations.gov/searchResults?rpp=25&po=0&s=FAA-2015-4011&fp=true&ns=true.

reviews the situation as a whole, beginning with the regulatory scheme under which airlines operate, including safety requirements as well as certificates of convenience and the necessity to serve all potential passengers. It also surveys effects on passenger safety by reviewing the history of seat size reduction in relation to the increase in average passenger size and weight. This section will also examine the potential effects of seat size reduction on passenger and airline safety with regard to evacuation criteria, including whether current FAA evacuation standards are still adequate given the obvious change and makeup of the passengers currently onboard aircraft. Part Two will also review the effects of reduced seat sizes on passenger comfort and demeanor to determine whether deteriorating passenger demeanor has or might realistically rise to a level that could impact aircraft safety itself. Finally, Part Two examines how reduced seat size configurations may be impacting potential passengers in the airline marketplace and whether such impacts are acceptable in spite of the steadily increasing numbers of airline passengers flying overall.

Part Three of the article will examine possible responses to the situation, including the pros and cons of possible legislative alternatives as well as the option of taking no action. Examples of such responses are legislation ordering the FAA to set minimum standards, legally expanding the powers of the FAA to regulate passenger comfort, requiring the FAA to study the problem and report the results of that study to Congress, or engaging in rulemaking under existing legal mandates. This section will also examine the role of the Department of Transportation and its possible involvement. Part Three will also review the option of a voluntary agreement to study alternatives related to minimum standards for seat size configurations using procedural mechanisms, such as an airline appointed advisory group or independent advisory group. These groups could institute an ongoing review process based on updated safety data, passenger size increases, and market demand.

Lastly, Part Four of the article will examine rational outcomes from these possible responses. In the end, if passenger safety standards—as currently designed—are the only consideration, legislation or rulemaking may not be warranted. However, regardless of whether such a result is warranted, further seat size changes or reductions must include continuous monitoring. This article will offer a proposal for airlines to consider implementing a shared-value approach to passenger safety and comfort, using shared-value lessons from within and outside of the airline industry. The article will conclude by justifying the need for rationally considering this issue and for, at the very least, creating a defensible record in the event of future accidents or other disagreeable outcomes. It is this lack of proactive strategy that has often resulted in accidents and incidents—with the attendant consequence of expensive litigation, political or consumer backlash against the airline industry, and less than optimal solutions that are hurried or forced, all of

which could have otherwise been avoided.

II. BACKGROUND AND SITUATION

A. *Airline Regulation*

The Airline Deregulation Act of 1978 removed the federal government's control over airfares and route selection with the hope of allowing market dynamics and competition to force airlines to compete for passengers based largely on pricing.[18] The policy "was premised on an expectation that an unregulated industry would attract new airlines and increase competition, thereby benefiting consumers with lower fares and improved service."[19] In terms of stimulating demand for air travel, the policy was very successful.

Between 1980 and 2005, the median domestic airfare declined by 40 percent.[20] During this same period, "[l]onger-distance and more heavily traveled markets" became more competitive.[21] The average number of competitors grew from 2.2 airlines per market in 1980 to 3.5 in 2005.[22] During the mid-1960s, no more than one in five Americans had flown on an airplane.[23] By 2000, about 50% of the U.S. population flew at least one round-trip per year.[24]

The increased competition, however, also contributed to the poor economic performance of the U.S. airline industry. At the end of 1991, the "industry had lost all the profits it had earned since data began being collected, plus nearly $2 billion more."[25] It would recover in the late 1990s,

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[18] *See* Airline Deregulation Act of 1978, Pub. L. No. 95-504, 92 Stat. 1705 (1978).

[19] U.S. GOV'T ACCOUNTABILITY OFF., GAO-06-630, AIRLINE DEREGULATION: REREGULATING THE AIRLINE INDUSTRY WOULD LIKELY REVERSE CONSUMER BENEFITS AND NOT SAVE AIRLINE PENSIONS 3 (2006).

[20] *Id.* at 18. It should also be noted that:

> fares in shorter-distance and less-traveled city-pair markets (e.g., those between smaller cities) have not fallen as much as fares in longer-distance and heavily-trafficked markets. While the competition brought about by deregulation likely played a significant role in bringing down fares, the extent to which these changes are directly attributable to deregulation as opposed to other factors, such as advances in technology or economic factors, is difficult to isolate.

[21] *Id.* at 4.

[22] *Id.*

[23] Derek Thompson, *How Airline Ticket Prices Fell 50% in 30 Years (and Why Nobody Noticed),* ATLANTIC (Feb. 28, 2013), https://www.theatlantic.com/business/archive/2013/02/how-airline-ticket-prices-fell-50-in-30-years-and-why-nobody-noticed/273506/.

[24] *Id.*

[25] Paul S. Dempsey, *The Financial Performance of the Airline Industry Post-Deregulation,* 45 HOUS. L. REV. 422, 427 (2008) (discussing the financial performance of the

then lose all its profits again in the early part of this century. In the period between the start of deregulation and 2009, U.S. airlines lost nearly $59 billion (in 2009 dollars).[26]

The industry was forced to find ways to improve its financial health. Many carriers simply went out of business.[27] Other carriers found relief by filing for bankruptcy reorganization. The large U.S. carriers came to the realization that long-term survival could only come about through different measures related to increasing the amount of revenue generated per flight. One of the tactics employed to achieve this strategy was to "unbundle optional services from the base ticket price," which resulted in airlines "charging separate fees for services that were previously included in the ticket price."[28] At the same time, large U.S. carriers pursued a path for their individual and collective long-term financial viability by engaging in consolidation.[29]

While airline passengers experienced lower fares, they also experienced changes in both what their airfare covered as well as the quality of their overall in-flight experience.[30] For example, some of these changes resulted in airline passengers paying more than the base price for their ticket because their preferred seat came at an additional cost or because a separate charge covered checked luggage.[31] For example, many airlines segmented their

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U.S. airline industry).

[26] Severin Borenstein, On the Persistent Financial Losses of U.S. Airlines: A Preliminary Exploration 2 (Nat'l Bureau of Econ. Research, Working Paper No. 16744, 2011).

[27] Mark C. Mathiesen, *Bankruptcy of Airlines: Causes, Complaints, and Changes*, 61 J. Air L. & Com. 1017, 1018 (1996). *See also US Airline Bankruptcies,* AIRLINES FOR AMERICA, http://airlines.org/dataset/u-s-bankruptcies-and-services-cessations/ (last visited May 14, 2019).

[28] U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-17-756, INFORMATION ON AIRLINE FEES FOR OPTIONAL SERVICES 22 (2017).

[29] Rick Newman, *How Airline Mergers Saved an Industry—and May Even Benefit Fliers,* U.S. NEWS & WORLD REPORT (Feb. 14, 2013), https://www.usnews.com/news/blogs/rick-newman/2013/02/14/how-airline-mergers-saved-an-industryand-may-even-benefit-fliers.

[30] *Id.*

[31] *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-17-756, *supra* note 28, at 16 (outlining selected airline fees for checked baggage and optional services); 14 C.F.R. § 399.85(b) (2012) states that:

> [i]f a U.S. carrier, a foreign air carrier, an agent of either, or a ticket agent has a website accessible for ticket purchases by the general public in the U.S., the carrier or agent must clearly and prominently disclose on the first screen in which the agent or carrier offers a fare quotation for a specific itinerary selected by a consumer that additional airline fees for baggage may apply and where consumers can see these baggage fees. An agent may refer consumers to the airline websites where specific baggage fee information may be obtained or to its own site if it displays airlines' baggage fees.

economy class cabin to create a so-called "premium" economy section with more legroom, resulting in less average legroom in the regular economy section.[32]

With the restructuring of many carriers and the implementation of the aforementioned revenue-enhancing initiatives, the U.S. airline industry currently enjoys tremendous financial success.[33] Since 2013, the mainline carriers (e.g., non-regional U.S. carriers) have consistently generated sustained profits.[34]

B. *The Airline Seating Debate*

As mentioned, the airline industry has implemented many changes, including airline practices regarding holding passengers on delayed aircraft,[35] airline rules for passenger bumping and compensation for denied boarding,[36] and creation and implementation of ancillary fees for passengers.[37] Few of these changes, however, seem to have had more of an impact on the air traveling public or garnered more attention than changes in passenger aircraft seating configurations, as evidenced by public debate, legislative efforts, and legal action surrounding the issue.[38] Moreover, airlines continue to exacerbate this seating configuration issue by continuing to reduce seat widths and seat pitch to increase passenger loads and maximize profits.[39]

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[32] *See, e.g.*, SEATGURU: PREMIUM ECONOMY CLASS COMPARISON CHART, https://www.seatguru.com/charts/premium_economy.php (last visited May 14, 2019).

[33] *See* Press Release, IATA, Strong Airline Profitability Continues in 2018 (Dec. 5. 2017), https://www.iata.org/pressroom/pr/Pages/2017-12-05-01.aspx.

[34] TOM STALNAKER ET AL., AIRLINE ECONOMIC ANALYSIS 46 (2017), http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2018/January/Airline_Economic_Analysis_AEA_2017-18_web_FF.pdf.

[35] U.S. DEP'T OF TRANSP., DOT 199-09, NEW DOT CONSUMER RULE LIMITS AIRLINE TARMAC DELAYS, PROVIDES OTHER PASSENGER PROTECTIONS (2009), https://www.transportation.gov/briefing-room/new-dot-consumer-rule-limits-airline-tarmac-delays-provides-other-passenger.

[36] *See* U.S. DEP'T OF TRANSP., FLY RIGHTS: A CONSUMER GUIDE TO AIR TRAVEL, https://www.transportation.gov/airconsumer/fly-rights (updated 2018).

[37] U.S. GOV'T ACCOUNTABILITY OFF., GAO-17-756, *supra* note 28, at 5.

[38] *See infra* Section II(B) 1-3.

[39] *See, e.g., US Airline Seat Densification Part 1: Alaska, JetBlue And Southwest Strike a Delicate Balance*, CAPA CENTRE FOR AVIATION (Oct. 3, 2015), https://centreforaviation.com/analysis/reports/us-airline-seat-densification-part-1-alaska-jetblue-and-southwest-strike-a-delicate-balance-246718 (last visited Aug. 10, 2018). According to the report, "[a]ny number of US airlines are in the midst of, or have recently completed, reconfigurations to increase seating density on their aircraft in an effort to drive additional revenue at a relatively low cost." *See also,* Stephanie Rosenbloom, *Fighting the*

1. The Public Debate

On one side of this debate are free-market proponents, including the airlines themselves, who vociferously argue that market economics alone should determine what airlines should offer in terms of aircraft seating and pricing.[40] On the other side of the debate are those who passionately argue that reductions in passenger room onboard aircraft markedly decreases comfort and passenger safety as a result of the negative effects that the lack of space brings, including impacts on the potential evacuation of aircraft in emergencies.[41] Regardless of this debate, there is ample evidence that despite these concerns, many, if not most, airline passengers are willing to accept reduced seat sizes given the lower prices they pay to travel.[42]

This does not mean, however, that the American public is wholly satisfied with airline service.[43] A Gallup poll conducted in 2015 revealed that the majority of those surveyed were satisfied with many aspects of the airline travel experience, including the courtesy of customer service agents and flight attendants, the flight schedules, and even the price of airline tickets.[44] However, the Gallup poll, also revealed that 54% of respondents expressed dissatisfaction with the comfort of the seats in which they fly.[45] This dissatisfaction has resulted in both legislative and legal action over seat size regulation.[46]

Incredible Shrinking Airline Seat, N.Y. TIMES (Feb. 29, 2016), https://nyti.ms/1pl3pKM; Christopher Elliott, *A Very Pro-Consumer' Reform Could Make Minimum Sizes For Airline Seats a Real Thing*, WASH. POST (Feb. 10, 2016), https://www.washingtonpost.com/lifestyle/travel/a-very-pro-consumer-reform-could-make-minimum-sizes-for-airline-seats-a-real-thing/2016/02/10/182f0154-cf75-11e5-b2bc-988409ee911b_story.html?utm_term=.e8d3d3b2325c.

[40] One former airline executive argues regulation is not necessary because consumers should be able to choose instead of having the "nanny state to protect them from something already proven safe." Baldanza, *supra* note 9.

[41] *See, e.g., Disclose Airline Seat Sizes to the Sardines, er, Fliers*, USA TODAY (Aug. 11, 2017), https://www.usatoday.com/story/opinion/2017/08/10/airline-seats-sardines-faa-needs-study-editorials-debates/556099001/.

[42] *See* Michael Goldstein, *Meet the Most Crowded Airlines: Load Factor Hits All Time High*, FORBES (July 9, 2018), https://www.forbes.com/sites/michaelgoldstein/2018/07/09/meet-the-most-crowded-airlines-load-factor-hits-all-time-high/#6764a1ca54fb (stating that load factors for U.S. airlines have increased on domestic flights from approximately 68% in 2002 to 86% in 2018).

[43] *Airlines*, GALLUP, http://news.gallup.com/poll/1579/airlines.aspx (last visited Feb. 16, 2019).

[44] *Id.*

[45] *Id.*

[46] *See infra* sections II(B)(2) and II(B)(3) below.

2. Legislative Responses

Complaints about airline seating configurations reached the halls of Congress in the form of a policy debate about minimum seat sizes that meet the comfort and safety requirements of airline customers.[47] The underlying argument is that it is incumbent upon both the DOT and FAA to mandate a certain level of seat pitch (e.g., comfort) for airlines.[48]

In 2016, members in both the House of Representatives and the Senate introduced amendments to the FAA reauthorization bill requiring the FAA to "establish minimum dimensions (including width, length, and seat pitch)" for the "safety and health of passengers."[49] Neither body of the legislature included the provisions in the final bill.[50] In 2017, the House of Representatives and the Senate made efforts once again to introduce and pass legislation called the Safe Egress in Air Travel Act of 2017 (SEAT Act of 2017).[51] A more recent FAA reauthorization bill passed by the House contains a requirement that the FAA study and set minimum seat dimensions on commercial aircraft for purposes of health and safety within one year.[52]

3. Legal Responses

Consumer rights groups have been active as well, legally challenging the FAA regarding the seat size issue.[53] On July 28, 2017, the United States Court of Appeals for the District of Columbia granted review of the denial of a petition submitted to the FAA by the consumer rights group FlyersRights.org, requesting the FAA to promulgate rules governing size limita-

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[47] Michael Balsalmo, *Airline Seat Sizes Should Be Federally Mandated Says Senator*, SKIFT (Feb. 28, 2016, 11:00 AM), https://skift.com/2016/02/28/airline-seat-sizes-should-be-federally-mandated-says-senator/.

[48] *Id.*

[49] H.R. 4490, 114th Cong. §§ 1-2 (2016); *see also* S. 2658, 114th Cong. § 3121 (2016); Press Release, Rep. Adam Kinzinger, The Hill: 'House Lawmakers Renew Fight Over Shrinking Airplane Seats' (June 30 2016), https://kinzinger.house.gov/news/documentsingle.aspx?DocumentID=399371.

[50] Thom Patterson, *Congressman Loses Battle in War on Shrinking Airline Seats,* CNN (Feb. 11, 2016, 4:43 PM), https://www.cnn.com/2016/02/11/aviation/proposed-airline-seat-size-law/index.html; Kathryn Vasel, *Senate Rejects Plan to Regulate Airplane Seat Size,* CNN (Apr. 7, 2016, 4:40 PM), http://money.cnn.com/2016/04/07/pf/schumer-airline-seat-size-amendment-rejected/index.html.

[51] H.R. 1467, 115th Cong. §§ 1–2 (2017); *see also* S. 1405, 115th Cong. § 3116 (2017); Press Release, Rep. Steve Cohen, Reps. Cohen and Kinzinger, Senators Blumenthal, Schumer, Markey, Menendez and Feinstein Introduce Bipartisan, Bicameral SEAT Act (Mar. 9, 2017), https://perma.cc/KL7J-GE62.

[52] *See* H.R. 4, 115th Cong. § 541 (2018).

[53] *See e.g.,* Flyers Rights Educ. Fund, Inc. v. Fed. Aviation Admin., 864 F.3d 738 (D.C. Cir. 2017).

tions for aircraft seats on the basis of passenger safety (*Flyers Rights* case).[54] For a variety of reasons discussed below,[55] the Court denied portions of the plaintiff's petition for review, but remanded other portions of the petition to the FAA for a demonstration of the factual reasoning for its original denial of the petition.[56]

C. *Federal Government Agencies with Potential to Influence the Seat Size Issue*

In determining how best to approach this growing dispute over the issue of aircraft seating configurations, a starting point is to first consider the organizations in the best position to: (1) review the problem, (2) analyze possible solutions, and (3) possibly mandate changes. Given the regulated nature of aviation in the United States, we first look to the federal agencies primarily responsible for air travel and safety.

1. Mandate of the Federal Aviation Administration

The FAA is statutorily responsible for the promotion of safety of flight of commercial aircraft.[57] The FAA's mandate over safety is detailed in 49 U.S.C. §44701(a)-(b), which, among other requirements, states that the Administrator has authority to issue "regulations and minimum standards for other practices, methods, and procedure the Administrator finds necessary for safety in air commerce and national security."[58] Of course, the FAA recognizes its statutory safety responsibilities, calling safety the foundation of everything it does and listing the regulation of civil aviation to promote safety first in the list of its major roles and responsibilities.[59]

The FAA's authority in this area is often called "plenary,"[60] meaning, it

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[54] *Id.* at 740.

[55] *See infra* section II(F).

[56] *Flyers Rights Educ. Fund*, 864 F.3d at 749.

[57] 49 U.S.C. § 44701(a) (2018).

[58] 49 U.S.C. § 44701(a)(5) (2018).

[59] *See* U.S. DEP'T OF TRANSP., SAFETY: THE FOUNDATION OF EVERYTHING WE DO, FED. AVIATION ADMIN., https://www.faa.gov/about/safety_efficiency (last visited Sept. 18, 2018). The regulation of safety includes issuing and enforcing regulations and minimum standards covering the manufacture, operation, and maintenance of aircraft.

[60] Bargmann v. Helms, 715 F.2d 638, 642 (D.C. Cir. 1983). The court stated the 1958 Act gave "the FAA '*plenary authority* to [m]ake and enforce safety regulations governing the design and operation of civil aircraft' in order to ensure the '*maximum possible safety.*'" *Id.* (quoting H.R. Rep. No. 2360, 85th Cong. 2, 7 (2d Sess. 1958)). The Act refers to the Federal Aviation Act of 1958. Section 601(a)(6) of the Act gives the FAA Administrator the authority to make rules "necessary to provide adequately for national security and safety in air commerce." Pub. L. No. 85-726, 72 Stat. 731, 775. That authority is codified at 49 U.S.C. § 44701(a)(5) (2018).

is "full," "complete," and "entire."[61] Despite the sweeping nature of the FAA's safety role, other federal agencies, such as the Department of Transportation ("DOT") and the National Transportation Safety Board, also have some responsibilities regarding aviation safety.[62]

2. Mandate of the Department of Transportation

Among other responsibilities, the DOT is responsible for the regulation of the aviation industry.[63] This includes regulatory power over granting carriers authority to offer air transportation as well as over a myriad of consumer protection issues.[64] The Secretary of Transportation is charged with ensuring that an applicant for a certificate authorizing air service is "fit, willing, and able" to provide the service and that the granting of a certificate is in "the public interest and consistent with public convenience and necessity."[65]

In making its determination, the DOT must consider a number of factors including "preventing deterioration in established safety procedures,"[66] ensuring "the availability of a variety of adequate, economic, efficient, and low-priced services without unreasonable discrimination . . . ,"[67] and "developing and maintaining a sound regulatory system that is responsive to the needs of the public."[68] As a matter of law and policy, the DOT neither considers seating configurations nor seat size in its review of applications for certificates of economic authority.[69] 49 U.S.C. § 41109(2)(B) states in part that the Secretary of Transportation "may not prescribe a term preventing an air carrier from adding or changing schedules, equipment, accommodations, and facilities for providing the authorized transportation to satisfy business development and public demand."[70] Nonetheless, as the FAA is part of the DOT, the DOT does have at least some influence.[71]

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[61] *Plenary*, BLACK'S LAW DICTIONARY (10th ed. 2014).

[62] *See* discussion *infra* Sections III(B) and III(C).

[63] *See* David Wallechinsky, *Meet Your Government: Department of Transportation (DOT)*, ALLGOV.COM, http://www.allgov.com/departments/department-of-transportation?detailsDepartmentID=578 (last visited May 14, 2019).

[64] *See* 49 U.S.C. §§ 41101–41113 (2018).

[65] 49 U.S.C. § 40112(b) (1994). This regulatory authority is "separate and distinct from any safety authority required by the" FAA. U.S. Dep't of Transp., Off. of the Secretary, DOT-OST-2016-0002, Consent Order No. 2016-3-27 (Mar. 23, 2016), https://www.regulations.gov/document?D=DOT-OST-2016-0002-0006.

[66] 49 U.S.C. § 40101(a)(3) (2000).

[67] *Id.* at § (a)(4).

[68] *Id.* at § (a)(7).

[69] *See* 49 U.S.C. § 41102.

[70] 49 U.S.C. § 41109(2)(B).

[71] For example, on June 18, 2018, DOT announced the initiation of an audit by the

3. Mandate of the National Transportation Safety Board

The National Transportation Safety Board ("NTSB") was established as an independent federal agency by the Air Commerce Act.[72] In addition to investigating aircraft accidents,[73] the NTSB has the authority to conduct safety studies.[74] However, the NTSB has no direct authority to create or modify transportation safety regulations or practices. It effects change in transportation safety by issuing "safety recommendations to regulators, operators, and users of transportation systems."[75]

The NTSB's safety recommendations are very influential and have a "profound influence on congressional decision-making and oversight of transportation safety issues."[76] It is precisely because the NTSB's safety recommendations are so influential with regard to transportation safety-related matters that the NTSB could play a potentially significant role in the issue of aircraft seat density in airline safety.

Each of these three agencies has independent, but occasionally overlapping, authority with regard to influencing airline operations and safety.[77] With regard to the issue of airline seating configurations specifically, most interested parties have looked to the FAA as the federal agency most competent and empowered to effect potential change in this area.[78] However, as will be discussed below, whether the FAA is the only agency able to control or effect potential changes in this area is subject to debate.[79]

DOT Inspector General of the FAA's Oversight of Aircraft Evacuation Procedures. *See* U.S. Dep't of Transp., Off. Of Inspector Gen., Memorandum on Audit Announcement: FAA's Oversight of Aircraft Evacuation Procedures (June 18, 2018), https://www.oig.dot.gov/library-item/36578.

[72] *See* Pub. L. 69-254, 44 Stat. 568.

[73] *See* 49 U.S.C. § 1132.

[74] *See* Robert L. Sumwalt, III & Sean L. Dalton, J.D., U.S. Nat'l Transp. Safety Bd., *The NTSB's Role in Aviation Safety*, 4, https://www.ntsb.gov/news/speeches/rsumwalt/Documents/Sumwalt_141020.pdf.

[75] CONG. RESEARCH SERVICE, R44587, THE NATIONAL TRANSPORTATION SAFETY BOARD (NTSB): BACKGROUND AND POSSIBLE ISSUES FOR REAUTHORIZATION AND OVERSIGHT, (Aug. 10, 2016). According to this report, the NTSB issued over 14,300 safety recommendations to more than 2,300 recipients across all modes of transportation with about 82% of those leading to the implementation of safety improvements. *Id.* at 4.

[76] *Id.* at 5.

[77] *See id.* at 1; *see also* 49 U.S.C. § 44701(a) (2018); 49 U.S.C. § 40101(a)(3) (2000).

[78] *See, e.g.*, Flyers Rights Educ. Fund, Inc. v. Fed. Aviation Admin., 864 F.3d 738, 740 (D.C. Cir. 2017). In this most recent case, the Petitioner requested the FAA to promulgate rules governing "size limitations for aircraft seatsFalse" *Id.*

[79] *See infra*, Section III.

D. *Seat Size Reductions and Increased Passenger Size*

The simultaneous reduction in seat size configurations and continuing increase in passenger size has exacerbated the debate regarding whether these changes are affecting passenger health and safety. These two factors—seat size reduction and passenger size increases—continue to move inexorably in opposite directions for different reasons. However, both have the effect of fueling the present discontent.

1. Seat Pitch and Width Reductions

Seat size and spacing reduction is accelerating as airlines try to generate more revenue from each flight. Called "seat densification,"[80] seat configurations onboard a commercial aircraft is a matter of two primary factors, seat pitch and seat width. Seat pitch is defined as the distance between a point on one seat and the same point on the seat directly in front of it.[81] It includes not only the space for the passenger's legs but also the width of the seat and tray table (if any) in front.[82] Seat width is the distance between the armrests of a seat.[83]

Efforts by airlines to increase seat densification has been occurring for several years.[84] One early article regarding reduced seat widths on wide-bodied commercial aircraft noted that ten airlines have opted to add an extra seat to each row of the Airbus A330 (ten per row) rather than the nine seats per row layout for which the aircraft had been originally designed.[85] The trend to reduce seat width continues as both United and American Airlines are adding an extra seat per row in their Boeing 777-200 models to add additional seats, twenty-one in the case of United and forty-two on American.[86]

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[80] *US Airline Seat Densification Part 1*, *supra* note 39. (hereinafter "US Airline Seat Densification").

[81] *See Flyers Rights*, 864 F.3d at 741; *See also* John Walton, *Leg Room, Seat Pitch & Your 'Personal Space' on an Aircraft Explained*, AUSTRALIAN BUSINESS TRAVELLER (Nov. 26, 2012), https://www.ausbt.com.au/leg-room-seat-pitch-your-personal-space-on-an-aircraft-explained.

[82] *Id.*

[83] *Seat Width*, BUSINESS DICTIONARY, http://www.businessdictionary.com/definition/seat-width.html (last visited Sept. 8, 2018).

[84] *See U.S. Airline Seat Densification I, supra* note 39.

[85] Jon Ostrower & Daniel Michaels, *The Incredible Shrinking Plane Seat*, WALL ST. J. (Oct. 23, 2013, 8:57 PM), https://www.wsj.com/articles/the-incredible-shrinking-plane-seat-1382572034. This article specifically discusses the reduction in seat widths, specifically the increase in the number of seats across the width of the wide-body aircraft

[86] *See* Hugo Martin, *United Airlines Becomes Latest Carrier to Put Economy Passengers In Rows of 10 Seats*, L.A. TIMES: BUSINESS (Oct. 21, 2017, 3:00 AM), http://www.latimes.com/business/la-fi-travel-briefcase-united-boeing-20171021-story.html.

One of the most common ways that airlines increase seating capacity while also reducing seat pitch on their aircraft is by installing thinner seats and, in some cases, moving the seat pockets and tray tables so as to increase freedom of movement in a relatively smaller space.[87] As a result, more seats could be put on an aircraft without the passengers necessarily noticing, airlines have claimed.[88] Unfortunately, passengers have noticed. Thinner seats are much more uncomfortable, especially on long flights.[89]

Regardless, seat densification does not appear to be slowing. One study published in 2015 reviewed seat densification by the largest U.S. airlines, United, Delta, and American, concluding that the airlines "remained bullish" about ongoing strategies to grow capacity through seat densification, characterizing the strategy as an "efficient generator[] of capacity at nominal cost[]."[90] According to Paul Hudson, President of FlyersRights.org, in the last few decades the average seat pitch has fallen from 35 inches to 31 inches and continues to fall with some as little as 28 inches.[91] Seat width has narrowed from an average of 18.5 inches to 17 inches.[92] Similar statistics have been echoed by numerous other sources.[93]

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[87] *See, e.g.* Ginger Adams Otis, *Airlines Trip Seat Sizes, Weights To Boost Capacity, Reduce Fuel Costs*, N.Y. DAILY NEWS (October 15, 2013, 11:36 PM), http://www.nydailynews.com/news/national/airlines-trim-seat-sizes-weights-boost-capacity-reduce-fuel-costs-article-1.1486440.

[88] *Id. See also*, Martha C. White, *supra* note 7. The CEO of Spirit Airlines, which has the lowest seat pitch in the industry at 28 inches, stated "[w]hile it's only 28 inches in pitch, it actually feels like it's about 30 inches." *Id.*

[89] *See* Benjamin Zhang, *These Seats Are the Worst Innovation Airlines Have Come Up With, and I Spent 15 Hours Suffering In Them*, BUSINESS INSIDER (Nov. 6, 2016, 10:50 AM), http://www.businessinsider.com/slimline-airline-seats-uncomfortable-delta-united-american-2016-11. The author notes that it was not a lack of legroom (pitch) that had bothered him as he has paid for a seat upgrade. Rather it was the pain and numbness from sitting in the thin seat that caused him anguish. *Id. See also* Caroline Costello, *United's New Slimline Seats Are Torture*, SMARTERTRAVEL (Jan. 23, 2015), https://www.smartertravel.com/uniteds-new-slimline-seats-are-torture/ (stating that United would fit 14 additional planeloads of passengers onto its existing fleet by the end of 2015).

[90] *See US Airline Seating Densification Part 2: The Big 3 add seats, change the profile of willing passengers*, CAPA CENTRE FOR AVIATION, (Oct. 5, 2015, 6:34 AM), https://centreforaviation.com/analysis/reports/us-airline-seat-densification-part-2-the-big-3-add-seats-change-the-profile-of-willing-passengers-247070.

[91] Telephone interview with Paul Hudson, President, FlyersRights.org, (Oct. 26, 2017) (hereinafter "Telephone Interview"). These same figures were accepted by the court in *Flyers Rights*. *See* Flyers Rights Educ. Fund, Inc. v. Fed. Aviation Admin., 864 F.3d 738, 742 (D.C. Cir. 2017); *See also*, Bill McGee, *supra* note 5 (noting that the seat pitch and width for the four largest U.S. airlines has changed dramatically since 1985).

[92] Bill McGee, *supra* note 5.

[93] *See e.g.*, Press Release, Senator Ed Markey, Blumenthal, Markey Statement on FAA Failure to Regulate Airline Seat Size, Pitch (July 5, 2018),

2. Seat Densification and Airline Economics

Airlines try to maximize revenue on each flight operated by its aircraft.[94] Many have concluded that the best way to achieve this goal is to increase seat capacity.[95] Most airlines have increasingly sought to squeeze more seats into existing aircraft and maximize seating density for part, or all, of their fleets.[96] Fitting more seats onto aircraft increases possible passenger loads allowing the airline to fly more passengers per flight.[97]

Increasing seat density also decreases the aircraft's cost per available seat mile (CASM).[98] As one prominent airline reporting group noted, "[a]s airlines continue to seek ways to reduce costs, increasing seat density remains a sure way to reduce unit costs (CASM)."[99] An airline's CASM decreases almost in proportion to its increasing seat density because the cost of flying additional passengers on an aircraft is minimal.[100]

Moreover, as data indicates, reductions in seat pitch and width have not

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https://www.markey.senate.gov/news/press-releases/blumenthal-markey-statement-on-faa-failure-to-regulate-airline-seat-size-pitch (referring to FAA assertions that seat pitch is unlikely drop below 27 inches).

[94] THE GLOBAL AIRLINE INDUSTRY 99-101 (Peter Belobaba et al. eds., 2d ed. 2015).

[95] *See id.*; Mary Schlangenstein, *American's Jets to Pack In More Seats in $1.4 Billion Sales Push*, BLOOMBERG: TECH. (Sept. 28, 2017, 4:39 PM), https://www.bloomberg.com/news/articles/2017-09-28/american-air-plans-to-add-more-seats-in-1-4-billion-sales-push.

[96] *See* Conor Shine, *Why Airlines Can't Stop Cramming More and More Seats on Their Planes*, DALLASNEWS (Nov. 2017), https://www.dallasnews.com/business/airlines/2017/11/17/airlines-stop-cramming-seats-planes.

[97] Passenger load factor is defined as "[t]he percentage of available seats that are filled with paying passengersFalse Average load factor is computed as the ratio of RPMs (revenue passenger miles) to ASMs (available seat miles). . .sometimes referred to as Passenger Load Factor (The total number of revenue passengers boarding aircraft in scheduled service). *Load Factor (Loads)*, GLOSSARY OF AIRLINE TERMINOLOGY, http://airlines.org/glossary/load-factor-loads/ (explanatory parentheticals added).

[98] Specifically, CASM is defined as "the unit cost measure used in the airline industry to calculate and compare the cost of each seat per mile flown which is an indication of its carrying capacity and potential for profits. CASM is calculated by dividing the airline's total operating expenses by available seat miles." *Cost Per Available Seat Mile (CASM)*, BUSINESS DICTIONARY, http://www.businessdictionary.com/definition/cost-per-available-seat-mile-CASM.html.

[99] *See Seat Density Impact on Route Economics*, *supra* note 9.

[100] *See* Bob Hazel et. al., *Airline Economic Analysis*, OLIVER WYMAN 20 (November 2014), http://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2014/nov/Airline_Economic_Analysis_Screen_OW_Nov_2014.pdf. This report notes that for a notional Airbus A320, the CASM drops from 14.12 cents with 132 coach seats to 11.30 cents with 180 coach seats (the density used in the aircraft by discount airlines, an almost 20 percent cost decrease).

had a negative effect on passenger load factors, as load factors continued to increase between 2006 and 2019, climbing as high as 87.2%.[101] This is well above the airline profitability break-even load factor of approximately 73%.[102] Additionally, passengers also continue to fly in record numbers,[103] with most passengers continuing to seek the lowest priced seat regardless of its size dimensions.[104] Thus, from the airlines' point of view, the decision to increase seat densification makes good business sense.

As a result, despite the sensitivity of the densification issue and calls for change, the airlines continue to densify.[105] For instance, American Airline's newest Boeing 737 MAX aircraft has seats with a 30-inch pitch in its main cabin, a reduction from thirty-one inches in previous aircraft.[106] Additionally, it is not just seat densification, but overall aircraft interior densification that is occurring. That same Boeing 737 MAX will have a bath-

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[101] *See Passenger Load Factor of Commercial Airlines Worldwide From 2005 To 2019*, STATISTA, https://www.statista.com/statistics/658830/passenger-load-factor-of-commercial-airlines-worldwide/ (last visited May 15, 2019); *see also* Press Release, Int'l Airline Transp. Ass'n, Record Passenger Load Factor in July (Sept. 6, 2017), http://www.iata.org/pressroom/pr/Pages/2017-09-06-01.aspx (reporting a domestic U.S. passenger load factor of 87.2%). This continues a long term trend of increasing load factors of U.S. airlines from approximately 79% in 2006. *See* Tom Stalnaker et. al., *Airline Economic Analysis*, OLIVER WYMAN 18 (2015-2016), http://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2016/jan/oliver-wyman-airline-economic-analysis-2015-2016.pdf.

[102] *See* Tom Stalnaker, *supra* note 101. Interestingly, passenger load factors leveled off in 2016 with the domestic U.S. load factor dropping .2% from 2015-2016. The worldwide average load factor hit 81.7% in 2018 with Ryanair's load factor reaching an astonishing 94.7% in 2017. *See* Michael Goldstein, *Meet the Most Crowded Airlines: Load Factor Hits All-Time High*, FORBES.COM (July 9, 2018, 5:21 PM) https://www.forbes.com/sites/michaelgoldstein/2018/07/09/meet-the-most-crowded-airlines-load-factor-hits-all-time-high/#2158dc8a54fb.

[103] The Bureau of Transportation Statistics reports that airlines carried an all-time high of 932 million passengers (domestic and international) in the U.S. in 2016, an increase of 3.8% from 2015's record high. The U.S. airlines increase over 2015 was 3.1%. *See e.g.*, U.S. Dep't of Transp., Bureau of Transp. Stat., Corrected BTS Statistics Release: 2016 Traffic Data for U.S. Airlines and Foreign Airlines U.S. Flights, (Mar. 17, 2017), https://www.rita.dot.gov/bts/press_releases/bts017_17.

[104] U.S. GOV'T ACCOUNTABILITY OFF., GAO-17-756, *supra* note 28, at 19 (2017) (hereinafter "GAO Report").

[105] *See e.g.*, David Heffernan, *The Safety and Comfort of Your Airline Seat*, FORBES (Jan. 7, 2019, 11:27 AM), https://www.forbes.com/sites/davidheffernan1/2019/01/07/the-safety-and-comfort-of-your-airline-seat/#a5e7ec81d1ab.

[106] 29 inches was originally planned for several rows of seats. *See* Jackie Reddy, *AA Shrinks Seat Size in First Class and Economy on Boeing 737 Max*, FLYERTALK (Dec. 5, 2017), https://www.flyertalk.com/articles/lack-of-legroom-makes-for-cramped-conditions-on-aas-boeing-737-max.html.

room that is a mere 24 inches wide.[107] Densification is not only occurring in domestic travel but is also spreading to international routes, as aircrafts typically used for the U.S. domestic market are being converted for international use.[108] For example, United Airlines recently announced that it would begin using its Boeing 777-200 series aircraft for certain transatlantic routes with a configuration of 336 seats and a 31-inch seat pitch in the economy section.[109] The airline, however, has also chosen to operate a subset of its 777 fleet in three other configurations.[110] This is a reflection of the underlying business strategy that dictates seating configurations.

3. Seat Leg Room at Additional Cost

Seat densification is part of the larger effort by airlines to "unbundle" optional services.[111] Unbundling has been occurring since 2008 and can include adding optional fees for checked bags, early boarding, meals, seat selection, etc.[112] One airline executive stated that the use of unbundling allows the company to reduce the base ticket price, allowing them to compete with other airlines.[113] Other airline executives asserted that unbundling makes flying more affordable for more people, increasing the number of passengers flying.[114]

These optional fees are big revenue generators for the airlines, fueling a phenomenal rise in income for the airlines.[115] Fees for optional services that airlines are required by law to report are baggage fees, reservation change fees, and cancellation fees.[116] Those revenues rose from $6.3 bil-

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[107] *See* Gary Leff, *No American Airlines: 30 Inch Pitch and Bring Your Own Entertainment Isn't All Passengers Need*, VIEW FROM THE WING (Nov. 30, 2017), http://viewfromthewing.boardingarea.com/2017/11/30/no-american-airlines-30-inch-pitch-bring-entertainment-isnt-passengers-need/.

[108] *See* Chris Matyszczyk, *United Airlines Just Decided to Make Transatlantic Flights More Uncomfortable (Happy Holidays)*, INC. (Dec. 4, 2017), https://www.inc.com/chris-matyszczyk/united-airlines-just-decided-to-reduce-space-on-transatlantic-flights-happy-holidays.html.

[109] *Id.*

[110] *Boeing 777-200 (777)*, UNITED AIRLINES, https://www.united.com/web/en-US/content/travel/inflight/aircraft/777/200/default.aspx (last visited May 15, 2019).

[111] *See* GAO Report, *supra* note 28, at 1.

[112] *Id.*

[113] *Id.* at 19.

[114] *Id.*

[115] For example, in 2007, the top ten airlines rated by total ancillary revenue generated $2.1 billion. The figure for the top 10 airlines by ancillary income in 2017 rose to more than $29 billion. *See* Jay Sorensen, *2017 Top 10 Airline Ancillary Revenue Rankings*, IDEAWORKSCOMPANY 1, 4 (July 17, 2018), https://www.ideaworkscompany.com/wp-content/uploads/2018/07/2017-Top-10-Airline-Ancillary-Revenue-Rankings.pdf.

[116] *See* GAO Report, *supra* note 28, at 17.

lion in 2010 to $7.1 billion in 2016.[117] Miscellaneous fees, of which seat legroom upgrades are a part, added additional airline revenue of approximately $4 billion in 2016.[118]

Although fees for purchasing seats with additional legroom are not tracked separately, they are attractive revenue generators for U.S. airlines[119] Viewed another way, passengers are now paying extra for economy seats with "additional" legroom. These additional legroom seats are comparable to the legroom that used to be available for all economy seats, on average about 34-35 inches of seat pitch.[120] Moreover, seats with additional legroom, often called "preferred seating,"[121] are no wider than other economy seats. The reduction of legroom for all other economy seats on board the aircraft, along with seat width reductions, result in seat densification.

Naturally, the airlines are unsympathetic to any attempts to limit their ability to make changes in seat densification.[122] One recent commentator, a former Spirit Airlines chief executive, likened any attempt to regulate seat size as subjecting the airlines to the "nanny state."[123] The airlines trade group, Airlines for America, in commenting on the issue of seat densification stated, "there is no need for the government to interfere."[124]

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[117] *Id.*

[118] *See* Tom Stalnaker et. al., *Airline Economic Analysis*, OLIVER WYMAN 1, 26 (2016-2017), https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/jan/aea/NEW_NYC-MKT59202-002_AirlineEconomicAnalysis_2016-17_web.pdf.

[119] *See e.g.*, Brian Sumers, *Delta Airlines Sees Premium Profit,* SKIFT (Oct. 12, 2018, 2:30 AM), https://skift.com/2018/10/12/delta-air-lines-sees-premium-profits/ (discussing Delta Airlines higher-margin profitability from seat upgrades); *See generally,* Jay Sorensen, *The 2018 CarTrawler Yearbook of Ancillary Revenue*, IDEAWORKSCOMPANY 1 (Sept. 2018), https://www.ideaworkscompany.com/wp-content/uploads/2018/09/2018-Ancillary-Revenue-Yearbook-R.pdf. The report is a survey of world airlines ancillary income, including seat fee upgrades, for 2017.

[120] *See* Telephone Interview, *supra* note 91.

[121] *See* GAO Report, *supra* note 28, at 10.

[122] *See* David Millward, *'We Call It Torture Class' – Passenger Groups Battle Aviation Authorities Over Shrinking Plane Seats*, TELEGRAPH (July 17, 2018, 10:38 AM), https://www.telegraph.co.uk/travel/news/passengers-battle-aviation-authorities-over-shrinking-plane-seat/ (quoting the airlines industry trade group, Airlines For America, as stating "We believe market forces should ultimately determine whether the industry is meeting customers' expectations, rather than government regulation.").

[123] *See* Baldanza, *supra* note 9. The "nanny state" originated in Britain and indicates government policies that are "overprotective" or interfere with "personal choice." *Nanny State*, OXFORD ENGLISH DICTIONARY (3d ed. 2003) *available at* http://www.oed.com/view/Entry/124968?redirectedFrom=nanny%20state#eid35308746.

[124] *See* White, *supra* note 9, at 3. *See also* Yamanouchi, *supra* note 1.

4. Increasing Passenger Sizes

The increasing height and weight of passengers is working in opposition to seat densification."[125] In 2002, American adults weighed an average of twenty-five pounds more than in 1960 and were more than an inch taller.[126] The average male in the United States weighs 196 pounds, thirty more pounds than the average male in the 1960s.[127] According to Paul Hudson, the president of FlyersRights.org, research done by the group indicated that 10% of current passengers weigh over 250 pounds or are over 6'2" tall.[128]

Given that the passenger space in many economy cabins has decreased, the increasing size of passengers is exacerbating the already growing issue of seat densification as larger and larger passengers are having to sit in smaller and smaller seats in order to get the cheapest prices. One answer often heard to this quandary is that larger people should simply lose weight, buy an extra seat, or buy a wider business class seat.[129] Regardless of whether such comments could be considered fair, they ignore contributing issues such as height, muscle mass, or pregnancy.[130] They also ignore the other half of the equation: seat densification. As one author states, "Airline seats are as uncomfortable as the silent — and sometimes not-so-silent — judgments from other passengers who think this is a fat person problem, not an economic one."[131]

The resulting "'us' versus 'them'" paradigm has created a "rights" argument on both sides.[132] For instance, relatively smaller passengers discuss the issue as one of their "rights" being violated by larger passengers who may encroach into their seating area.[133] Larger passengers, on the other hand, discuss the issue in terms of having the right not to be discriminated

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[125] *See* Longley, *supra* note 11.

[126] *See* Press Release, CDC, Nat'l Ctr. for Health Statistics, Americans Slightly Taller, Much Heavier Than Four Decades Ago (Oct. 27, 2004) https://www.cdc.gov/nchs/pressroom/04news/americans.htm.

[127] *See FastStats: Measured Average Height, Weight, And Waist Circumference For Adults Aged 20 And Over*, *supra* note 13. Between 35 and 40 percent of 35-year-olds in the U.S. are classified as obese. That trend continues as a recent study predicts that 57 percent of children will be classified as obese by age 35. *See* Gene Emery, *Forecast predicts over half of U.S. children will be obese by age 35*, REUTERS HEALTH: HEALTH NEWS (Nov. 29, 2017, 5:04 PM), https://www.reuters.com/article/us-obesity-children-forecast/forecast-predicts-over-half-of-u-s-children-will-be-obese-by-age-35-idUSKBN1DT3CT.

[128] See Telephone Interview, supra note 91.

[129] *See* Delarato, *supra* note 10. The author opens the article with "What I'm about to say is far from news: Being a fat person on a plane is dreadful."

[130] *Id.*

[131] *See id.*

[132] *See* Small & Harris, *supra* note 10, at 695.

[133] *Id.*

against.[134] Canadian courts have agreed with this human rights approach in very limited cases. In a 2008 decision, the Canadian Supreme Court ruled that airlines must "accommodate passengers with excess weight by offering a second seat at no additional charge."[135] The ruling applied to the "morbidly obese."[136] While the practical issues of implementing this type of ruling are interesting—how to determine what is "morbidly obese" for example—it is the assertion of a human rights approach to the problem that is of interest as a legal and policy matter.[137]

5. The Impact of Seat Densification on Potential Passengers

Opinions regarding the issue of passenger size aside, it is important to consider the interplay between increasing passenger size and seat densification. Is the increasing weight or height of Americans—combined with seat densification—creating barriers to flying for some of these passengers? As has been noted, numerous articles and essays have been written about the anguish and discomfort that large passengers feel when forced to fly in economy class seats.[138] Nonetheless, as these writings indicate, many continue to do so. Moreover, as has been noted, seat densification has not reduced the overall numbers of passengers flying.[139] But the question remains: Are some large or tall people not flying because of seat densification, and does it matter? There is some evidence to indicate this is so.

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[134] *See e.g.,* Dalessandro, *supra* note 10 (noting that a Hawaiian Airlines policy of weighing passengers before they board "smacks of discrimination").

[135] William Hignett & Ted Kyle, *To Buy or Not to Buy: An Extra Seat*, OCA, http://www.obesityaction.org/community/article-library/to-buy-or-not-to-buy-an-extra-seat-2/ (last visited May 15, 2019).

[136] *See Top Court Backs Free Seat Ruling for Some Disabled, Obese Travelers*, CBC NEWS (Nov. 20, 2008, 9:33 AM), http://www.cbc.ca/news/canada/top-court-backs-free-seat-ruling-for-some-disabled-obese-travellers-1.723839.

[137] *Id.* One human rights expert noted "[t]here is indeed an interesting argument to be made for a basic human right to physical space on an airplane. It is part of a larger discussion about the fundamental need for movement." Christopher Elliott, *Airplanes' Space Wars are Shifting to the Human Rights Front*, WASH. POST (Sept. 17, 2015), https://www.washingtonpost.com/lifestyle/travel/airline-space-wars-are-shifting-to-the-human-rights-front/2015/09/17/d54999f4-5bce-11e5-8e9e-dce8a2a2a679_story.html?utm_term=.1cc0982c8631.

[138] *See* sources cited *supra* note 10. *See also,* Vargas, *supra* note 10 (noting the emotional implications of "fat shaming" airline passengers); Your Fat Friend (@yrfatfriend), *What it's like to be that fat person sitting next to you on the plane,* MEDIUM (Mar. 26, 2016), https://medium.com/@thefatshadow/what-it-s-like-to-be-that-fat-person-sitting-next-to-you-on-the-plane-85006e263778 (providing a personal account of the anxiety and depression that results from popular culture caricatures of large people on airplanes).

[139] *See Corrected BTS Statistics Release*, *supra* note 103.

In an interview with one large frequent flyer, the passenger noted limiting flying more and more, or only flying when very inexpensive business class seats were available, which was rare.[140] The reduced size of seat room and the length of the journey were big factors in the passenger's decision not to fly.[141] In a recent British Broadcasting Company article, the author notes a collection of viral online comments from large persons who have flown, explaining the agony of these individuals in terms of "barriers to flying."[142]Thus, as seat densification is creating barriers to flying for some passenger populations, does the issue require government oversight as a matter of law? Arguably, it may. As has been noted, DOT has the legal obligation to ensure "the availability of a variety of adequate, economic, efficient and low-priced services without unreasonable discrimination-False"[143] This was one of the arguments made by the Petitioner in a recent federal case.

E. *The Flyers Rights Case*

In August 2015, the non-profit group FlyersRights.org ("Flyers Rights"), along with its president, Paul Hudson filed a petition with the FAA to promulgate a regulation "mandating minimum seat width and seat pitch for commercial airlines."[144] It petitioned the FAA to issue a Notice of Proposed Rulemaking (hereinafter NPRM) with respect to the following:

> 1. Exercise its discretionary rulemaking authority under 49 U.S.C. § 106, to impose within 180 days reasonable regulations setting maintenance standards and limiting the extent of seat size changes in order to ensure consumer safety, health, and comfort.
>
> 2. Issue an order within the next 45 days placing a moratorium or freeze on any further reductions in seat size, width, pitch, padding, and aisle width until a final rule is issued.

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[140] Interview with Paul M. Shrewsbury, President, Summit Scientific, (Nov. 24, 2017) (on file with the authors). This male American, weighing 280 pounds, stated that smaller seats had made it less likely that he would fly. The passenger relayed stories of going to great lengths to avoid discomforting other passengers when he had no choice but to fly. This included standing for over five hours on one trans-Atlantic flight, searching endlessly for somewhat "affordable" business class seats, and avoiding window or middle seats at all cost.

[141] *Id.*

[142] *What It's Really Like to be Judged as 'That Fat Person' on a Plane*, BBC III (Sept. 29, 2017), http://www.bbc.co.uk/bbcthree/item/3fe7c414-c51a-4bfa-ae31-e992d68ffe2f.

[143] 49 U.S.C. § 40101(a)(4) (1996).

[144] FlyersRights.org, Petition for Rulemaking: Limitation of Seat Size Reductions, at 1, (Aug. 26, 2015), https://flyersrights.org/wp-content/uploads/2016/12/SeatSizePetition.pdf; *see also* Flyers Rights Educ. Fund, Inc. v. Fed. Aviation Admin., 864 F.3d 738, 740 (D.C. Cir. 2017).

> 3. Appoint an advisory committee or task force to assist and advise the FAA in proposing seat and passenger space rules and standards, with such committee having broad representation of the various interests involved and expertise needed. . .[145]

In February 2016, the FAA denied Flyers Rights' petition. The agency stated that the grounds raised by Flyers Rights in its petition "do not meet the criteria to pursue rulemaking."[146] Flyers Rights successfully petitioned the U.S. Court of Appeals for the District of Columbia Circuit to review the FAA denial.[147]

1. Background of Flyers Rights

Flyers Rights is a non-governmental advocacy group established in 2007.[148] Kate Hanni, a former real estate agent, started the group after she sat on the tarmac for over nine hours while on an American Airlines flight.[149] Flyers Rights is a strong advocate for policies that protect airline passengers, such as the so-called "tarmac delay rule," which places a time limit on how long airlines can keep passengers on an aircraft before taking off or after landing.[150]

2. Petition for Rulemaking

In its petition, Flyers Rights argued that a minimum rule should be established for seat size and spacing dimensions (hereinafter "seat densification") for two reasons: (1) seat densification, along with the increasing size of passengers, was a safety concern regarding the ability to evacuate a

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[145] FlyersRights.org, Petition for Rulemaking, *supra* note 144, at 3-4.

[146] FAA, Final Decision Letter Dismissing FlyersRights.org Petition for Rulemaking, FAA Docket No. 2015-4011 (Feb. 1, 2016), https://www.regulations.gov/document?D=FAA-2015-4011-0140.

[147] *See generally, Flyers Rights*, 864 F.3d at 738. Flyers Rights was not the first to petition the FAA for rulemaking on this issue. The National Association of Airline Passengers filed a similar petition nearly a year earlier. *See* Telephone Interview with Douglas Kidd, Executive Director, Nat'l Ass'n of Airline Passengers (NAAP) (Oct. 26, 2017) (on file with author). NAAP's petition is at https://www.regulations.gov/docket?D=FAA-2014-0663.

[148] *See* Kathleen Schalch, *Ordeal on Tarmac Turns Passenger into Activist*, (Sept. 17, 2007, 2:19 PM), https://www.npr.org/templates/story/story.php?storyId=14475481; *see also,* Tim Winship, *Who Represents Airline Passengers' Rights?*, FREQUENT FLYER (Feb. 6, 2009), https://www.smartertravel.com/2009/02/06/who-represents-airline-passengers-rights/. The group later changed its name to Flyers Rights. *See* 74 Fed. Reg. 68984. *See also, Coalition for an Airline Passengers Bill of Rights: Flyersrights.org,* VOLUNTEER MATCH, https://www.volunteermatch.org/search/org87807.jsp (last visited Sept. 21, 2018).

[149] *See* Schalch, *supra* note 148.

[150] 14 C.F.R. 259.4 (2019); *See also About Us*, FLYERS RIGHTS, http://www.flyersrights.org/about-us/ (last visited Sept. 21, 2018).

commercial aircraft in the event of an emergency[151] and (2) these same factors were a risk to the health and safety of passengers from the potential development of deep vein thrombosis as well as joint and muscle problems.[152] The FAA denied the petition for rulemaking for a variety of reasons, including that the expressed concerns only raised issues related to passenger health and comfort and that deep vein thrombosis was rare. The denial also stated that evacuation tests had been performed on aircraft with interior configurations that were more densely configured than those used by most airlines and that "[f]ull scale evacuation tests on widely used airplanes have been successfully conducted at 28- and 29-inch, when substantiating the maximum occupancy."[153] The FAA did not cite any studies or tests to verify its claims.[154]

As a result, Flyers Rights asked the FAA to cite the studies upon which it relied in its original denial.[155] The FAA supplied study reports on aircraft egress, but none of the documents addressed the impact of seat densification or increased passenger size on the ability of passengers to "expeditiously leave their seats and reach emergency exits."[156] Citing the FAA's unsubstantiated representations regarding passenger health and safety, Flyers Rights then petitioned the D.C. Circuit Court of Appeals to review the agency's denial for rulemaking.[157]

In its opinion, the court first noted its jurisdictional mandate with regard to its review of federal agency decisions, stating that it reviewed such decisions to determine whether they were arbitrary, an abuse of discretion, or not in conformance with the law.[158] In reviewing agency decisions, the court stated that its review of an administrative agency's decision "not to engage in rulemaking" is "extremely limited."[159] The court then looked at whether the agency "employed reasoned decision making" and whether the facts relied upon by the agency had some basis in the record.[160]

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[151] *Flyers Rights*, 864 F.3d at 741-42.

[152] *Id.* at 742.

[153] FAA, Final Decision Letter Dismissing FlyersRights.org Petition for Rulemaking, *supra* note 146.

[154] *Id.*

[155] *Id.*

[156] *Id.*

[157] *Id.* (citing Safe Extensions, Inc. v. Fed. Aviation Admin., 509 F.3d 593, 604 (D.C. Cir. 2007) (quoting 5 U.S.C. § 706(2)(A))).

[158] Flyers Rights Educ. Fund, Inc. v. Fed. Aviation Admin., 864 F.3d 738, 743 (D.C. Cir. 2017).

[159] *Id.*

[160] *Id.* (citing Defenders of Wildlife v. Gutierrez, 532 F.3d 913, 919 (D.C. Cir. 2008)).

3. The Analysis of the Court

a. *Safety Concerns*

In its analysis, the court first reviewed the safety rule regarding aircraft evacuation, citing the requirement that aircraft with a capacity of more than 44 passengers must be capable of being evacuated within 90 seconds.[161] The court noted the FAA's responsibility to reasonably address safety concerns using notably strident and colorful language about the FAA's actions, remarking that the FAA had "failed that task here."[162] In addressing the FAA's statements that omitting seat size information from the tests meant that seat dimensions were "categorically unimportant" to emergency egress, the court stated that the assertion made no sense and that the FAA's "rationale also blinks reality."[163] The question, according to the court, was not whether seat dimensions mattered, but when.[164]

The court next addressed the matter of passenger size and its potential effect on passenger evacuation, commenting that problems with the FAA's position continued because the FAA had not been able to articulate whether passenger size had been taken into account during any evacuation testing.[165] The court stated that the FAA could not "hide the evidentiary ball," noting that the record could be slim but not "vacuous."[166] Nonetheless, although Flyers Rights had asked the court to order the FAA to institute rulemaking regarding seat dimensions, the court stated that to do so was unwarranted until the agency had the opportunity to provide the court with sufficient information addressing the evacuation concerns raised by Flyers Rights.[167]

b. *Health and Comfort Concerns*

In its brief to the court, Flyers Rights asserted that the FAA had erred in its refusal to consider passenger health and comfort because it "misinterpreted the scope of its own statutory responsibility and authority," citing 49 U.S.C. §44701(a).[168] The FAA denied that it had this responsibility, noting

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[161] *See* FAA Airworthiness Standards: Transport Category Airplanes, 14 C.F.R. § 25.803(c) (2019).

[162] *See Flyers Rights*, 864 F.3d at 744.

[163] *Id.*

[164] *Id.* at 745.

[165] *Id.* at 746-47.

[166] *Id.* at 747.

[167] *Id.*

[168] Final Brief for Petitioners at 26, Flyers Rights Educ. Fund v. Fed. Aviation Admin., 864 F.3d 738 (D.C. Cir. 2017) (No. 16-1101). Under 49 U.S.C. § 44701(a), Flyers Rights asserted the FAA had "responsibility, in regulating the industry, to consider a number of other factors 'as being in the public interest and consistent with public convenience and necessi-

that the statutory provision cited by Flyers Rights only applied to the Secretary of Transportation.[169] The court readily agreed.[170]

However, Flyers Rights also asserted that health was an aspect of safety that the FAA must consider to fulfill its safety responsibility.[171] The court agreed with this contention, stating that there was "no question that the [FAA] has the statutory authority to address at least some passenger health issues."[172] However, the court noted that the FAA had acknowledged it had the authority to oversee matters pertaining to passenger health but had simply chosen not to regulate in this case. The D.C. Circuit Court held that the FAA's decision to not address the impact of seat size on passenger health was a proper use of its regulatory judgement.[173]

4. Decision

The court denied the petition for review regarding Flyers Rights health and comfort concerns but granted its petition regarding passenger safety, remanding the issue back to the FAA for it to produce a "properly reasoned disposition" of Flyers Rights' safety concerns about the impact of decreased seat dimensions and increased passenger size on emergency evacuation.[174]

For Flyers Rights, the court decision was a major victory given the deference that federal agencies are typically given.[175] The decision also garnered significant media coverage and commentary, much of it positive.[176]

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ty,' including ensuring 'the availability of a variety of adequate, economic, efficient and low-priced services,' 49 U.S.C. § 40101(a)(4) and 'developing and maintaining a sound regulatory system that is responsive to the needs of the public.' 49 U.S.C. § 40101(a)(7)." Brief for Petitioners at 2-3, Flyers Rights Educ. Fund. v. Fed. Aviation Admin., 864 F.3d 738 (D.C. Cir. 2017) (No. 16-1101).

[169] Final Brief for Respondents at 19, Flyers Rights Educ. Fund v. Fed. Aviation Admin., 864 F.3d 738 (D.C. Cir. 2017) (No. 16-1101).

[170] *See Flyers Rights*, 864 F.3d at 748.

[171] *Id.*

[172] *Id.*

[173] *Id.* at 748-49.

[174] *Id.* at 749.

[175] *See* Telephone Interview, *supra* note 91. Paul Hudson also asserted that the matter was "a human rights issue," especially for women, who were being forced to be in direct contact with other passengers. *Id.* He noted that the Court panel, made up of three female judges were quite understanding of this during oral argument. *Id. See also,* Chevron v. Nat. Res. Def. Council, 467 U.S. 837, 843-44 (1984) (discussing the discretion of federal agencies to issue legislative regulations as an express delegation of Congress where Congress has left gaps in the statutory language and upholding the EPA's discretion in defining a statutory term).

[176] *See, e.g.*, Jonah Engel Bromwich, *Court Directs F.A.A. to Revisit Issue of 'Shrinking' Airline Seat Space*, N.Y. TIMES (July 31, 2017), https://www.nytimes.com/2017/07/31/business/airline-seat-size-faa.html; Alan Levin, *The*

On the other hand, one commentator found the positive coverage unwarranted, stating that the FAA merely had to provide the required evidence and that it should also make the argument that setting seat densification standards would raise the cost of air travel so much that passengers would resort to alternative methods of travel.[177] That is a fairly sweeping assertion, and, even if true, it was not before the court. The writer also suggested that the remaining work with the case was "basically a lawyer's job" to put evacuation evidence into the record.[178] That is a significant overstatement, as it is fairly evident that had such evidence existed, the lawyers already working for the FAA would have presented it when challenged on the issue by both Flyers Rights and the court. Regardless of the writer's assertions, the tone of the article is demonstrative of the emotional element that usually accompanies the debate.

F. *Commercial Aircraft Evacuation Standards*

As the court noted in *Flyers Rights*, its further involvement in potentially ordering rulemaking depended on the FAA placing sufficient evidence into the record on the effect that seat densification and passenger size has on passenger evacuation.[179] Currently, the evacuation standard is set under 14 CFR § 25-803, which requires airplanes with a capacity of more than forty-four people to be able to be evacuated under emergency conditions within 90 seconds.[180] Compliance with the rule must be demonstrated through actual testing using the criteria in Appendix J of the Code of Federal Regulations unless the FAA finds data that is "equivalent" to that which would have been obtained by actual testing.[181]

1. Passenger Requirements for Aircraft Emergency Evacuation Testing

CFR Part 25, Appendix J provides details on evacuation test criteria and procedures. With regard to the representative passenger load:

'Incredible Shrinking Airline Seat' Gets a U.S. Court Rebuke, BLOOMBERG: TECH. (July 28, 2017, 11:18 AM), https://www.bloomberg.com/news/articles/2017-07-28/u-s-court-rebukes-faa-over-incredible-shrinking-airline-seat; Bart Jansen, *Economy Seats Have Shrunk and a Court Wants the FAA to Prove that They're Still Safe*, USA TODAY (July 31, 2017, 11:23 AM), https://www.usatoday.com/story/news/2017/07/31/case-incredible-shrinking-airline-seat-tells/524972001/.

[177] *See* Richard Fahy, *DC Circuit Ignores Economics in Ordering FAA to Reconsider Denial of Rulemaking on Seat Pitch*, REGULATORY FOLLIES (Aug. 3, 2017, 7:28 PM), http://regulatoryfollies.blogspot.com/2017/08/dc-circuit-ignores-economics-in.html.

[178] *Id.*

[179] *See Flyers Rights*, 864 F.3d at 749.

[180] 14 C.F.R. § 25.803(c) (2019).

[181] *Id.*

> a representative passenger load of persons in normal health must be used as follows:
>
> (1) At least 40 percent of the passenger load must be female.
>
> (2) At least 35 percent of the passenger load must be over 50 years of age.
>
> (3) At least 15 percent of the passenger load must be female and over 50 years of age.
>
> (4) Three life-size dolls, not included as part of the total passenger load, must be carried by passengers to simulate live infants 2 years old or younger.[182]

Notably, the procedures in this section do not contain any requirements that representative loads include individuals of above-average weight and height, disabled persons, or children older than infants.

In addition, the FAA has detailed evacuation testing procedures under its Flight Standards Information Management System (FSIMS).[183] Within the FSIMS library are emergency evacuation, ditching procedures, and demonstrations for airlines operating under Federal Aviation Regulation Part 121.[184] As outlined in these procedures, aircraft manufacturers must conduct emergency evacuation demonstrations in order to receive certification of an aircraft type.[185] Additionally, a Part 121 operator must conduct a "full-scale emergency evacuation demonstration when there has been no previous demonstration of the aircraft type and model by another Part 121 operator or by a manufacturer during type certification."[186]

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[182] *See* Emergency Evacuation, 14 C.F.R. Part 25 Appendix J (2019).

[183] *See* FAA, FLIGHT STANDARDS INFORMATION MANAGEMENT SYSTEM (FSIMS), http://fsims.faa.gov/PICResults.aspx?mode=EBookContents&restricttocategory=all~menu (last visited Sept. 21, 2018). "The Flight Standards Information Management System (FSIMS) is a single-source, web-based, repository of policy and guidance available to all FAA employees." FAA, FLIGHT STANDARDS INFORMATION MANAGEMENT SYSTEM (FSIMS), http://fsims.faa.gov/help_pw/introduction.html (last visited May 23, 2019).

[184] *See* FAA, FLIGHT STANDARDS INFORMATION MANAGEMENT SYSTEM (FSIMS) 8900.1 CHG 578, *Safety Assurance System: Evaluate 14 C.F.R. Part 121 Emergency Evacuation/Ditching Procedures/Demonstrations*, (Feb. 22, 2018), Section 7, Vol. 3, ch. 30 *available at* http://fsims.faa.gov/PICDetail.aspx?docId=8900.1,Vol.3,Ch30,Sec7_SAS (hereinafter "General Technical Information"). *See also* FAA, AC 25.803-1A, EMERGENCY EVACUATION DEMONSTRATIONS, (Mar. 12, 2012) *available at* https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/1019850.

[185] *See* General Technical Information, *supra* note 186, at 3-2613(B).

[186] *Id.* at 3-2614(A).

The FSIMS procedures also contain passenger participation requirements and state:

1) Participants must be representative of a normal passenger complement as follows:

Table 3-119. Normal Passenger Complement[187]

Passenger	Age	Percentage of Full Seating Capacity
Adult Females	12–60	30% minimum
Adult Males	12–60	50%–60%
Adult Males and Females (proportional mix)	Over 60	5% minimum
Children (prorated by age)	3–11	5%–10%
Life-sized dolls		

Once again, however, there are no requirements that the passenger complement in the tests include large persons, tall persons, or disabled persons, nor are there any particular weight requirements for evacuation test passengers.[188] However, there is a requirement that children other than infants be used unless restricted by local labor laws.[189]

The details regarding how these tests are conducted are important because airline aircraft evacuations are not that unusual. As shown in a review of emergency evacuations over a 16-month period from September

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[187] *Id.* at 3-2620(A)(1).

[188] The FAA does use average passenger weight information. *See* FAA, ADVISORY CIRCULAR 120-27E, AIRCRAFT WEIGHT AND BALANCE CONTROL ii (June 10, 2005), https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC120-27E.pdf. An attempt to update the circular was made in 2014 but was apparently not successful. As noted by the Society of Allied Weight Engineers (SAWE), the most significant part of the proposed 2014 revision was a change from the use of standard passenger and baggage weights contained in AC120-27E to a requirement that all airlines perform a survey to determine their own particular passenger and baggage weights in AC120-27F. According to SAWE, the FAA stated that it would like to "get out of the business" of publishing standard passenger/baggage weights. FAA ADVISORY CIRCULAR (AC) 120-27E - PROPOSED SAWE WORKING GROUP, SOC'Y OF ALLIED WEIGHT ENG'RS (Jan. 8, 2014), https://www.sawe.org/news/ac120-27e.

[189] In such cases the procedures allow that "a proportional mix of the overall passenger complement may be substituted." *See* General Technical Information, *supra* note 186, at 3-2619(A)(4).

1997 to June 1999, the NTSB reported that there were 42 evacuations in the U.S., an average of one every 11 days.[190] Of the passengers evacuated in these incidents, six percent suffered minor injuries and two percent suffered serious injuries.[191]

2. Seat Density in Emergency Aircraft Evacuation Evaluations

Critics of the current testing methodology complain that the tests are outdated and unrealistic.[192] For example, the tests do not reflect seat densification.[193] They also do not take into account decreases in aisle width,[194] the inability of some passengers to brace for impact,[195] or that the tests are run with volunteers who know that an emergency test will be conducted.[196] Critics have also expressed concern that neither the aircraft manufacturers nor the FAA will disclose test data for the newest and most densely packed versions of the Boeing 737, the most widely used narrow-body jetliner.[197]

Although not contained in any of the regulatory or procedural guidance previously noted, the FAA has considered seat pitch in its testing requirements in some form.[198] In a 2015 meeting of the Advisory Committee for Aviation Consumer Protection, an FAA representative testified that the FAA did take seat pitch into account in evacuation testing and required that testing be done with a default seat pitch as low as 31 inches but had not tested densification of less than 31 inches.[199] These denser seat configurations are occurring on a significant number of airlines.[200] There is also no

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[190] *See* NAT'L TRANSP. SAFETY BD., SAFETY STUDY: EMERGENCY EVACUATION OF COMMERCIAL AIRPLANES 15 (2000).

[191] *Id.* at 17.

[192] *See* Clive Irving, *Flying Coach Is So Cramped It Could Be a Death Trap*, DAILY BEAST (Sept. 13, 2017, 1:00 AM), https://www.thedailybeast.com/flying-coach-is-so-cramped-it-could-be-a-death-trap.

[193] *Id.*

[194] *Id.* The author contends that increased passenger size is not just a factor with seat size, but also with aisle width.

[195] *Id.*

[196] *Id. See also* Dave Demerjian, *How Long Does It Take To Really Evacuate A Plane?*, WIRED (Aug. 27, 2008, 10:35 AM), https://www.wired.com/2008/08/as-your-flight/.

[197] *See* Irving, *supra* note 192.

[198] *See* Media Center, *Advisory Committee for Aviation Consumer Protection,* YOUTUBE (Apr. 14, 2015), https://www.youtube.com/watch?v=Cp8s-Kf6gtw&feature=youtu.be&t=889 (Presentation by Cynthia Corbett, FAA Cabin Safety Research, Civil Aerospace Medical Center at 23:18).

[199] *See id.*

[200] *See* Ricky Radka, *Wild Pitch: US Airlines with the Most Legroom in Economy. . . and the Least,* AIRFAREWATCHDOG: TRAVEL TIPS & ADVICE (May 2, 2018), https://www.airfarewatchdog.com/blog/44252939/wild-pitch-us-airlines-with-the-most-legroom-in-economy-and-the-least/ (citing American, United, Delta, Spirit, and Frontier

indication in the FAA guidance that seat width, aisle width, or average passenger size has been considered.[201]

G. *Passenger Health and Comfort Issues*

Although the D.C. Circuit made short shrift of the passenger health and comfort arguments raised by the Petitioners in the *Flyers Rights* case, there are, nonetheless, significant health and comfort issues created by seat densification and the increased size of passengers that warrant consideration.[202] For example, although the Flyers Rights Petitioners focused on the issue of deep vein thrombosis, the inability of passengers to move freely in an aircraft might have other negative effects on health.[203] Among these may be the difficulty faced by passengers attempting to go to the bathroom on flights as it becomes increasingly more difficult to get out of rows and maneuver in aisles, especially in single-aisle aircraft.[204] This might lead to passengers intentionally not drinking enough liquids on aircraft, which may result in dehydration.[205]

One Emirates Airlines executive, for instance, noted the solution to passenger discomfort from seat densification, at least on long flights, was to offer distractions including large meals, lots of snacks, and a large variety of electronic entertainment.[206] That may be, but at what point does seat densification on aircrafts create a substantial enough risk to passenger health sufficient to warrant serious review? The use of aircraft bathrooms may be avoided by some on shorter flights. However, when the ability to get to a bathroom is made more difficult on longer flights, it becomes more serious.[207]

Bathrooms are not only becoming more difficult to get to with seat densification, they are becoming smaller and more difficult to use.[208] Aircrafts

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(among others) as having seat pitches of 31 inches or less).

[201] *See* General Technical Information, *supra* note 186.

[202] *See id.*

[203] *Id.*

[204] According to Paul Hudson at Flyers Rights, they have received numerous complaints from passengers who are avoiding drinking liquids so they will not have to use the bathroom. The difficulty of exiting from the middle and window seats on densified aircraft discourages these passengers from disturbing the other passengers in order to use the toilet. *See* Telephone Interview, *supra* note 91.

[205] *Id.*

[206] *See* Wu, *supra* note 7. According to this executive "[w]ith food and TV. . .people are mesmerized."

[207] *See* Telephone Interview, *supra* note 91 (stating that anecdotal evidence shows that passengers are not getting up as much and that studies of the issue are warranted).

[208] *See* Dinah Eng, *Smaller Bathrooms on Planes Pose Challenges for Passengers*, N.Y. TIMES (Dec. 23, 2016), https://www.nytimes.com/2016/12/23/travel/smaller-airplane-

began to decrease bathroom size in 2013 in order to add extra seats to the aircraft, which has led to additional health concerns.[209] According to the *New York Times*, besides passenger complaints, industry professionals are also concerned.[210] "The configuration of the toilets can make it especially difficult during medical emergencies to help travelers who are incapacitated or unable to move on their own," stated one flight attendant union representative.[211] The article noted that the airline industry's response was that there have been no significant complaints about the issue, although the complaints noted by those interviewed were quite vociferous and varied.[212]

The most dramatic change in bathroom size has been in width. For instance, the economy class bathrooms on older model Boeing 757s are about 34 inches wide, but the bathrooms on newer 757s are coming in at a tight 24.5 inches,[213] and as noted previously, American's Boeing 737 MAX will have a bathroom that is a mere 24 inches wide.[214] This has proven unpopular. As one American Airlines pilot recently told airline executives, using the rear bathroom on the 737 MAX was "the most miserable experience in the world. . .[you've] added 12 more seats, no more lavatories, and you've shrunk that lavatory to 75% the size that it was before."[215]

Seat densification effects on bathroom sizes has also raised concerns about adequate bathroom access for disabled persons traveling on single-aisle aircraft.[216] In response, DOT established an Advisory Committee on Accessible Air Transportation (ACCESS Advisory Committee).[217] The DOT stated that it was planning to issue a notice of proposed rulemaking with respect to this issue by 2017.[218] As of March 2019, no action has been

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bathrooms-challenges-for-passengers.html.

[209] *Id.*

[210] *Id.*

[211] *Id.*

[212] *Id.*

[213] *Id.*

[214] *See* Leff, *supra* note 107.

[215] This pilot also noted that he refused to fly in the economy section of the 737 MAX, and the bathrooms were the biggest complaint he received. "[T]here's 160 [economy] passengers for 2 lavatories on 5 hour flights." *See* Gary Leff, *American Airlines Pilot Says Their New Lavatory is "The Most Miserable Experience in the World,"* VIEW FROM THE WING (Feb. 27, 2018), https://viewfromthewing.boardingarea.com/2018/02/27/american-airlines-pilot-says-airlines-new-lavatory-miserable-experience-world/.

[216] *See* Eng, *supra* note 208.

[217] *See* U.S. DEP'T OF TRANSP., ACCESS ADVISORY COMMITTEE (Feb. 8, 2018) https://www.transportation.gov/airconsumer/fly-rights. *See also* Bart Jansen, *Disabled Travelers Sue DOT to Force Accessible Lavatories on Single-Aisle Planes*, USA TODAY (July 31, 2018, 2:00 PM), https://www.usatoday.com/story/travel/2018/07/31/disabled-travelers-sue-dot-force-accessible-lavatories-airliners/871366002/.

[218] *Id.*

taken.[219]

H. *Passenger Demeanor as a Potential Safety Issue*

Another issue worthy of consideration is to what extent passenger behavior as a result of crowding is becoming, in and of itself, a safety issue. When does the emotion surrounding the issue of commercial aircraft densification rise to a level of genuine safety risk on aircraft? Sometimes called "legroom rage" or "recline rage," instances of fights on aircraft are increasing.[220] Some of these instances have resulted in flight diversion decisions by pilots fearing for the safety of the aircraft.[221]

One survey of 2,332 U.K. airline passengers found that a staggering 41% of respondents reported having an argument or conflict with another passenger during a flight.[222] The number one reason for such conflict was reclining seats into already limited knee space.[223] Four percent of the incidents with other passengers involved physical conflict.[224] Passengers are becoming increasingly "territorial" about their space.[225] Some in the airline industry agree that squeezing passengers together has increased tempers and anecdotally led to air rage incidents.[226]

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[219] *See* ACCESS ADVISORY COMMITTEE, *supra* note 217.

[220] *See* Media Center, *supra* note 198 (Presentation by Julie Fredrick, Government Affairs Association of Flight Attendants, at 30:39). *See also* Guy Walters, *Legroom Rage: Why a Gadget that Stops Plane Seats Tilting Back is Starting Fights on Airliners*, DAILY MAIL (Aug. 27, 2014, 8:11 PM), http://www.dailymail.co.uk/travel/travel_news/article-2736320/Legroom-rage-Why-gadget-stops-plane-seats-tilting-starting-fights-airliners.html. *See also*, Michael Muskal, *Recline Rage: Why Airline Seating is Provoking Mid-Flight Fights*, L.A. TIMES (Sept. 2, 2014, 11:26 AM), http://www.latimes.com/nation/nationnow/la-na-nn-cramped-seats-recline-airline-20140902-story.html (noting three airline flight diversions in one week due to anger over seating space on aircraft).

[221] *See* Walters, *supra* note 220.

[222] *See* Claudia Cuskelly, *Plane Passenger FIGHTS Are Most Likely To Be Caused By THIS On Flights To [U.S]*, Express (Apr. 19, 2017, 2:31 PM), https://www.express.co.uk/travel/articles/793778/flights-passenger-fights-holidays.

[223] *See* Claire Zulkey, *Who's Really at Fault in the Airplane Reclining Seat Wars?*, MEN'S HEALTH (Nov. 3, 2015), https://www.menshealth.com/guy-wisdom/airplane-seat-wars.

[224] *See id.*

[225] *See* Jon Ostrower, *The New Age of Airline Rage*, CNN MONEY (May 8, 2017, 11:34 AM), http://money.cnn.com/2017/05/08/news/companies/airline-rage/.

[226] Kelly Yamanouchi, *Airline Seat Squeeze Sparks Debate over Safety Concerns in Evacuation*, ATLANTA J.-CONST. (Aug. 3, 2018, 3:25 PM), https://www.ajc.com/business/airplane-seat-squeeze-sparks-debate-over-safety-concerns-evacuation/EIcC12yaC0ruc9mQntvbdN/. Sara Nelson, president of the Association of Flight Attendants recently stated that such incidents were a result of bigger passengers, and smaller and closer seats. *Id.*

In sum, given the plethora of issues and potential conflicts involving the issues of seat density and space on commercial aircrafts, the question becomes what to do in response? The airline industry and many in the federal government prefer to do nothing, letting the market decide without any government, or other, oversight. While that may be a solution, other possible approaches should be considered.

III. POSSIBLE RESPONSES

A. *FAA rulemaking*

On July 2, 2018, the FAA responded to the D.C. Circuit's remand by publishing a supplemental response to its earlier denials articulating a "properly reasoned disposition" of Flyers Rights' petition for rulemaking to address the "adverse impact of decreased seat dimensions and increased passenger size on aircraft emergency egress."[227] The FAA's response was focused on whether the "seat width and pitch, in conjunction with passenger size, raise a concern" that is considered an "immediate safety issue," requiring rulemaking pursuant to 14 CFR §11.73.[228]

In its letter responding to the D.C. Circuit's remand, the FAA stated that it "had no evidence, and nothing" in the Flyers Rights' petition demonstrated that "current seat dimensions, including width and pitch, hamper the speed of passenger evacuation, or that increasing passenger size creates an evacuation issue."[229] The FAA stated that "the time to stand up from one's seat is less than the time it will take for the exit door to be opened and, for most passengers, for the aisle to clear."[230]

The FAA also stated its process and limitations for conducting aircraft evacuations:

> . . .the FAA has chosen not to require elderly passengers or children in demonstration tests after learning that they are more likely to sustain injury. Second, actual emergency evacuations are subject to a high degree of variability, such as the amount of damage to the airplane, and not every variable can be safely and reliably replicated. Therefore, a key purpose of the 90-second evacuation test is to provide a repeatable comparison of the airplane design to a specific standard, not to simulate every potential variable that may occur in an evacuation such as the amount of airplane damage and the diversity of human ages and

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[227] FAA, Decision Letter in Response to the July 28, 2017 Decision of D.C. Cir. Regarding FlyersRights.org Petition, FAA Docket No. 2015-4011 (July 2, 2018), https://www.regulations.gov/document?D=FAA-2015-4011-0160.

[228] 14 C.F.R. § 11.73(e); FAA, Decision Letter, *supra* note 227, at 1.

[229] FAA, Decision Letter, *supra* note 227, at 1.

[230] *Id.* at 2.

abilities.[231]

The FAA again concluded that no evidence was raised by Flyers Rights demonstrating "that decreases in seat pitch and increases in passenger girth create an immediate safety issue with regard to passenger evacuation that necessitates rulemaking."[232] The FAA's response was very detailed in terms of providing specifics as to why it did not believe that the increase in average passenger size did not require the agency to make changes with respect to its regulatory scheme pertaining to passenger evacuation.[233] Airplane manufacturers also provided the FAA with seat pitch and emergency evacuation information, including recordings for the evacuation of an aircraft with seat pitch of 28 to 30 inches.[234] The FAA disclosed this information on the regulatory docket for public review.[235]

In its response, the FAA also stated that there are limits on how dense the seating configuration can be on an aircraft.[236] 14 CFR § 25.562(c)(8), for example, requires "that seats not deform in a crash to the point that they would impede rapid egress."[237] The agency's Advisory Circular 25.562-1B, a non-regulatory document that provides guidance to operators on how best to comply with the agency's regulations, requires "a minimum of 9 inches between the front of one seat (the front of the seat cushion) to the nearest point on the back of the next seat."[238] In a declaration issued as part of the agency's July 2, 2018, response, Jeffrey Gardlin, a Senior Technical Specialist for Aircraft Cabin Security and Survivability with the FAA's Aircraft Certification Service, stated that

> [s]ince seat bottoms are typically approximately 18 inches from front-to-back, and have been for at least the past 30 years, seat pitch is unlikely to go below 27 inches (9+18), in order to maintain compliance with § 25.562(c)(8). So, although there is no explicit limit on seat pitch, there is a requirement for adequate egress paths, which must be maintained even following an accident.[239]

Groups like Flyers Rights were not satisfied with the FAA's position, expressing their "profound disappointment" and asking the FAA to appoint a

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[231] *Id.* at 4 (citing Declaration of Jeffrey C. Gardlin, FAA Docket No. 2015-4011 (June 21, 2018), https://www.regulations.gov/document?D=FAA-2015-4011-0159).

[232] FAA, Decision Letter, *supra* note 227, at 3.

[233] *Id.*

[234] *Id.* at 2.

[235] *Id.*

[236] *Id.* at 3.

[237] 14 C.F.R. § 25.562(c)(8); FAA, Decision Letter, *supra* note 227, at 3.

[238] FAA, Decision Letter, *supra* note 227, at 3 (citing FAA Adv. Circ. 25.562-1B, Appendix 2 (Sept. 30, 2015); Declaration of Jeffrey C. Gardlin, *supra* note 231, at para. 21).

[239] Declaration of Jeffrey C. Gardlin, *supra* note 231, at 5.

representative advisory committee to recommend minimum seat and passenger space standards on airlines.[240] Nonetheless, given the result in the *Flyers Rights* case, unless Congress enacts legislation requiring rulemaking with respect to seat dimensions, it is unlikely that a court will require the FAA to do so.[241]

B. *DOT Rulemaking and Possible Congressional Involvement*

There appears to be no legal authority for the DOT to regulate seat size and density *vis-à-vis* its rulemaking power.[242] As noted earlier in the article, Congress has prohibited the DOT from "prescribing a term preventing an air carrier from adding or changing. . .accommodations. . .for providing the transportation to satisfy business development and public demand."[243] In 2015, the Advisory Committee for Aviation Consumer Protection, a committee charged with advising the Secretary of Transportation on aviation customer service improvements, concluded that aircraft seating arrangements are "beyond the scope of DOT's regulation" because it "is an issue of service and competition between airlines as part of the deregulation of the industry."[244]

Of course, Congress could act to amend 49 U.S.C. § 41109(2)(B), but it appears it is reluctant to move in this direction.[245] Thus, if legislative action is to be taken, such action will likely be in the form of legislation requiring the FAA to establish minimum seat size and minimum distance between rows of seats on all aircraft operated by U.S. carriers, as has been previously attempted.[246] As noted earlier, efforts in this direction have not abated as the House of Representatives recently passed a FAA reauthoriza-

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[240] *See* FlyersRights.org, Response Letter to the FAA Decision on Court Remand of July 3, 2018 The Case of the Incredible Shrinking Airline Seat, FAA Docket No. 2015-4011, at 5 (Aug. 21, 2018), https://www.regulations.gov/document?D=FAA-2015-4011-0182.

[241] Cass R. Sunstein & Adrian Vermeule, *The Law of "Not Now,"* 103 GEO. L. J. 157, 170 (2014).

[242] 49 U.S.C. § 41109(2)(B) (2018).

[243] *Id.*

[244] Record of Meeting, Ninth Meeting of the Advisory Committee on Aviation Consumer Protection, 3 (Sept. 1, 2015), *available at* https://www.transportation.gov/sites/dot.gov/files/docs/resources/individuals/aviation-consumer-protection/285496/acacp-record-9th-meeting.pdf; U.S. DEP'T OF TRANSP., ADVISORY COMMITTEE FOR AVIATION CONSUMER PROTECTION (Sept. 5, 2018), https://www.transportation.gov/airconsumer/ACACP.

[245] Sunstein & Vermeule, *supra* note 241, at 170.

[246] H.R. 1467, 115th Cong. §§ 1-2 (2017). *See also* S. 1405, 115th Cong. § 3116 (2017). *See* Press Release, Reps. Cohen and Kinzinger, Senators Blumenthal, Schumer, Markey, Menendez and Feinstein Introduce Bipartisan, Bicameral SEAT Act (Mar. 9, 2017) (https://perma.cc/KL7J-GE62).

tion bill that contained SEAT Act language requiring the FAA to study and set minimum seat dimensions on commercial aircrafts for purposes of health and safety within one year.[247] Support in the Senate for including SEAT language in the bill also appears to be growing.[248]

Additionally, in March 2018, Congressman Peter DeFazio, the Ranking Member of the House of Representatives Committee on Transportation and Infrastructure, and Congressman Rick Larsen, Ranking Member of the Subcommittee on Aviation, requested that the Inspector General (IG) for the DOT examine the FAA's evacuation standards and whether passengers can safely evacuate aircraft in emergencies within the required 90 seconds.[249] In response, the DOT IG released an audit announcement on June 18, 2018 stating that stakeholders had raised concerns about the validity of the "assumptions that drive FAA evacuation standards," given that the assumptions have not been updated since 1990.[250]

In its audit, the DOT IG would specifically look at the adequacy of existing safety standards with regard to the increase in passenger sizes, decreased sizes of seats, and increased passenger reliance on carry-on luggage.[251] The objective of the audit is to assess the FAA's development of aircraft emergency standards "including how changes in passenger behavior, passenger demographics, and seating capacity" affect the standards. The audit would also analyze the process for determining whether aircraft meet evacuation standards.[252] Thus, although the DOT may not be able to engage in specific rulemaking on this issue as the law currently stands, should the resulting DOT IG investigation indicate that changes to the regulatory scheme are needed, any resulting recommendations will likely be very influential on both the FAA and Congress in enacting changes.[253]

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[247] *See* H.R. 4, 115th Cong. § 541, *supra* note 15, and accompanying text. *See also*, Kelly Yamanouchi, *Federal Bill Would Regulate US Airline Seat Size*, ATLANTA J.-CONST. (May 8, 2018), https://www.ajc.com/business/airline-seat-size-would-regulated-bill-passed-house/BDAdTxsx6T2WuQx8DzVxGP/.

[248] *See* Kevin Freking, *Congress takes aim at shrinking seats, legroom on airplanes*, CHI. TRIB. (Sept. 24, 2018, 7:50 AM), http://www.chicagotribune.com/business/ct-biz-congress-airplane-legroom-bill-20180924-story.html.

[249] *See* Mallory Shelbourne, *Transportation Department Watchdog to Examine Airplane Cabin Evacuation Standards*, THE HILL (June 19, 2018, 4:23 PM), https://thehill.com/policy/transportation/aviation/393089-transportation-department-inspector-general-announces-audit-of.

[250] OFFICE OF INSPECTOR GEN., DEP'T OF TRANSP., PROJECT NO. 18A3006A000, AUDIT ANNOUNCEMENT-FAA'S OVERSIGHT OF AIRCRAFT EVACUATION PROCEDURES (June 18, 2018), *available at* https://www.oig.dot.gov/sites/default/files/Audit%20Annoucement%20-%20Aircraft%20Evacuation%5E06.18.2018.pdf.

[251] *Id.* at 1.

[252] *Id.* at 2.

[253] *Id.*

C. *Advisory Group Participation*

Another possible response would be to establish an effective procedural mechanism, such as an airline appointed advisory group or an independent advisory group, that would require an ongoing review process based on updated safety data, passenger size increases, and market demand. An advisory group is not a new idea; for example, an Advisory Committee for Aviation Consumer Protection (Advisory Committee) has existed since 2012.[254] The purpose of the Advisory Committee is to advise the DOT Secretary on activities "relating to airline customer service improvements."[255] The Advisory Committee has discussed the matter of seat densification in the past.[256] During the most recent 2015 meeting, many of the issues associated with seat densification identified in this article were discussed; including decreasing legroom, increasing incidents of air rage as a result of a reduction of passengers' personal space, and issues surrounding seat recline.[257] Nonetheless and rather tellingly, while the 2015 meeting was several hours in length, the summary minutes of the meeting were less than five pages, with the issue of seat density—which dominated the meeting—accounting for less than half of a page.[258] The Advisory Committee has not met again since 2015.[259] Clearly, the current advisory group approach has not resulted in significant action on this issue. For such a group to be effective in responding to the issues discussed in this article, it needs to be a stakeholder group with the support of the airline industry. That does not appear to have happened to date.

D. *Do Nothing*

While there are compelling arguments for the government to act with respect to the seat pitch issue, there are also strong reasons why the government may choose to stay silent. The Airline Deregulation Act of 1978 was enacted with the purpose of ensuring that the marketplace would serve as the key factor in determining the type of aircraft and seating configurations that would be offered on any routes operated by the airlines. Absent some type of safety issue, imposing limits in this regard could potentially result in changes that could have adverse consequences on the airline industry and some of its passengers. In addition, given that the industry has only recently begun to enjoy a substantial period of financial stability, it may be

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[254] *See* U.S. DEP'T OF TRANSP., ADVISORY COMMITTEE FOR AVIATION CONSUMER PROTECTION, *supra* note 238.

[255] *Id.*

[256] Media Center, *supra* note 198, at 1:12.

[257] *See id.* at 26:35; *id.* at 30:30; *id.* at 1:12.

[258] Record of Meeting, *supra* note 244.

[259] The ninth meeting of the group was the last. *See id.*

worthwhile for government policymakers to conduct a serious analysis to determine whether the industry and its passengers would benefit from such changes.

The airline industry has been adding seats to many of its aircraft. Many carriers have segmented the economy cabin by allowing passengers to obtain a seat with more space if they are willing to pay an additional fee or higher fare. The airline industry asserts it is better able to defend its seat densification strategy, claiming that passengers who want more space can certainly pay for it. If the government were to impose some regulation to ensure a certain seat pitch for comfort, some of those passengers who desired to pay for that enhanced economy cabin experience may not be able to do so anymore.[260]

IV. RATIONAL OUTCOMES

Regardless of potential responses to the airline seat densification issue, the intensity of the dispute between airline stakeholders demonstrates that the issue warrants a closer examination.[261] It is a basic business axiom that thoughtful solutions to business problems may be found through careful planning and collaboration with stakeholders.[262] It is equally true that solutions may be imposed on a business or industry after accidents or incidents. The lead up and impact of the tarmac delay rule imposed on the airline industry in 2009 is instructive.

A. *The Tarmac Delay Problem*

Prior to 2009, airline passengers were too often stuck in an aircraft on the airport tarmac prior to or after flights.[263] Passenger anger over these incidents grew.[264] These incidents had been occurring for a number of years, including one weather related incident in Detroit in 1999 that left thousands of passengers stranded on airplanes without food, water, or useable toi-

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[260] Karen Walker, *Airline Seat Size, Ancillaries and Washing Machines,* ATW ONLINE: EDITOR'S BLOG (July 19, 2018), http://atwonline.com/blog/airline-seat-size-ancillaries-and-washing-machines.

[261] *See supra* Part II.

[262] See discussion *infra* Section IV.B.

[263] *See* Everett Potter, *America's Worst Tarmac Delays*, TRAVEL & LEISURE: AIRLINES & AIRPORTS (Nov. 29, 2010), http://www.travelandleisure.com/slideshows/worst-tarmac-delays.

[264] *See* David Armstrong, *Beleaguered Air Passengers Want New Laws / Recent Storm Delays Leave Angry Customers Seeking Bill of Rights*, S.F. CHRON. (Feb. 16, 2007, 4:00 AM), https://www.sfgate.com/news/article/Beleaguered-air-passengers-want-new-laws-Recent-2648847.php.

lets[265] Another, at New York's Kennedy International Airport in 2007, involved more than 1,000 passengers who were confined on several JetBlue aircraft during a snowstorm.[266] Calls for legislation after that incident were opposed by industry groups and others.[267] In several later incidents in 2008 and 2009, numerous other flights suffered delays, some between six and twelve hours.[268]

The tarmac delay issue received considerable negative attention, yet airline industry attempts to address the issue with air travel stakeholders seemed lacking.[269] During a September 2009 congressional hearing on potential legislation mandating a time limit for tarmac delays, no airline industry or trade group representatives attended.[270] Yet, the move towards an imposed solution advanced, and while legislation on the matter did not materialize, agency rulemaking did.[271] In December 2009, DOT instituted passenger protection rules including the establishment of a three hour maximum limit for passenger delay on a tarmac before being allowed to deplane from domestic flights.[272] The rules were later amended to place a four-hour tarmac delay limit on international flights.[273] During the rulemaking process itself, airline industry representatives got involved, opposing the tarmac delay rule, stating that it would do more harm than good and increase flight cancellations.[274]

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[265] *See* Tom Zeller Jr., *Held Hostage on the Tarmac: Time for a Passenger Bill of Rights*, N.Y. TIMES (Feb. 16, 2007), https://thelede.blogs.nytimes.com/2007/02/16/held-hostage-on-the-tarmac-time-for-a-passenger-bill-of-rights/.

[266] *Id.*

[267] *Id.*

[268] Potter, *supra* note 263. It was a similar delay incident in 2006 that spurred the creation of the airline passenger advocacy group, FlyersRights.org, the plaintiff in the recent Flyers Rights case. *See supra* note 147 and accompanying discussion.

[269] *See* Bill McGee, *Tarmac Delay Rules: Consumer Success or Industry Burden*, USA TODAY (Feb. 4, 2015), https://www.usatoday.com/story/travel/columnist/mcgee/2015/02/04/tarmac-delay-fines/22801359/.

[270] *Id.*

[271] *See* Enhancing Airline Passenger Protections, 74 Fed. Reg. 68,983 (Dec. 30, 2009) (to be codified at 14 C.F.R. pt. 399).

[272] 74 Fed. Reg. at 68,987. The originally proposed rule did not include the 3-hour time limit. Enhancing Airline Passenger Protections, 73 Fed. Reg. 74,586, 74,589 (Dec. 8, 2008). The time limit was later included in the final rule. *See* 74 Fed. Reg. *at* 68,987; *see also*, U.S. DEP'T OF TRANSP., NEW DOT CONSUMER RULE LIMITS AIRLINE TARMAC DELAYS, PROVIDE OTHER PASSENGER PROTECTIONS, (Feb. 5, 2018), https://www.transportation.gov/briefing-room/new-dot-consumer-rule-limits-airline-tarmac-delays-provides-other-passenger.

[273] Contingency Plans for Lengthy Tarmac Delays, 14 C.F.R. § 259 (2017).

[274] *See, e.g.*, Enhancing Airline Passenger Protections, 74 Fed. Reg. at 68,986.

After passage of the rule, tarmac delays decreased dramatically.[275] An independent study in 2014 showed that the rule also decreased taxi out times of greater than one hour during all post-rule summer periods; however, it also increased the prevalence of flight cancellations during the 2010-2012 summer periods.[276] What one did not see, however, were news headlines citing airline customer outrage at these resulting flight delays, at least not nearly to the extent seen leading up to the imposition of the tarmac delay rule.[277] Thus, while the evidence is clear that the tarmac delay rule has increased flight delays for some, the tradeoff in increased passenger comfort from not having to endure long waits sitting on airplanes appears to be worth it to passengers. While the tarmac delay rule may have increased some wait times for passengers in terminals, there is little evidence that passengers want the tarmac delay rule eliminated or that passengers on the whole are willing to let a minority of passengers suffer during long tarmac delays in order to decrease the overall chances of flight delays. In sum, regardless of whether one views the tarmac rule as a passenger comfort success or a cost increasing failure, the lesson is that there is a better way to tackle such issues. Unfortunately, as with the lead-up to the tarmac delay rule, we are seeing this pattern repeat itself with seat densification.[278] A new approach is needed.

B. *Moving from an Adversarial Approach to a Stakeholder Model*

As the experience with the tarmac delay rule shows, imposed solutions can be significantly more onerous than those that may have worked better had the airlines addressed the tarmac issue earlier.[279] Discussions of the

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[275] In the first six months of the rule being in effect, tarmac delays of three or more hours decreased by 97%, from 546 to 12. *See* U.S. DEP'T OF TRANSP., NO TARMAC DELAYS LONGER THAN THREE HOURS IN OCTOBER, https://www.transportation.gov/briefing-room/no-tarmac-delays-longer-three-hours-october (last updated Feb. 11, 2015).

[276] *See* ECONOMETRICA, INC., INDEPENDENT REVIEW AND ANALYSIS OF THE IMPACT OF THE THREE-HOUR TARMAC DELAY RULE 23, 27 (Jan. 9, 2014) https://cms.dot.gov/sites/dot.gov/files/docs/Econometrica_Tarmac_Delay_Report_1_9_2014.pdf

[277] *See, e.g.*, McGee, *supra* note 269; Robert Channick, *Rule to Prevent Tarmac Delays Backfires for Airline Passengers: Study*, CHI. TRIB. (Jan 5. 2016), http://www.chicagotribune.com/business/ct-tarmac-delays-0105-biz-20160104-story.html.

[278] As can be seen from the previous discussion, the pattern is airline passengers and passenger rights groups complain seeking changes, the airline industry resists imposed changes, federal agencies are asked to create rules, legislation is called for, legal action is considered. *See supra* Part II(B). If those seeking change are successful, a solution may be imposed on the airline industry.

[279] As opposed to simply seeking to avoid a regulatory response, it can benefit businesses to work with the government in drafting "sensible" regulation. *See, e.g.*, James O'Toole, *The Hidden Business Benefits of Regulation,* STRATEGY AND BUS. BLOGS (Apr. 24,

seat densification issue should consider more than a pure market capitalist methodology that emphasizes profit above all else.[280] This profit motive is strong and, in the ongoing debate about the purpose of business, the continuing pull toward a strategic management approach that focuses on increasing shareholder value is ever-present.[281] This profit-focused approach to seat densification is the direction the airline industry is currently taking with a view of remaining competitive.[282] From the airline industry's perspective, this profit approach makes it difficult to argue that seat densification has been anything other than a good financial benefit to the airlines' bottom line.[283] Nonetheless, potential safety issues as well as the sensitivity and potential explosiveness of the issue of seat densification warrants a look beyond shareholder returns to one of a stakeholder approach.

C. *Airline Stakeholders*

In analyzing the seat densification controversy, we think a stakeholder value approach must be considered. In short, the stakeholder theory of management posits the view that a business is an institution that serves human ends and benefits people.[284] It is considered a fundamental principle by many in the international business community.[285] While the list of air-

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2014), https://www.strategy-business.com/blog/The-Hidden-Business-Benefits-of-Regulation?gko=61916; In this case, it is reasonable to predict that airline industry support for some type of tarmac rule may have resulted in rules or practices that decreased tarmac delays without as large an impact on overall flight delays.

[280] The four key aspects of the market capitalism model are 1) limited government regulation; 2) markets discipline business to promote social welfare; 3) corporate performance should be measured by profits; and 4) the ethical duty of managers is to maximize the interests of owners and investors. *See* JOHN F. STEINER & GEORGE A. STEINER, BUSINESS, GOVERNMENT, AND SOCIETY: A MANAGERIAL PERSPECTIVE 11, (13th ed. 2012).

[281] *See id.* at 11; David Newman, *Airlines and Stakeholders: A First Class Relationship*, ETHICALSYSTEMS.ORG (May 15, 2017), https://www.ethicalsystems.org/content/airlines-and-stakeholders-first-class-relationship; ALFRED RAPPAPORT, CREATING SHAREHOLDER VALUE: A GUIDE FOR MANAGERS AND INVESTORS 2-3 (2d ed. 1998) (pronouncing that maximizing shareholder value is a good idea that has moved to being "self-evident.").

[282] *See Seat Density Impact on Route Economics*, *supra* note 9; Stalnaker, *supra* note 101, at 7 (noting that greater seat density increases available seat miles and reduces unit costs).

[283] *See* Hazel, *supra* note 100, at 20.

[284] Andrew C. Wicks & Jeffrey S. Harrison, *Toward a More Productive Dialogue between Stakeholder Theory and Strategic Management* 251, *in* STAKEHOLDER MGMT. (David M. Wasieleski & James Weber eds., 2017).

[285] For example, the Caux Roundtable for Moral Capitalism cites stakeholder management as it first Principle of Responsible Business. *See* Caux Round Table Principles for Responsible Business, CAUX ROUNDTABLE FOR MORAL CAPITALISM,

line stakeholders can vary, an airline's stakeholders typically include its employees, passengers, shareholders, community groups, unions, and suppliers.[286] Additionally, given the regulated nature of the airline operating environment, the airline stakeholders list often expands to include a "public stakeholders group," which includes the governments and communities that regulate and provide infrastructure to the business.[287] As previously noted, this includes the FAA, DOT, the NTSB, and legislators.[288]

Although a thorough discussion of the stakeholder management model is beyond the scope of this article, it has promise with regard to this issue because seat densification is of such high interest to airline stakeholders beyond investors and shareholders.[289] As has been discussed, the seat densification question involves far more than shareholder return and profitability; it is also about safety,[290] health and comfort,[291] customer satisfaction,[292] airline employee working conditions,[293] and the availability of airline services to all segments of the American public without social stigma, especially to those of larger size.[294] All airline stakeholders should be brought into the discussion. Using a stakeholder's approach to the problem also allows an airline to distinguish itself from its competition and avoid the continued trend of air travel becoming a commodity, a result the airlines are trying to avoid.[295]

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http://www.cauxroundtable.org/principles/ (last visited May 23, 2019).

[286] *See e.g.*, DELTA AIRLINES, CORPORATE RESPONSIBILITY REPORT 78-79 (2017).

[287] Max B.E. Clarkson, *A Stakeholder Framework for Analyzing and Evaluating Corporate Social Performance*, 20 ACAD. OF MGMT. REV. 92, 106 (1995).

[288] *See supra* Part II(C).

[289] *See supra* Part III.

[290] *See supra* Part II(E).

[291] *See supra* Part II(G).

[292] *See supra* Part II(B).

[293] *See, e.g.* Media Center, *supra* note 198 at 31:27 (noting the challenges of treating passenger emergencies as a result of lack of potential space).

[294] *See supra* Part II(D)(5).

[295] The commodity trap is where products, even complex ones, fail to be differentiated except for price. All industries risk this, including the airlines. *See* Paul S. Dempsey, *An Introduction to Airline Economics,* MCGILL U. INST. OF AIR & SPACE LAW 9 (2017), https://www.mcgill.ca/iasl/files/iasl/airline_economics_psd.pdf ("The commoditization of air travel has left airlines with little opportunities for product differentiation other than price; service has deteriorated industry-wide.") (last visited Feb. 21, 2019); Brian Sumers, *Routehappy CEO: Airlines, Like Coffee, Are Not a Commodity Business*, SKIFT (Sept. 27, 2016, 2:00 PM), https://skift.com/2016/09/27/routehappy-ceo-airlines-like-coffee-are-not-a-commodity-business/. *See also,* ROLAND BERGER, ESCAPING THE COMMODITY TRAP: HOW TO REGAIN A COMPETITIVE EDGE IN COMMODITY MARKETS 3 (April 2014); John Quelch, *How to Avoid the Commodity Trap,* HARV. BUS. REV.: CONSUMERS (Dec. 13, 2007), https://hbr.org/2007/12/how-to-avoid-the-commodity-tra.

Moreover, a profits-approach to the issue is not antithetical to a stakeholder one. While it may be difficult to precisely value using a stakeholder approach, there is evidence that increased customer satisfaction is positively associated with shareholder value.[296] One study demonstrated that firms that raised customer satisfaction created more shareholder wealth.[297] Moreover, in that same study, airlines were one of the industries that had the greatest positive correlation.[298] Thus, while customer satisfaction may be elusive in today's passenger flying environment, honest, transparent efforts by individual airlines and the airline industry to address the issue of seat densification are desperately needed. Engaged airline consideration of seat densification from a customer satisfaction perspective presents a good opportunity to change an ongoing pattern of tribulation between airline stakeholders.

D. *Moving Away from Emotional Responses to a Defensible Record*

In the end, while a market-based, shareholder value-focused approach to this issue may be the appropriate outcome, the airline industry and those advocating for such an approach should at least move to create a defensible record demonstrating a genuine and transparent study of the issue. As one commentator on the seat densification issue notes, "it is always difficult to get people to recognize the potential for disaster if the disaster has yet to happenFalseThe danger now is complacency."[299] Transparent, current, and relevant safety evacuation standards that demonstrate whether seat densification has negatively affected safety, or has the potential to do so, should go a long way towards increasing consumer confidence in the midst of seat densification. And it is in the best interests of the airline industry to pay attention. Should a serious airline mishap occur, it would create a much more

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[296] *See e.g.*, Eugene W. Anderson et al., *Customer Satisfaction and Shareholder Value*, 68 J. OF MARKETING 172, 181 (2004).

[297] *Id.*

[298] *Id.* at 182. The authors' research showed a positive average correlation among the industries studied of 1.73. For a $10B firm, a 1% improvement in customer satisfaction translated into an increase in the firm's value of $275M. *Id.* at 181. The correlation for airlines was stronger than average at approximately 2.4. *See id.* at 182.

[299] *See* Irving, *supra* note 192. In addition to safety concerns, legal action against airlines resulting from densification is also increasing. *See, e.g.,* Lauren McMah, *Man Sues British Airways After Being Made To Sit Next To Overweight Passenger*, NEWS.COM.AU (Nov. 19, 2018), https://www.news.com.au/travel/travel-updates/man-sues-british-airways-after-being-made-to-sit-next-to-overweight-passenger/news-story/db1e95abe0c3816cc4da655dcabbac98; Elie Mystal, *Man Sues American Airlines Because His Aisle Was Full Of Fat People*, ABOVE THE L. (May 9, 2017, 6:33 PM), https://abovethelaw.com/2017/05/man-sues-american-airlines-because-his-aisle-was-full-of-fat-people/.

defensible record should the need arise.

V. CONCLUSION

Between June 2017 and May 2018, the U.S. airline industry transported approximately 756 million passengers on domestic flights.[300] The average load factor (enplaned passengers divided by total available seats) for those flights was 84.5%.[301] These data points suggest that many, if not most, airline passengers are willing to fly on airplanes with more seats. Airline passengers may not necessarily like the increased seat density on the aircraft they are traveling on, but it does not appear the industry is ready to make any substantial changes at this time.[302]

The administrative process that Flyers Rights used to request that the FAA issue a notice of proposed rulemaking to limit seat size changes in the industry was not a failure[303] It started a process by which a federal court of appeals expressed concern about the FAA's failure to take into account the changing average passenger size, thereby questioning whether the safety process for conducting passenger evacuations from aircraft needed to be reconsidered.[304] The process also resulted in the court compelling the FAA, and the industry it regulates, to be more forthcoming with the information the agency used to decline the petition for rulemaking.[305]

However, that may not be enough to prevent further government intervention into the issue of seat densification in the current environment.[306] It would benefit the industry to not only avoid mechanical responses resisting outside interference on the seat densification issue but also to seriously re-

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[300] BUREAU OF TRANSP. STATISTICS, JUNE 2018 U.S. AIRLINE TRAFFIC DATA (Sept. 14, 2018), https://www.bts.gov/newsroom/june-2018-us-airline-traffic-data (follow "download excel tables" hyperlink; then view table 2).

[301] *Id.* (follow "download excel tables" hyperlink; then view table 11).

[302] Elaine Glusac, *On New Planes, American Airlines Will Add Seats and Reduce Space*, N.Y. TIMES (May 3, 2017), https://www.nytimes.com/2017/05/03/travel/new-planes-american-airlines-will-add-seats-reduce-space.html.

[303] *See* Flyers Rights Educ. Fund, Inc., v. Fed. Aviation Admin., 864 F.3d 738, 740 (D.C. Cir. 2017) (noting Flyers Rights' petition and the FAA's subsequent denial in granting the petition of judicial review); Aram A. Gavoor & Daniel Miktus, *Public Participation in Nonlegislative Rulemaking*, 61 VILL. L. REV. 759, 792 (2017) (explaining that denial of rulemaking requests may be reviewed by the courts)).

[304] *Flyers Rights*, 864 F.3d at 745-46.

[305] *See id.* at 749; WWHT, Inc. v. FCC, 656 F.2d 807, 814 (D.C. Cir. 1981) (explaining when a "reviewing court may require an agency to institute rulemaking proceedings after the agency has denied a petition for rulemaking.").

[306] *See e.g.*, FAA Reauthorization Act of 2018, Pub. L. No. 115-254, 100 Stat. 1080 (2018). The Act orders the FAA to set minimum dimensions for passenger seats necessary for safety within one year of enactment. Sec. 577(a).

consider proactive approaches to the problem that involve stakeholders in an engaged and transparent way. The airline industry can never please everyone and be profitable, but an honest, open examination of this sensitive issue could go a long way to improving passengers' views of the industry.

Overall, the U.S. airline industry has created a business environment that allows it to be profitable and provide value to its shareholders, employees, and customers. As the industry continues to evolve, it is important for us to ask whether airline initiatives, such as seat densification, are living up to the promise that airline deregulation can be beneficial both to the airline industry and all of the customers it serves. Given that the industry is constantly changing, it will be interesting to see how this issue evolves during the next five years.