EXTENDING THE PAYROLL SUPPORT PROGRAM FOR AIRLINE WORKERS WILL SAVE OVER ONE HUNDRED THOUSAND JOBS AND SUBSTANTIALLY ENHANCE THE AIRLINE INDUSTRY'S ABILITY TO CONTINUE TO RESTORE AIRLINE SERVICE AND ACCELERATE THE U.S. ECONOMIC RECOVERY

A Six-Month Extension of the PSP Will Cement the Success of the Program and Will be Fully Funded, Yielding an Estimated Incremental $33 to $54 Billion in Payroll- and Air Service-Related Benefits to the U.S. Treasury, State Treasuries and Broader U.S. Economy

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1. Executive Summary

Prior to passage of the Coronavirus Aid, Relief, and Economic Recovery ("CARES") Act, the novel coronavirus had in a matter of weeks decimated air travel demand to unprecedented lows, and there was enormous uncertainty as to when demand would start to return. As a result, U.S. airlines were faced with the prospect of dramatically cutting service and furloughing the overwhelming majority of their workforces. But when Congress passed and President Trump signed the CARES Act into law on March, 27, 2020, this "single-biggest economic relief package in American history"[2] provided a better path forward by reserving $25 billion in pandemic relief funds under the Payroll Support Program ("PSP") for U.S. passenger airline employees.[3]

In recognition of the industry's dire straits, there were three chief justifications for making this relief package available to airline workers. *First*, lawmakers urgently sought to support American workers from the economic fallout of the emerging pandemic by preserving airline industry jobs and, in fact, conditioned the PSP funding on carriers committing not to terminate or involuntarily furlough their employees or reduce their pay rates and benefits until September 30, 2020.[4] *Second*, lawmakers sought to preserve the industry's essential role in the national economy by enabling the availability of extensive air service and thereby promoting commerce and trade, connecting families and friends, transporting armed services personnel, and serving to underpin much of the nation's tourism, leisure, and hospitality industry—the largest component of the U.S. economy.[5] *Third and*

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[2] *See* Remarks by President Trump at Signing of H.R. 748, The CARES Act, https://www.whitehouse.gov/briefings-statements/remarks-president-trump-signing-h-r-748-cares-act/.

[3] CARES Act, Section 4112 (Pandemic Relief for Aviation Workers).

[4] *See* CARES Act, Section 4114 (Required Assurances); *see also below* footnote 52.

[5] *See* https://www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-13/ statement of President Trump on March 27th, 2020 ("…I also want to preserve airlines, because that's preserving lots of other jobs. That's preserving the travel and leisure industry, which is perhaps the largest industry in our country, if you add it all up. You add up all the hotels and all of the traveling and all the planes and everything else — probably, by far, the largest industry in our country."). Secretary Mnuchin has also noted that the PSP was "critical to supporting American workers and preserving our airline industry, *which is a vital part of the U.S. economy*," *see* "Treasury Finalizes Agreements with Major Airlines, Disburses Initial Payroll Support Program Payments," *U.S. Treasury Department*, April 20, 2020, https://home.treasury.gov/news/press-releases/treasury-finalizes-agreements-with-major-airlines-disburses-initial-payroll-support-program-payments (emphasis added), and would ""support American workers and *help preserve the strategic importance of the airline industry* while allowing for appropriate compensation to the taxpayers," *see* "Statement by Secretary Mnuchin on the Payroll Support Program," *U.S. Treasury Department*, April 14, 2020, https://home.treasury.gov/news/press-releases/sm977 (emphasis added).

finally, lawmakers understood that a healthy and vibrant airline industry would facilitate, lead the way to, and accelerate a broader economic recovery in the wake of the virus.[6]

Now, four months into the PSP, it is clear that the program has worked exactly as intended and has been an unambiguous success in achieving the first two goals. And at its core, the PSP has started a "virtuous cycle" that would pave the way to faster and more robust economic recovery. In particular, PSP funding has kept airline employees on the payroll at a time when demand conditions would otherwise have resulted in hundreds of thousands of lost jobs. This stands in stark contrast to other sectors of the travel and hospitality industry in the U.S. economy, which in the absence of similar federal assistance have been forced to furlough millions of workers. The PSP has also avoided the circumstances of many foreign carriers who, short of liquidation and bankruptcy, have cut significant portions of their workforce and service.

In addition, the PSP resulted in a significant increase in air service by U.S. carriers, including more domestic service than they otherwise would have provided in the midst of the pandemic (and comparatively more than domestic service provided by carriers in other parts of the world). This is because the PSP effectively made labor a "fixed" cost, which dramatically reduced U.S. carriers' marginal cost of operating a flight and, in turn, significantly lowered their cash "break-even" load factor. For example, on June 4, American Airlines announced that it had committed to operate 55% of its previously planned capacity for its July 2020 schedule at a time when industrywide demand for airline services was only around 15% of last year's levels.[7] And in aggregate, U.S. airlines have

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[6] For example, Senator Ted Cruz and Representative Sam Graves wrote shortly after the CARES Act passed that:

> "The aviation industry helps power America's economy, and millions of travelers depend on airlines to conduct business across the United States and the globe. Simply put, when our planes can't fly, the American economy is grounded too. . . . [The CARES Act] passed with overwhelming bipartisan support, and there was widespread agreement that immediate, much-needed help for the aviation industry (as part of our overall efforts to help every sector, small businesses and families hurt by the crisis) would also have strong positive ripple effects throughout the country. Soon, when the virus has been constrained and curtailed, there will be an American recovery, and a healthy and vibrant domestic airline industry will help lead it."

See "Sen. Ted Cruz & Rep. Same Graves: Coronavirus Recovery – Helping Airlines Take Wing Will Boost Entire Economy," *Fox News*, April 7, 2020, https://www.foxnews.com/opinion/coronavirus-airlines-recovery-boost-us-economy-ted-cruz-sam-graves.

[7] *See* "Bring on Summer: American Airlines Increases Domestic Flying for Summer Travel Season, Begins Reopening Admirals Clubs and Increases Flexibility," *American Airlines Press Release*, June 4, 2020, http://news.aa.com/news/news-details/2020/Bring-on-Summer-American-Airlines-Increases-Domestic-Flying-for-Summer-Travel-Season-Begins-Reopening-Admirals-Clubs-and-Increases-Flexibility-OPS-DIS-06/default.aspx.

continued to offer nearly 20 percentage points more domestic flights relative to early January than carriers in the rest of the Americas, Western Europe, and Australia. U.S. airlines' capacity expansion has, in turn, provided a huge economic boost to airlines' supply chains and has helped to jumpstart the U.S. economy by stimulating more travel and additional spending than would have otherwise occurred, allowing consumers and families to stay connected to loved ones through these challenging times and escape safely on vacations this summer.

As projected by the initial Compass Lexecon CARES Act white paper,[8] by keeping U.S. airline employees on payroll through September 30, the PSP has provided billions in tax revenues, avoided billions in costs to the U.S. Treasury and state treasuries of those employees participating in government assistance programs, generated billions more in additional consumer spending, and laid the groundwork for tens of billions of dollars more in economic activity over the next two years as the U.S. economy reaps the dividends from the PSP's success in incentivizing airlines to operate far more capacity during the pandemic than they otherwise would have. What is more, the financial stability the PSP afforded the U.S. airline industry has allowed individual carriers the time to pursue aggressive self-help measures to increase liquidity and avoid bankruptcy, including raising billions of dollars in additional financing from capital markets.

However, the insidious persistence of the virus has rendered the achievement of the third CARES Act objective (*i.e.*, positioning airlines to promote and lead the economic recovery) elusive—for now. Indeed, the evolution of the pandemic has created the real possibility of unwinding any progress made. When the Act passed in March, lawmakers anticipated that six months of PSP funding would provide airline employees with sufficient financial assistance to bridge the worst of the pandemic. In hindsight, their anticipation was grounded in too much optimism. By most measures, the state of the pandemic is worse today than it was in late March: infections are sharply rising, averaging more than four times as many cases per day than in late March, and over 150,000 Americans have died. As a result, consumer confidence in flying is far from restored, most travelers

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[8] *See* "U.S. Passenger Airlines Are Critical to the U.S. Economy's Ability to Rebound From the Economic Turmoil Caused By the COVID-19 Pandemic," Eric Amel, Darin Lee and Ethan Singer ("Compass Lexecon CARES Act white paper"), available at https://www.compasslexecon.com/wp-content/uploads/2020/07/Economic-Benefits-of-Employee-Payroll-Grants-Final.pdf.

and businesses will not resume their traditional travel patterns by September 30 (*i.e.*, the end of PSP funding)—many will simply wait until a vaccine is available (optimistically in 2021)[9]—and demand for air travel is expected to decline over the second half of 2020 and into the first quarter of 2021. This is true even in locations that had previously started to lead domestic travel recovery in April/May, such as Texas and the rest of the Sunbelt.

Consequently, even with the aggressive self-help measures that the airlines have pursued in the interim, the industry is and will remain substantially overstaffed on October 1 and until demand meaningfully rebounds. For instance, both American Airlines and United project they will be significantly overstaffed come October 1 and have recently issued WARN Act notices to approximately 20% and 30% of their workforces respectively (over 60,000 employees combined), Spirit has indicated that 20% to 30% of its workers may be furloughed, Delta has planned to furlough 2,500 pilots if they do not agree to pay cuts, and other carriers are expected to follow suit. Accordingly, without an extension of the PSP, over 100,000 airline employees could be furloughed on or shortly after September 30. In addition to large scale job loss, mass furloughs in reverse seniority order (by contract) will put upward unit cost pressure on airlines, increasing the already-difficult task of restoring sustainable air service. Simply put, airlines will soon be forced to make capacity decisions that incorporate the cost of labor that will result in less air service, and that, in turn, will slow the recovery of the broader U.S. economy.

This can be avoided. By extending the PSP for six months until March 31, 2021—by which time a vaccine is likely to be available—U.S. airlines can eliminate the need to furlough over one hundred thousand employees and would be incented to increase service beyond what they otherwise would offer, enabling airlines to continue to maintain more service to more destinations. In turn, airlines would be poised to facilitate a swift economic recovery in meeting increased demand once the virus wanes. Moreover, as with the current PSP, the PSP extension will be "fully funded" with

[9] For example, United's CEO Scott Kirby has said that "I think we're going to be a gradual trajectory from today's level of demand up to 50%, where we'll plateau. And then I think there'll be a rapid recovery once we get to kind of a widespread vaccine." *See* United Airlines Holdings, Inc. Q2 2020 Earnings Conference Call Transcript, July 22, 2020. Southwest's CEO Gary Kelly has likewise conditioned full recovery on a widespread vaccine or effective treatment. *See* Southwest Airlines Co. Q2 2020 Investor Relations News Release ("We expect air travel demand to remain depressed until a vaccine or therapeutics are available to combat the infection and spread of COVID-19.").

total economy-wide benefits that significantly outweigh the cost of the extended payroll support and range between $34 billion and $53 billion, based on varying assumptions regarding the industry's scope of furloughs absent the PSP extension and the restored capacity that would derive from the extension.[10] Table 1 below summarizes four industry-wide scenarios where an extension of the PSP would avoid furloughs amounting to 15% or 30% of workforces across the industry and would restore between 10% and 15% of capacity industrywide, where the benefits generated under these scenarios are explained in depth in Sections 4 and 5 below. Finally, an extension of the PSP would allow the U.S. Department of Transportation ("DOT") to extend the service commitments for another six months resulting in many small communities maintaining air service.

Although the initial PSP funds have already generated substantial economic benefits, far exceeding the cost of the initial support (as discussed in more detail below), the airline industry continues to face significant challenges due to the pandemic continuing unabated and the virus extracting a higher cost on the industry and the country than imagined last Spring. An extension of the PSP will avoid the unwinding of that progress, allow over one hundred thousand airline workers to keep their jobs, incentivize the continued restoration of air service, and facilitate a recovery from the additional and unanticipated costs of the virus.

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[10] These estimates are conservative because, as the Compass Lexecon CARES Act white paper demonstrated, by enabling the recovery of the U.S. airline industry the PSP funds will enable the U.S. economy to reap the benefits of higher secondary GDP spillover effects valued at increased GDP of $46 billion over two years.

Figure 1: Summary of Quantified Benefits to U.S. Treasury, State Treasuries and Broader U.S. Economy from a PSP Extension for U.S. Passenger Airline Employees

Economic Benefit			Total ($ millions) from Avoiding Furloughs			
			U.S. Passenger Airlines (total)			
			Avoid 15% Furloughs, Restore 10% Capacity	Avoid 30% Furloughs, Restore 10% Capacity	Avoid 15% Furloughs, Restore 15% Capacity	Avoid 30% Furloughs, Restore 15% Capacity
Primary Benefits	Taxes and Avoided Costs to Fed/State Treasuries	Additional Federal Income Taxes	**$462**	**$924**	**$462**	**$924**
		Additional State Income Taxes	**$74**	**$148**	**$74**	**$148**
		Additional Local Income Taxes	**$0.9**	**$1.8**	**$0.9**	**$1.8**
		Saved State Unemployment Benefits	**$884**	**$1,768**	**$884**	**$1,768**
		Additional Federal Payroll Taxes	**$465**	**$930**	**$465**	**$930**
		Additional State Unemployment Insurance Taxes	**$15**	**$30**	**$15**	**$30**
	Subtotal Direct Benefits to U.S. and State Treasuries		**$1,901**	**$3,802**	**$1,901**	**$3,802**
	Additional Consumer Spending in U.S. Economy Due to Higher Airline Employee Disposable Income		**$1,848**	**$3,695**	**$1,848**	**$3,695**
	Sub-total Direct Benefits to U.S. and State Treasuries and Additional Consumer Spending		**$3,748**	**$7,497**	**$3,748**	**$7,497**
	Short-Term Capacity Benefits	Additional Supply Chain Benefits*	**$3,340**	**$3,340**	**$5,010**	**$5,010**
		Additional Spending by Domestic Travelers*	**$4,311**	**$4,311**	**$6,466**	**$6,466**
	Sub-total Capacity Benefits Through March 31, 2021		**$7,650**	**$7,650**	**$11,476**	**$11,476**
	Sub-total of Primary Benefits Oct 1-March 31,2021		**$11,399**	**$15,147**	**$15,224**	**$18,972**
	Trailing Effects	Additional Supply Chain Benefits*	**$10,020**	**$10,020**	**$15,030**	**$15,030**
		Additional Spending by Domestic Travelers*	**$12,567**	**$12,567**	**$18,851**	**$18,851**
	Sub-total Trailing Effects (April 1, 2021-March 31, 2023)		**$22,587**	**$22,587**	**$33,881**	**$33,881**
Grand Total			**$33,986**	**$37,734**	**$49,105**	**$52,853**

* Short-Term incremental capacity benefits assume that the PSP extension results in airlines' providing the additional percentage points of capacity in each column (relative to pre-pandemic levels) than they otherwise would from October 2020-March 2021. Trailing Effects of the PSP extension assume the listed percentage points more of airlines' pre-pandemic capacity is restored in the first year following March 31, 2021, followed by half the listed percentage points relative to pre-pandemic capacity in the second year.

The remainder of this white paper is organized into four sections. Section 2 details how the PSP has been successful to date, including avoiding the drastic cuts to service and capacity that U.S. carriers had contemplated to the great benefit of the broader U.S. economy. Section 3 explains the need for a six-month extension of the PSP, centering on the reality that the pandemic is having a longer and more severe impact than originally anticipated. The final two sections quantify the well-documented benefits of a PSP extension for the economy—which is "fully funded" with total economy-wide benefits that significantly outweigh the cost of the extended payroll support—(summarized in Figure 1 above), including the direct payroll-related benefits to the U.S. Treasury and state treasuries (Section 4) and the significant benefits from increased capacity enabled by a PSP extension (Section 5).

2. The CARES Act PSP Has Worked Exactly as Congress Intended

As discussed in detail below, (a) the PSP has allowed airlines to keep their employees on the payroll at a time when demand conditions would otherwise have resulted in hundreds of thousands of furloughs; (b) the PSP created effective incentives for U.S. airlines to offer far more service than they otherwise would by lowering airlines' marginal costs and break-even load factors; (c) by incenting U.S. airlines to offer more service, the PSP stimulated more travel, thereby helping to jumpstart the U.S. economy; and, as a result, (d) the PSP has already provided economic benefits to the U.S. economy of over $24 billion, while paving the way for an additional $70 billion in benefits over the next two years, and (e) the PSP was the essential catalyst that provided U.S. carriers with a basis for stability, enabling them to raise additional funding and engage in other self-help, thereby preventing numerous airline bankruptcies.

a. The PSP Has Kept Airline Employees on the Payroll at a Time When Demand Conditions Would Otherwise Have Resulted in Hundreds of Thousands of Involuntary Furloughs

In 2019, U.S. passenger airlines collectively employed approximately 450,000 people in the United States.[11] By requiring that PSP funds "shall exclusively be used for the continuation of payment of employee wages, salaries, and benefits"[12] and further conditioning the receipt of PSP funds on no

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[11] Compass Lexecon CARES Act white paper, page 12.

[12] CARES Act, Section 4112.

involuntary furloughs until September 30, 2020, Congress guaranteed that airline employees could remain on the payroll through that date. This is in stark contrast to other hard-hit travel and hospitality-related industries which—in the absence of the PSP—have been forced to furlough millions of workers in the face of unprecedented reductions in consumer demand.[13] As Figure 2 illustrates, unlike other sectors of the travel and hospitality industry that have seen their customer numbers plummet due to patrons becoming fearful for health reasons of utilizing their services or that have been shut down for some or all of the pandemic to help stop the spread of the virus, U.S. airlines have not yet involuntarily furloughed any of their employees.

Figure 2: Involuntary Job Losses between March-June for Other Sectors of the Travel and Hospitality Industry

Company Or Industry	Number Of Employees Affected
Hotel Industry	70% of hotel employees have been laid-off or furloughed
Restaurant Industry	8 million restaurant employees (or two-thirds of total employees) have been laid-off or furloughed
Casino/Gaming Industry	About 652,000 casino gaming and resort employees have been impacted
Enterprise	Over 2,000 employees laid-off
Hertz	Declared bankruptcy and laid-off 10,000 employees (or about one-third of total North American employees)
Disney Resorts	About 100,000 employees (or about half of the Disney theme park and resort staff) have been furloughed
Princess Cruises	About 50% of California-based staffed have been laid-off or furloughed
Carnival Cruises	Over 1,300 of Florida-based employees (or about 45% of workforce) laid-off or furloughed
Amtrak	20% of employees furloughed, and another round of staffing reductions/ furloughs announced

Sources: "COVID-19 Devastating Hotel Industry," *American Hotel & Lodging Association*, updated April 22, 2020, https://www.ahla.com/sites/default/files/FACT%20SHEET_COVID19%20Impact%20on%20Hotel%20Industry_4.22.20_updated.pdf. "Restaurant sales and job losses are widespread across segments," *National Restaurant Association*, April 20, 2020, https://www.restaurant.org/articles/news/restaurant-sales-and-job-losses-are-widespread. "COVID-19's Impact on U.S. Casino Industry Workers and Local Communities," *American Gaming Association*, updated April 13, 2020, https://www.americangaming.org/wp-content/uploads/2020/03/AGA_CV19_Factsheet-FINAL.pdf. "Enterprise rental company lays off more than 2,000 employees," *The Associated Press*, April 29, 2020, https://apnews.com/84b5b1c4b904e6a6fae19fb5731c6181. "U.S. car rental company Hertz to lay off 10,000 staff on coronavirus hit," *Reuters*, April 20, 2020, https://www.nasdaq.com/articles/u.s.-car-rental-company-hertz-to-lay-off-10000-staff-on-coronavirus-hit-2020-04-20. "Disney furloughs 100,000 theme park and hotel workers amid coronavirus shutdown," *NBC*, April 20, 2020, https://www.nbcnews.com/news/us-news/disney-furloughs-100-000-theme-park-hotel-workers-amid-coronavirus-n1188236. "Princess Cruises announces layoffs, furloughs for 50% of California workforce due to COVID-19," *The Signal*, May 15, 2020, https://signalscv.com/2020/05/princess-cruises-announces-layoffs-furloughs-for-50-of-california-workforce-due-to-covid-19/. "Carnival to lay off hundreds in Florida, other states," *The Associated Press*, May 14, 2020, https://apnews.com/0ab9a53acb8832f4549835295842f3ca. "Amtrak warns of more job and route cuts in memo to employees," *CBS*, June 16, 2020, https://www.cbs58.com/news/amtrak-warns-of-more-job-and-route-cuts-in-memo-to-employees. All accessed 7/20/2020.

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[13] *See, e.g.*, "Hardest-hit industries: Nearly half the leisure and hospitality jobs were lost in April," *CNBC*, May 8, 2020, https://www.cnbc.com/2020/05/08/these-industries-suffered-the-biggest-job-losses-in-april-2020.html, (reporting that "[a] torrent of layoffs in the leisure and hospitality industry led the U.S. economy to its worst month of job losses in modern history. The leisure and hospitality industry lost 7.7 million jobs, or 47% of total." The report also noted that "Casinos and amusement parks also cut more than 1 million workers last month as Americans refrained from travel and shored up finances amid the ongoing U.S. pullback.").

By way of further comparison, many foreign airlines have furloughed large portions of their employees in the absence of a similarly structured government assistance plan. For example, the pandemic has resulted in Air Canada cutting 20,000 of its employees (roughly 60% of its workforce),[14] while WestJet (Canada's second largest carrier and largest low-cost carrier) has already undergone two rounds of job cuts, eliminating over 9,000 jobs (out of 14,000 staff prior to the pandemic).[15] Notably, Air Canada's job reductions came even though the Canadian Government has been providing wage subsidies of 75% (up to $847 per week) to employers that have seen their revenues decline by 30%,[16] which Air Canada initially made use of until it decided it could not afford to keep all of their workers given current demand conditions.[17] Overseas, British Airways has already cut nearly 30% of its workforce (12,000 of its 42,000 employees) and SAS has temporarily laid off 90% of its 11,000 employees notwithstanding emergency loans from their Governments.[18] Other foreign carriers that have furloughed large proportions of their workers include Virgin Atlantic (3,500 positions, or roughly one third of its employees),[19] Qantas (which is

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[14] *See* "Air Canada Raises Additional C$1.23bn in Cash," *FlightGlobal*, June 22, 2020, https://www.flightglobal.com/strategy/air-canada-raises-additional-c123bn-in-cash/138948.article.

[15] *See* "WestJet permanently cuts more than 3,000 jobs," *FlightGlobal*, June 24, 2020, https://www.flightglobal.com/strategy/westjet-permanently-cuts-more-than-3000-jobs/138987.article.

[16] *See* "Frequently Asked Questions—Canada Emergency Wage Subside (CEWS)," https://www.canada.ca/en/revenue-agency/services/subsidy/emergency-wage-subsidy/cews-frequently-asked-questions.html.

[17] *See* "Air Canada to Stop Emergency Wage Subsidy; Thousands of Job Cuts Will Leave Workers Out in the Cold: Union," *Financial Post*, May 21, 2020, https://financialpost.com/transportation/airlines/air-canada-to-stop-emergency-wage-subsidy-and-thousands-of-job-cuts-will-leave-workers-out-in-the-cold-says-union (reporting that "Canada's largest airline said last week it plans to cut up to 20,000 people, or 60 per cent of its workforce, given plummeting demand for air travel during the global pandemic. Air Canada has slashed its flight capacity by as much as 95 per cent due to international travel bans and stay-at-home orders. As such, most of its employees have no work but have remained on the payroll thanks to the federal wage subsidy program that covers up to 75 per cent of salary costs.").

[18] *See* "British Airways to Cut up to 12,000 Jobs as Air Travel Collapses," *BBC,* April 28, 2020, https://www.bbc.com/news/business-52462660 ("British Airways owner IAG secures £300m from the Government's coronavirus aid scheme"); *see also* "British Airways Own IAG Secures £300m from the Government's Coronavirus Aid Scheme," *Evening Standard*, May 7, 2020 https://www.standard.co.uk/business/british-airways-owner-iag-secures-300m-from-the-government-s-coronavirus-aid-scheme-a4434886.html ("Denmark, Sweden Governments Offer SAS $302 Million Backing Over Coronavirus Crisis"); *and* "Denmark, Sweden Governments Offer SAS $302 Million Backing Over Coronavirus Crisis," *Forbes*, March 18, 2020, https://www.forbes.com/sites/davidnikel/2020/03/18/denmark-sweden-governments-offer-financial-support-to-sas-over-coronavirus-crisis/#18fdcca619b4.

[19] *See* "How Many Jobs Are Airlines Cutting Due to Coronavirus?," *FlightGlobal*, July 15, 2020, https://www.flightglobal.com/strategy/how-many-jobs-are-airlines-cutting-due-to-coronavirus/139262.article.

eliminating 6,000 jobs and furloughing 15,000 of its 30,000 employees),[20] and TAP Air Portugal (furloughing 90% of its 14,000 employees).[21]

But for the PSP, U.S. airlines would have coped similarly with the pandemic's dramatic effect on demand by involuntarily furloughing likely between 60% and 85% of their employees.[22] As demonstrated in the initial Compass Lexecon CARES Act white paper, by keeping U.S. airline employees on payroll through September 30, 2020, the PSP has provided significant benefits to the U.S. Treasury and state treasuries as well as the broader U.S. economy by enabling airline employees to continue paying the same amount of Federal, state, and local taxes, keeping airline employees off of public assistance programs (including state unemployment insurance and the Federal Pandemic Unemployment Compensation program) and allowing them to continue spending their income throughout thousands of local economies. In aggregate, our earlier white paper calculated that these benefits totaled (i) ***$9.2 to $15.7 billion*** in taxes and avoided costs to the U.S. Treasury and state treasuries;[23] and (ii) an additional $***4.7 to $8.0 billion*** in additional consumer spending,[24] a portion of the total benefits of $***89 to $99 billion***.[25]

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[20] *See* "Qantas to Cut 6,000 Jobs and Keep 15,000 Stood Down in Bid to Survive Coronavirus Downturn," *The Guardian*, June 24, 2020, https://www.theguardian.com/business/2020/jun/25/qantas-to-cut-6000-jobs-and-keep-15000-stood-down-in-bid-to-survive-coronavirus-downturn.

[21] *See* "How Many Jobs Are Airlines Cutting Due to Coronavirus?," *FlightGlobal*, July 15, 2020, https://www.flightglobal.com/strategy/how-many-jobs-are-airlines-cutting-due-to-coronavirus/139262.article.

[22] *See* Compass Lexecon CARES Act white paper. While the CARES Act prohibited U.S. carriers from involuntarily furloughing employees or reducing pay rates and benefits until September 30, 2020, carriers have provided incentives that have resulted in tens of thousands of employees choosing to *voluntarily* separate (e.g., take early retirement or buyouts) or take unpaid or reduced paid leaves. *See, e.g.*, "Delta Offers Employees Buyouts, Retirement as Coronavirus Hurts Travel Demand, While United Readies Similar Plans," *CNBC*, May 28, 2020, https://www.cnbc.com/2020/05/28/delta-offers-employees-buyouts-early-retirement-amid-weak-travel-demand.html; *see also* "Southwest Offers Buyout Packages, Temporary Leaves to 'Ensure Survival,'" *Reuters*, June 1, 2020, https://www.reuters.com/article/us-health-coronavirus-southwest-jobs/southwest-offers-buyout-packages-temporary-leaves-to-ensure-survival-idUSKBN23907G; and "Thousands of American Airlines Pilots, Flight Attendants Take Leave, Early Retirement," *USA Today*, April 13, 2020, https://www.usatoday.com/story/travel/airline-news/2020/04/13/american-airlines-crew-take-leave-buyouts-amid-coronavirus-crisis/2983289001/.

[23] *See* Compass Lexecon CARES Act white paper, pp. 14-16.

[24] *See* Compass Lexecon CARES Act white paper, p. 16.

[25] *See* Compass Lexecon CARES Act white paper, p. 6.

b. The PSP Created Effective Incentives for U.S. Airlines to Offer Far More Service by Lowering Airlines' Marginal Costs and Break-Even Load Factors

Faced with evaporating demand (by as much as 95% at the onset), idiosyncratic international and domestic travel restrictions[26] and extreme uncertainty in how long demand would remain acutely suppressed,[27] U.S. airlines would have had little choice but to cut the vast majority of capacity and terminate routes and destinations while they "waited out" the pandemic. Moreover, it is likely that some U.S. carriers would have chosen to suspend service altogether until demand returns, as several foreign carriers have done, including Canada's third and fourth largest carriers (Air Transat and

[26] For example, as of July 20, 2020, the U.S. State Department has a Global Level 4 Health Advisory in effect and "advises U.S. citizens to avoid all international travel due to the global impact of COVID-19." *See* https://travel.state.gov/content/travel/en/traveladvisories/ea/travel-advisory-alert-global-level-4-health-advisory-issue.html; *see also* "Coronavirus Travel Restrictions, Across the Globe," *The New York Times*, July 20, 2020, https://www.nytimes.com/article/coronavirus-travel-restrictions.html and "Governor Cuomo Announces Individuals Traveling to New York from Four Additional States Will Be Required to Quarantine for 14 Days," *New York State Press Release*, July 14, 2020, https://www.governor.ny.gov/news/governor-cuomo-announces-individuals-traveling-new-york-four-additional-states-will-be-required, noting that "[t]he quarantine applies to any person arriving from a state with a positive test rate higher than 10 per 100,000 residents over a 7-day rolling average or a state with a 10% or higher positivity rate over a 7-day rolling average." As of July 14, travelers from 22 states (Alabama, Arkansas, Arizona, California, Florida, Georgia, Iowa, Idaho, Kansas, Louisiana, Minnesota, Mississippi, North Carolina, New Mexico, Nevada, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Utah, and Wisconsin) were subject to New York's quarantine and any applicable fines for non-compliance.

[27] The unknowns complicating air travel demand forecasting and recovery are (i) whether there will be a potential vaccine, "cure," or other viable treatment for and/or containment of COVID-19 (and when); (ii) with outstanding questions regarding durability of immunity, how COVID-19 will impact long-run demand even after widespread availability of an effective vaccine or treatment; (iii) idiosyncratic state and local restrictions that inhibit demand for domestic air travel; (iv) when international markets will re-open; (v) the permanency of the paradigmatic shift to "work from home" and widespread adoption of technology substitutes for air travel, particularly by businesses; and (v) the depth and length of the recession.

Porter),[28] as well as SAS (Scandinavia),[29] Austrian Airlines,[30] Copa Airlines (Panama),[31] Ryanair (Ireland),[32] and EasyJet (UK),[33] among others.

By ensuring that the airlines would retain all their employees until September 30 as a condition of funding, the PSP effectively made labor costs (typically one-third of the cost to operate a flight) "fixed," which, in turn, dramatically reduced U.S. carriers' marginal cost of operating a flight. This, in turn, significantly lowered the cash "break-even" load factor for U.S. carriers (*i.e.*, the percentage of seats an airline must fill at prevailing fares with paying passengers in order to cover the cash

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[28] *See* "Transat, Porter Move to Suspend all Flights as Border Closes to Contain COVID-19," *CTV News*, March 18, 2020, https://www.ctvnews.ca/health/coronavirus/transat-porter-move-to-suspend-all-flights-as-border-closes-to-contain-covid-19-1.4859141. While Air Transat has announced that it will resume flights on July 23, 2020 subject to any travel restrictions, Porter has stated that it will remain shut down until August 31, 2020. *See* "Notice to Travelers," June 11, 2020, Air Transat, https://www.airtransat.com/en-US/Travel-Information-en-US/Notice-to-Travellers; *and* "Our Flights Will Now Restart August 31," Porter, https://s3.amazonaws.com/eporter.flyporter.com/Suspension/index.html.

[29] *See* "SAS Halts Most Services Over 'Non-Existent' Air Market," *FlightGlobal*, March 15, 2020, https://www.flightglobal.com/airlines/sas-halts-most-services-over-non-existent-air-market/137276.article, ("We will be at the disposal of the authorities to on their behalf take home stranded citizens or maintain infrastructure important to society, as far as possible.") On June 15 (*i.e.*, after a three-month shutdown), SAS began to slowly resume service on 21 of its short-haul routes, as well as a limited number of long-haul international routes. *See* "SAS to operate most initial flights from Copenhagen," *FlightGlobal*, June 5, 2020, https://www.flightglobal.com/networks/sas-to-operate-most-initial-flights-from-copenhagen/138702.article.

[30] *See* "Virus Crisis to Force Austrian, Porter to Suspect All Service," *AINonline*, March 18, 2020, https://www.ainonline.com/aviation-news/air-transport/2020-03-18/virus-crisis-force-austrian-porter-suspend-all-service. Austrian began to resume service on June 15, after a nearly three-month shutdown. *See* "Austrian to resume flights to 37 destinations," *Business Traveller*, May 29, 2020, https://www.businesstraveller.com/business-travel/2020/05/29/austrian-to-resume-flights-to-37-destinations/.

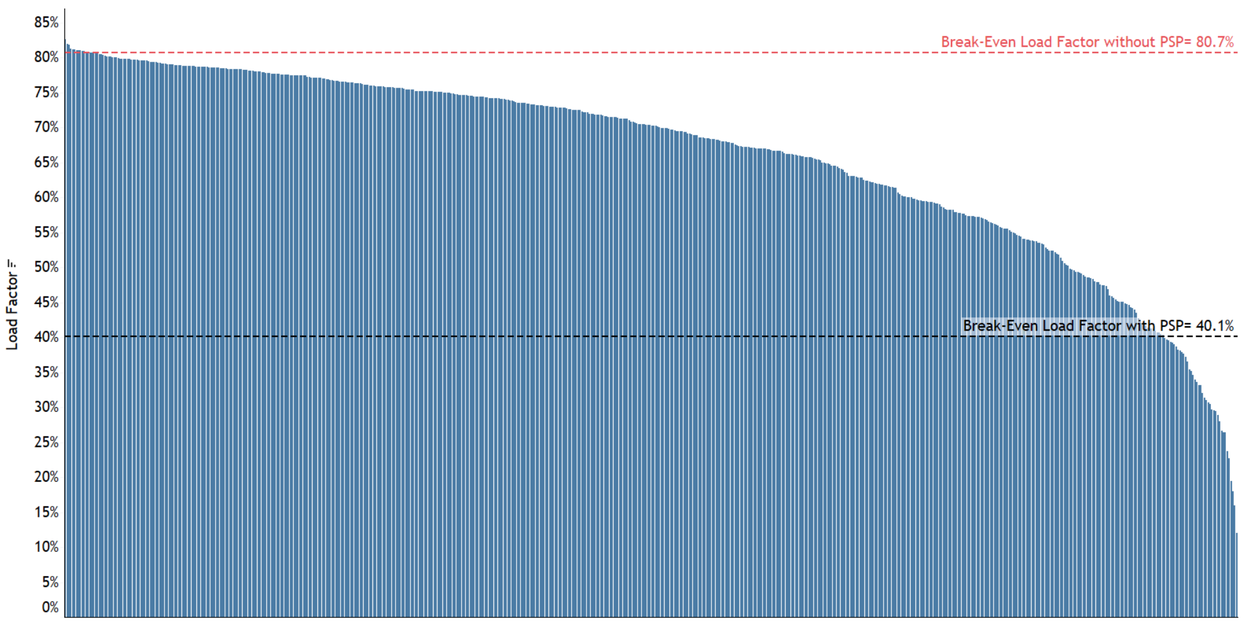
[31] *See* "Copa Airlines Announces Temporary Shutdown of Operations," Copa Airlines, March 20, 2020, https://www.copaair.com/en/web/us/temporary-shutdown-operations. Copa resumed flying on June 26, after a more than three-month shutdown. *See* "Panama's Copa Airlines Says It Plans to Resume Flights on June 26," *Reuters*, May 25, 2020, https://www.reuters.com/article/copa-holdings-panama/panamas-copa-airlines-says-it-plans-to-resume-flights-on-june-26-idUSL1N2D713W.

[32] *See* "Ryanair Says No More Flights Until June," *Independent*, March 24, 2020, https://www.independent.co.uk/travel/news-and-advice/ryanair-flight-cancelled-coronavirus-refund-travel-update-a9420926.html. Ryanair resume flights on July 1, after more than a three-month shutdown. *See* "Ryanair resumes flights full list of destinations from the UK," *Daily Mirror*, July 1, 2020, https://www.mirror.co.uk/travel/news/ryanair-resumes-flights-full-list-22277828.

[33] *See* "EasyJet Grounds Entire Fleet of Planes Because of Coronavirus," *The Guardian*, March 30, 2020, https://www.theguardian.com/business/2020/mar/30/easyjet-grounds-entire-fleet-of-planes-because-of-coronavirus-crisis. EasyJet resumed flying on June 15, 2020 after a two-and-a-half-month shutdown. *See* "EasyJet Resumes Some Domestic and International Flights After Halting Service Due to COVID-19," *Reuters*, June 14, 2020, https://www.businessinsider.com/easyjet-resumes-flying-with-covid-19-measures-in-place-2020-6.

costs of operating a flight)[34] and incentivized them to offer far more flights than they otherwise would in the face of unprecedently low and uncertain demand.[35] For example, Figure 3 below demonstrates how American's average cash break-even load factor in June 2020 fell from 81% to 40% because of the PSP, making the vast majority of domestic routes that would have been money losers incremental contributors to American's cash position. Put differently, because airlines can only sustainably operate flights on routes where traffic exceeds break-even load factor, the initial PSP made it possible for airlines to offer substantially more service since April 1 than they otherwise would have done.

Figure 3: Distribution of Load Factors on American Airlines Domestic Routes, June 2020 and Systemwide Cash Break Even Load Factor (with and without PSP Funds)



Source: American Airlines.
Notes: Load factor by route in June 2020. Break-Even Load Factor is cash break-even, based on June 2020 ticket plus ancillary revenue per passenger of $117, average aircraft with 114 seats per departure, payroll costs per departure (based on Feb. 2020) of $5,447, and non-payroll costs per departures (based on June 2020) of $5,382.

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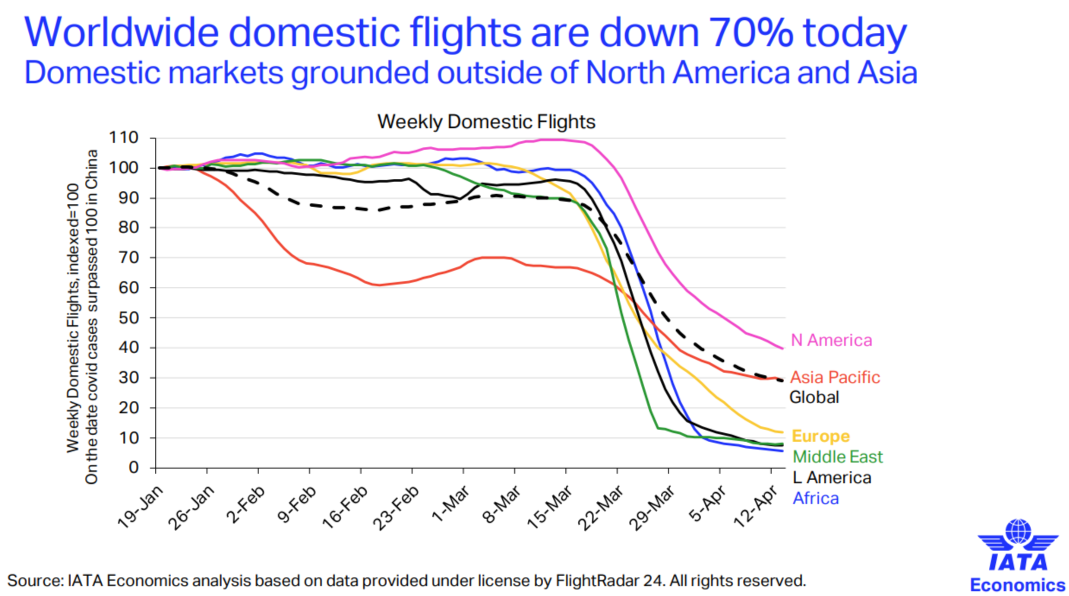
[34] American measures the profitability of a route using the "System Direct Contribution" of the route. System Direct Contribution measures the cash contribution of an individual route when only direct expenses are considered. Direct expenses are the costs that American allocates to flights that are largely variable with levels of flying. These primarily include frontline employee salaries and benefits, fuel, aircraft maintenance, landing and navigation fees, selling expenses, catering expenses, ground maintenance, and cargo expenses.

[35] In a more normal operating environment (e.g., 2019), American's consolidated cash break-even load factor was 64.5% (source: American). However, because corporate travel has come to a virtual standstill during the pandemic, American's current break-even load factor *absent the PSP* has risen to levels that make it difficult—if not impossible—to cover its costs on most flights without dramatically lowering its costs.

As we noted in our initial CARES Act white paper, it was reasonable to believe that the PSP would incent U.S. carriers to restore an additional 10% of their pre-pandemic capacity earlier than they otherwise would.[36] A comparison of post-pandemic capacity reductions by airlines around the world confirms that the PSP accomplished its intended goal of incenting U.S. airlines to offer more service than they otherwise would have, particularly domestically, and that the assumption that the PSP would result in an incremental 10 percentage points of capacity was conservative.[37] For example, as shown in Figure 4 below, an analysis conducted by IATA, demonstrated that the PSP was working as intended by incenting North American carriers (predominantly comprised of U.S. carriers)[38] to offer far more domestic flights than carriers in other parts of the world.

Figure 4: IATA Comparison of Weekly Domestic Flights by Region[39]



[36] *See* Compass Lexecon CARES Act white paper, p. 21 ("By way of example, if the CARES Act incents carriers to restore 10 percentage points more of pre-pandemic domestic capacity than they otherwise would have, it would result in approximately 282,551 more domestic seats per day, or an increase of 26.0 million seats between July 1 and September 30.").

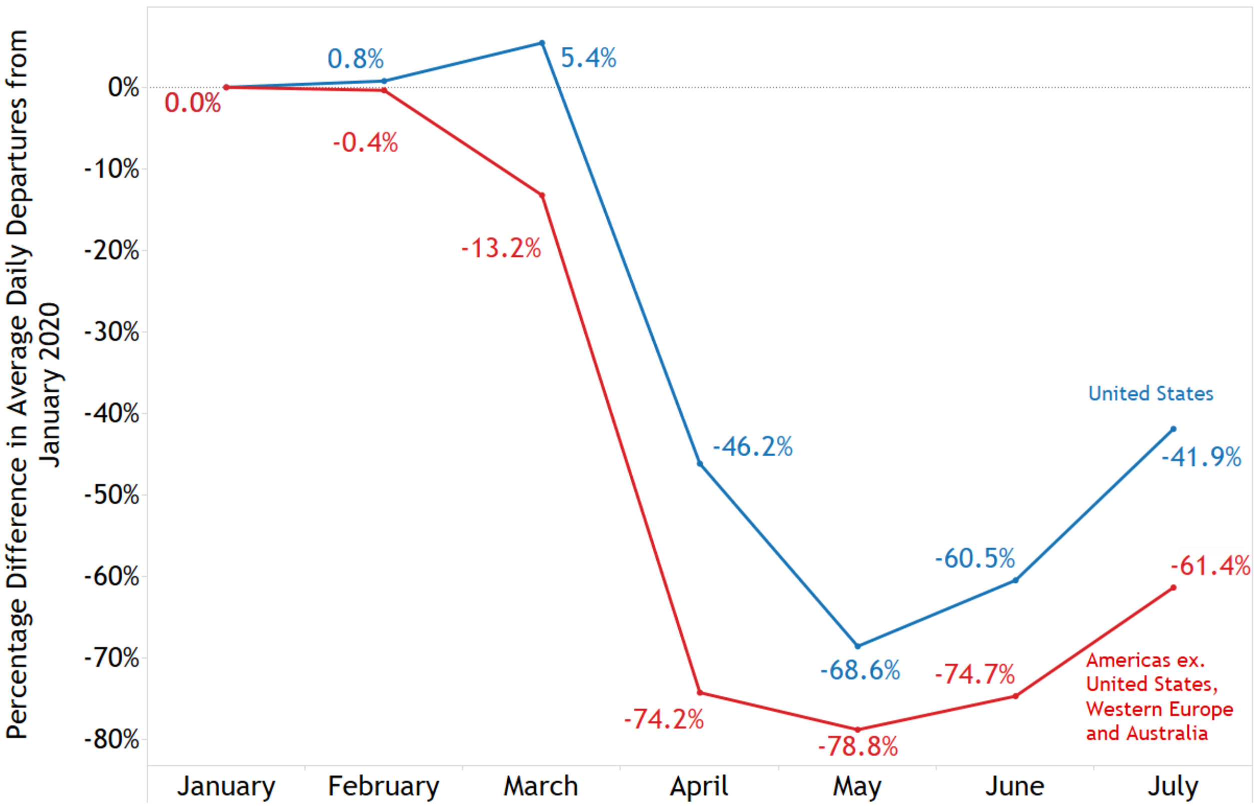
[37] Moreover, analysis of American's route level profitability reports reveals that in June 2020, American offered 27 percentage points of domestic capacity (relative to June 2019), that would have operated at a cash loss absent the CARES Act support. Thus, absent the PSP, it is reasonable to assume that American would have offered *at least* 10 percentage points less capacity, relative to 2019.

[38] Prior to the pandemic, U.S. carriers accounted for 87% of domestic flights within North America. *Source*: OAG, 2019. As noted above, by April, Canada's third and fourth largest carriers (Air Transat and Porter) had already ceased *all operations*.

[39] *See* "COVID-19: Assessing Prospects for Domestic Markets," Brian Pearce, Chief Economist, *IATA*, April 21, 2020, https://www.iata.org/en/iata-repository/publications/economic-reports/covid-19-assessing-prospects-for-domestic-markets/.

And while some regions (most notably Asia Pacific countries such as China and Japan) have restored the bulk of their domestic flights as the pandemic has largely been contained in those regions, as shown in Figure 5 below, U.S. carriers are continuing to offer far more domestic flights relative to early January than carriers in the rest of the Americas, Western Europe, and Australia (nearly 20 percentage points more in July)—a testament to the PSP's ongoing ability to incent U.S. carriers to offer more service by reducing their marginal costs.

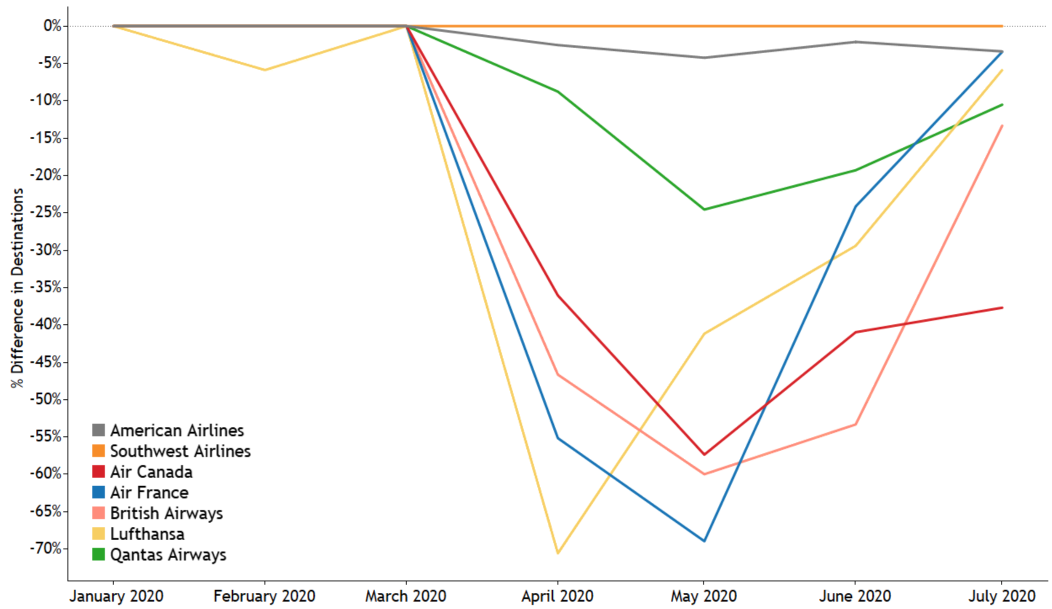
Figure 5: Comparison of Scheduled Domestic Flights, United States vs. Europe, the Americas (excl. United States) and Australia



Source: OAG, 2020.
Notes: Consolidated, domestic operations. Americas ex. United States includes Latin America and Canada. Western Europe includes Austria, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Romania, Spain, Sweden, Switzerland and United Kingdom.

In addition to incentivizing airlines to add more flights, the PSP also required that U.S. carriers continue to serve the vast majority of the U.S. cities that they served prior to the pandemic, thereby ensuring that the traveling public across the country still had access to air service. Thus, as shown in Figure 6, in comparison to carriers in other parts of the world, American and Southwest for example, have consistently served a far greater proportion of its domestic destinations than their counterparts in Canada, Europe, and Australia.

Figure 6: Comparison of Percentage of Domestic Destinations Maintained by Select Large Carriers in North America, Europe and Australia



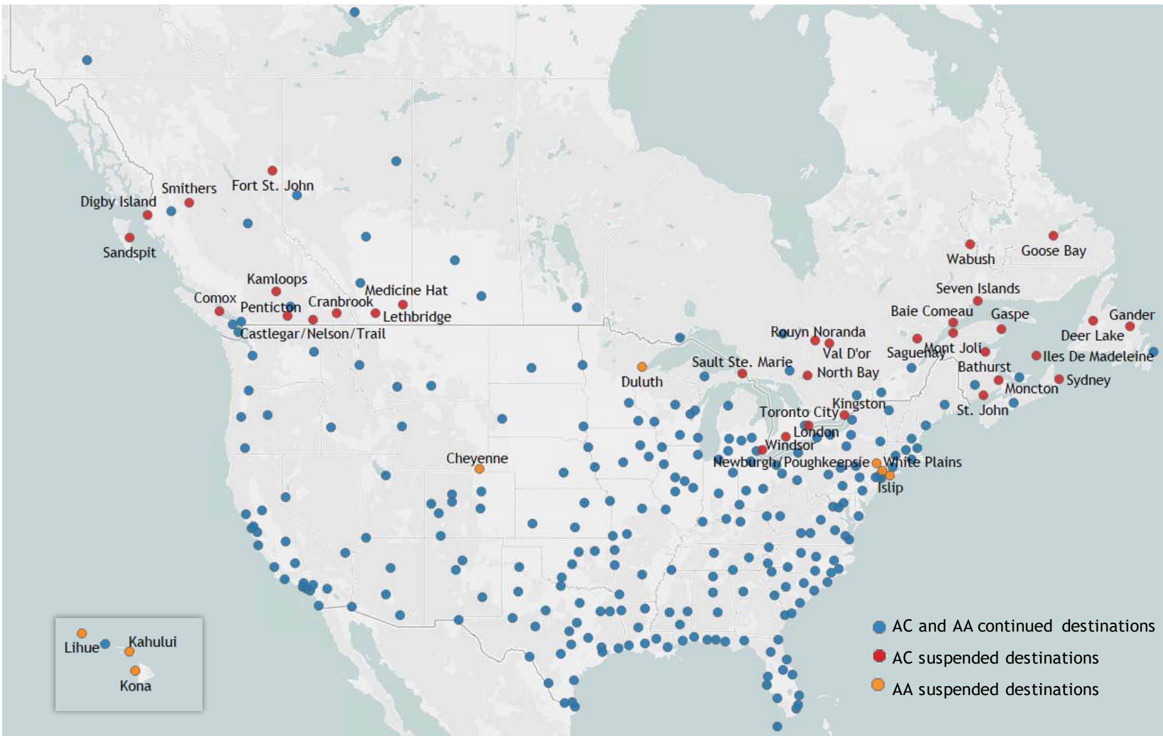
Source: OAG.
Notes: Percent difference in destinations by month relative to January 2020.

In sum, as the CARES Act intended, U.S. carriers' domestic networks remain intact (albeit with less frequency) notwithstanding the dramatic reduction in demand. This is in stark contrast to the networks of foreign carriers whose government's pandemic relief support did not require that carriers continue to serve all (or virtually all) of the domestic destinations they were serving prior to the pandemic. For example, Figure 7 compares the Canadian destinations that Canada's largest carrier (Air Canada) has continued to serve since the start of the pandemic with the domestic destinations that American has continued to serve. As Figure 7 shows, while in May the PSP resulted in American continuing to serve all but a small handful of the U.S. airports it was serving in March,[40] Air Canada suspended service to 33 of the 59 domestic airports the carrier served in

[40] By July 2020, American had also suspended service to Worcester, MA and Oakland, CA. For the small handful of U.S. airports that American suspended service to throughout the pandemic, it continued to offer the traveling public service from nearby airports (*i.e.*, San Francisco in lieu of Oakland, New York's LaGuardia or JFK airports in lieu of White Plains, Newburgh and Islip, Boston in lieu of Worcester, Minneapolis in lieu of Duluth and Denver in lieu of Cheyenne. Moreover, with the exception of Cheyenne, other U.S. carriers continued to serve the destinations suspended by American (*e.g.*, Duluth, Islip, Kona, Lihue, Kahului, Newburgh, Oakland, White Plains, and Worcester).

March.[41] Absent an extension of the PSP—and the corresponding service commitments—many of these small communities in the U.S. would risk losing air service.

Figure 7: Domestic Airports Served by American and Air Canada in May 2020 Compared to March 2020



Source: OAG.
Notes: Destinations served by American Airlines and Air Canada in March and May 2020. The destinations by carrier were restricted to airports served within the carrier's home country and were further restricted to airports with at least 20 departures in March 2020. Gunnison and Steamboat Springs were excluded because those destinations would have been suspended anyways due to seasonality.

As a result, even though demand remains at roughly a quarter of last year's levels, 99.7% of American's domestic origin and destination ("O&D") passengers who flew in the third quarter of 2019 can still fly on American today and reach their destination should they choose to do to.[42]

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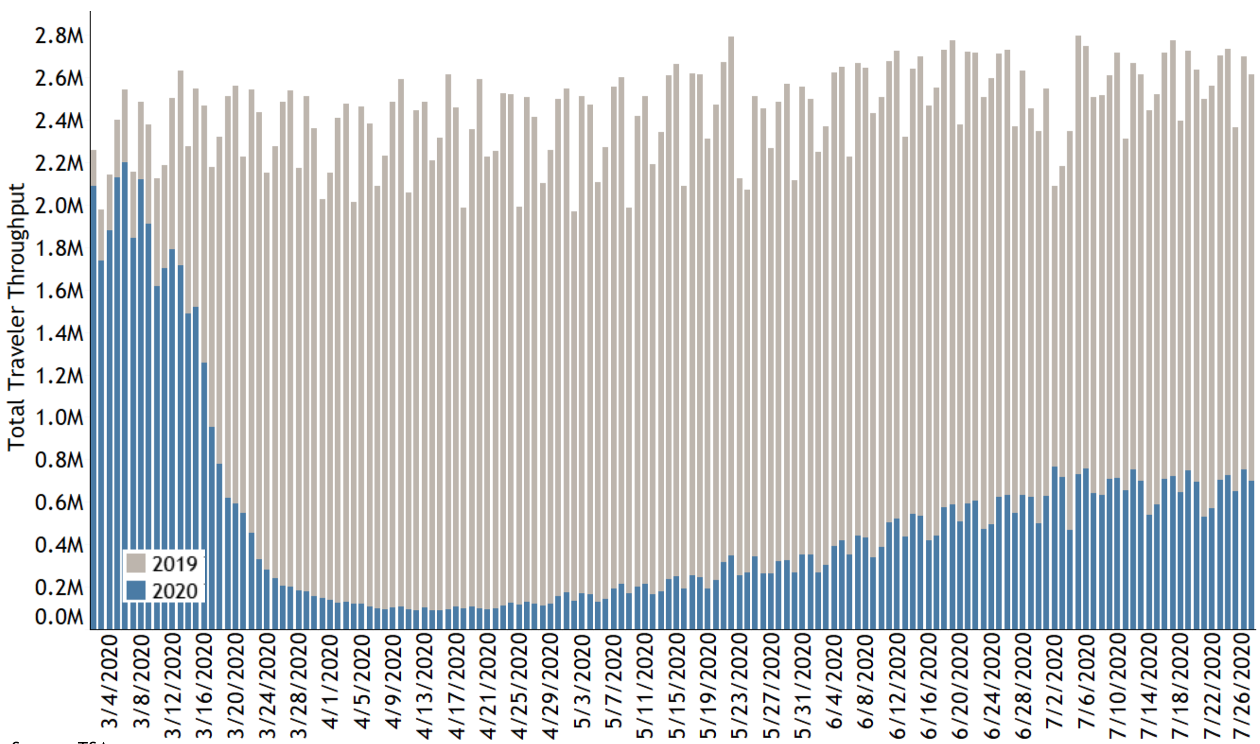
[41] By June, Air Canada had restored limited service to some of the domestic destinations that had suspended, albeit with very limited service that month: London (17 flights), Deer Lake (14 flights), Kamloops (9 flights), Gander (9 flights), Sault Ste. Marie (7 flights), Sydney (6 flights) and Digby Island (6 flights). Similarly, by June, American has resumed limited service to Kahului (34 flights).

[42] The 99.7% figure is based on the proportion of American's Q3 2019 domestic O&D passengers where American served both endpoint cities in Q3 2019 for which American is scheduled to serve both endpoint cities on August 10, 2020.

c. By Increasing Air Service, the PSP Has Helped to Jumpstart the U.S. Economy

It is plainly evident that the incremental capacity afforded by the PSP (*i.e.*, the additional service that directly resulted from the PSP's lowering of airlines' marginal costs and the requirement that U.S. carriers preserve their domestic networks) has resulted in *more* passengers traveling now than otherwise would have during the pandemic. For example, Figure 8 below shows the number of travelers passing through Transport Screening Authority ("TSA") checkpoints since March compared to the same day last year. While still only about one-fifth of last year's levels, traffic has rebounded significantly since April, due in large part to the PSP requiring that U.S. carriers keep their domestic route networks intact, thereby allowing those who want to travel to reach their destination.

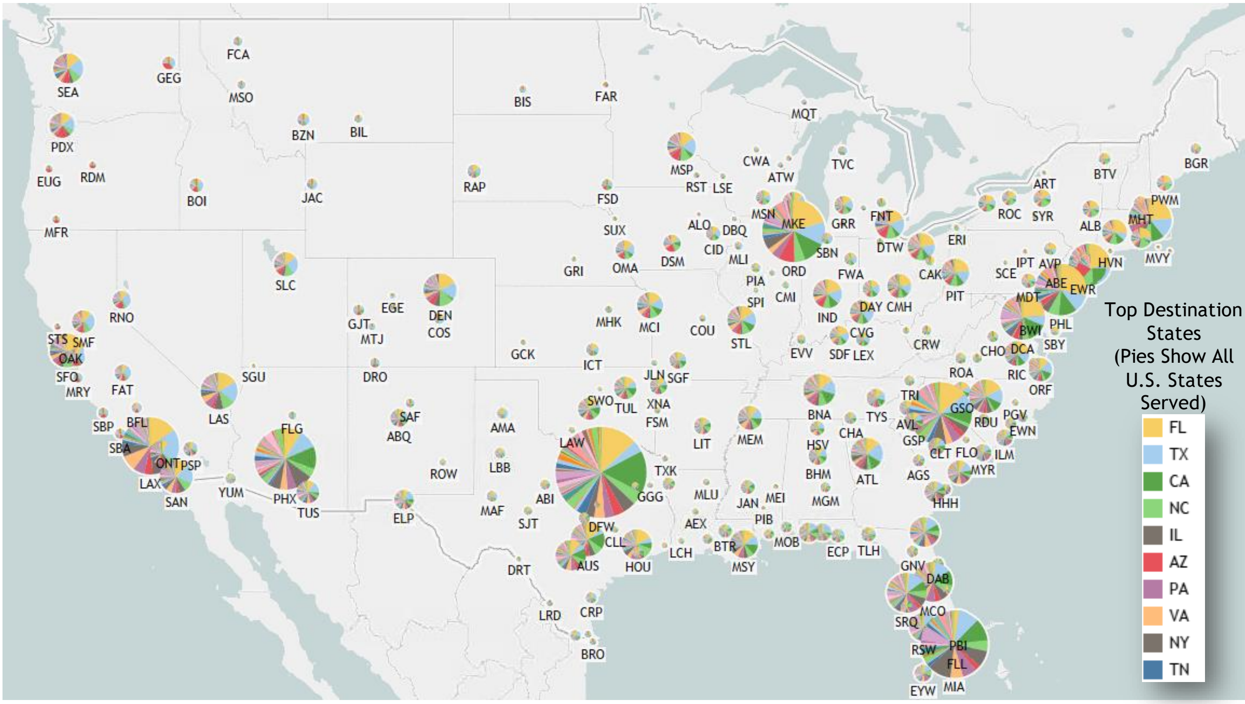
Figure 8: Travelers Passing Through TSA Checkpoints, 2019 vs. 2020



Source: TSA.
Notes: Travelers passing through TSA Checkpoints this year compared to travelers who passed through the checkpoints last year on the same day. Data through 7/27/20.

Further, as shown in Figure 9 below, an analysis of American's recent domestic O&D travel demonstrates that passengers have been traveling across the carrier's entire domestic network—and particularly on journeys that require American's comprehensive hub-and-spoke network.

Figure 9: Domestic O&D Travel for American Airlines Passengers, June 2020



Source: American Airlines domestic O&D flown ticket data, June 2020.
Notes: Pies located at airport of trip origin and sized by total number of passengers departing in June of 2020. Pie slices colored by state of destination.

Absent the PSP, much of the traffic American carried during this period would have been unsustainable in large part because premium traffic (*i.e.*, business travel) remains low on account of widespread corporate travel restrictions.[43] Figure 10 illustrates this point with a year-over-year comparison of American's revenues per available seat mile ("RASM"). As shown below, American's RASM in January and February closely tracked 2019 levels and then collapsed starting in March as the pandemic walloped demand. And although RASM has slowly improved since April, it remains far below last year's levels, notwithstanding the significant reductions in capacity.

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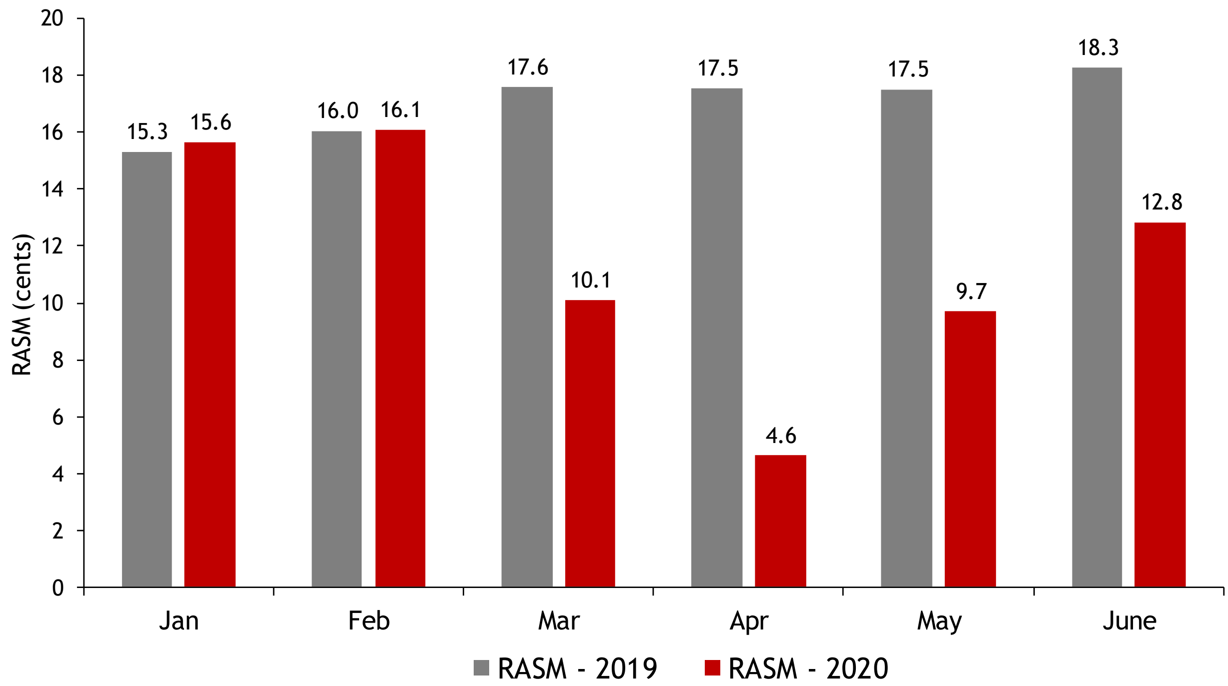
[43] *See, e.g.*, "Survey: Travel Managers Lifting Restrictions More Quickly in Europe than N. America," *Business Travel News*, July 7, 2020, https://www.businesstravelnews.com/Global/Survey-Travel-Managers-Lifting-Restrictions-More-Quickly-in-Europe-than-N-America (reporting on a Uniglobe Travel survey of corporate travel managers: "Nearly twice as many European travel managers than their North American counterparts have allowed business travel to resume, according to a Uniglobe Travel survey conducted last month. About 61 percent of European respondents said their firms either are traveling already or expect to within the next three months, compared with only 32 percent of North American respondents.").

Figure 10: American's RASM 2019 vs 2020



Source: American Airlines.
Note: Mainline plus wholly owned regional carriers.

Figure 9 above establishes that the PSP has enabled many consumers and families to stay connected to loved ones through these challenging times and escape safely on vacations this summer. By extension, the PSP has thus helped jumpstart the economy by encouraging consumers to spend money in many hard-hit sectors of the economy, including hotels, restaurants, and local entertainment or retail establishments. And as our earlier CARES Act white paper details, this additional spending through September will result in an estimated $2.2 billion in economic activity.[44]

d. The PSP Has Provided Over $24 Billion in Economic Benefits to the U.S. Economy and Paved the Way for $70 Billion in Additional Benefits Over the Next Two Years

When fully accounting for the trailing effects of the incremental capacity that the PSP has enabled over the next two years, the quantified benefits to the U.S. economy from the PSP are enormous and scale to the tens of billions. To illustrate, assuming that U.S. passenger airlines would have been forced to furlough 70% of their workforces in midst of the pandemic absent federal financial

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[44] *See* Compass Lexecon CARES Act white paper, pp. 21-22.

assistance, the PSP has generated over $24 billion in primary economic benefits to the U.S. economy through September 30, 2020—including over $4 billion in economic benefits from increased travel and spending in the airline supply chain due to the increased capacity that the PSP enabled—and has laid the foundation for an additional $70 billion over the next two years, as summarized in Figure 11 below.[45] Further, as we demonstrated in our CARES Act companion white paper on behalf of American Airlines,[46] when one analyzes the overall impact of PSP funds reserved for American specifically, these funds have resulted in over $5 billion in primary economic benefits through September 30, 2020, and have laid the groundwork for an additional $15 billion through September 2022.

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[45] *See* Compass Lexecon CARES Act white paper, Figure 1.

[46] *See* "As the Largest U.S. Passenger Airlines, American Airlines is Critical to the U.S. Economy's Ability to Rebound from the Economic Turmoil Caused by the COVID-19 Pandemic," Eric Amel, Darin Lee, and Ethan Singer, April 3, 2020 ("Compass Lexecon American CARES Act white paper"), Figure 1.

Figure 11: Summary of Quantified Benefits to U.S. Treasury, State Treasuries and Broader U.S. Economy from CARES Act Payroll Support for American Airlines' and U.S. Passenger Airline Employees Under 70% Furlough Avoidance Assumptions[47]

Economic Benefit			Total ($ millions) from Avoiding 70% Furloughs	
			American Airlines	**U.S. Passenger Airlines**
Primary Benefits	Taxes and Avoided Costs to Fed/State Treasuries	Additional Federal Income Taxes	**$449**	**$2,157**
		Additional State Income Taxes	**$59**	**$345**
		Additional Local Income Taxes	**$1.0**	**$4**
		Saved State Unemployment Benefits	**$1,067**	**$4,126**
		Saved Federal Pandemic Unemployment Compensation	**$1,138**	**$4,042**
		Additional Federal Payroll Taxes	**$545**	**$2,169**
		Additional State Unemployment Insurance Taxes	**$16**	**$69**
	Subtotal Direct Benefits to U.S. and State Treasuries		***$3,275***	***$12,913***
	Additional Consumer Spending in U.S. Economy Due to Higher Airline Employee Disposable Income		**$1,428**	**$6,601**
	Sub-total Direct Benefits to U.S. and State Treasuries and Additional Consumer Spending		***$4,703***	***$19,514***
	Short-Term Incremental Capacity Benefits	Additional Supply Chain Benefits*	**$395**	**$1,670**
		Additional Spending by Domestic Travelers*	**$435**	**$2,155**
		Additional Visitor Spending*	**$89**	**$284**
	Sub-total Capacity Benefits Through Sept, 30-2020		***$920***	***$4,110***
	Sub-total of Primary Benefits April 1-Sept, 30-2020		***$5,623***	***$23,623***
	Trailing Effects of CARES-Act	Additional Supply Chain Benefits*	**$2,373**	**$10,020**
		Additional Spending by Domestic Travelers*	**$2,553**	**$12,567**
		Additional Visitor Spending*	**$711**	**$2,276**
	Sub-total Trailing Effects (Oct 1, 2020-Sept 30, 2022)		***$5,637***	***$24,863***
	Primary Impacts Total		***$11,260***	***$48,486***
Secondary Impacts on U.S. GDP			***$10,623***	***$46,160***
Grand Total			**$21,883**	**$94,647**

* Short-Term incremental capacity benefits assume that the CARES Act results in American (and other airlines) providing 10 percentage points more capacity (relative to pre-pandemic levels) than it otherwise would from July-September 2020, including 5 incremental long-haul international routes (15 for the industry) restored. Trailing Effects of the CARES Act and secondary impacts on U.S. GDP assume 10 percentage points more of American's (and other airlines) pre-pandemic capacity is restored in the first year following October 1, 2020, followed by five percentage points relative to pre-pandemic capacity in the second year, including five incremental long-haul international routes restored for American (and 15 for the industry overall).

[47] In light of the ongoing international travel restrictions severely limiting foreign travel to and from the United States, the bulk of the $284 million in benefits from the industry's PSP funds attributable to increased foreign visitor spending between April 1 and September 30, 2020 have likely been deferred until these travel restrictions are removed.

e. The PSP Provided U.S. Carriers with Stability to Increase Liquidity and Avoid Bankruptcy

Another salutary effect of the PSP is that it gave U.S. carriers the time and financial stability to pursue aggressive self-help measures that have been critical in avoiding bankruptcy and minimizing impending furloughs. For example, in order to improve liquidity, airlines have raised billions with new equity and debt offerings. For example, American has raised over $4 billion in the last two months.[48] Southwest and United have each secured at least $6 billion from capital markets, and Delta Air Lines has raised over $6 billion, including $3.5 billion in bonds—the largest bond sale ever by an airline.[49]

Moreover, since the onset of the pandemic, airlines have engaged in a host of other self-help initiatives to reduce cash burn and preserve liquidity, including: operating cargo-only flights; retiring old aircraft early and restructuring fleets around newer and more efficient aircraft; deferring new aircraft deliveries; saving on vendor-related expenses; reducing IT spending; reducing spending on advertising and promotions; seeking early retirements and/or voluntary leaves of

[48] *Source*: American Airlines; *see also* American Airlines Group Inc. and American Airlines, Inc., Form 8-K, Ex. No. 99.1, July 2, 2020, ("Letter to Employees, dated July 2, 2020") ("We continue to make good progress to improve our liquidity, as evidenced last week with our raise of an additional $4.5 billion.").

[49] *See* "Aviation Industry Races for Cash With Record Bond Sales," *The Wall Street Journal*, May 4, 2020, https://www.wsj.com/articles/aviation-industry-races-for-cash-with-record-bond-sales-11588607851; *see also* Delta Air Lines, Inc., Form 10-Q, June 30, 2020; *and* Southwest Airlines Co., Form 8-K, June 8, 2020; *and* Southwest Airlines Co., Form 8-K, May 4, 2020; *and* Southwest Airlines Co., Form 8-K, May 1, 2020; *and* United Airlines Holdings, Inc., Form 8-K, Ex. No. 99.1, July 21, 2020, ("Press Release issued by United Airlines Holdings, Inc. dated July 21, 2020").

absences by the tens of thousands; restructuring management and support staff; and reducing CEO and officer compensation.[50]

These combined initiatives, together with PSP funding and the additional capital enabled by the PSP, have thus far spared large U.S. airlines from bankruptcy. While a few small U.S. airlines have liquidated (Compass Airlines and Miami Air International) or declared bankruptcy (RavnAir), this stands in great contrast to the many international carriers—large and small—that have either liquidated or gone bankrupt, including: Virgin Australia (Australia); Level Europe (Austria); LATAM (Chile); Avianca (Colombia); TAME (Ecuador); German Airways (Germany); Germanwings (Germany); Alitalia (Italy); Air Mauritius (Mauritius); Aeroméxico (Mexico); Comair (South Africa); South African (South Africa); BRA (Sweden); Thai Airways (Thailand); Sun Express Deuthschland (Turkey); and Flybe (United Kingdom).[51]

[50] *See, e.g.*, American Airlines Group Inc. and American Airlines, Inc., Form 10-Q, June 30, 2020 ("We have also suspended all non-essential hiring, paused non-contractual pay rate increases, reduced executive and board of director compensation, implemented voluntary leave and early retirement programs and decreased our management and support staff team, including officers, by approximately 5,100 positions, or 30%, to reduce our labor costs consistent with our obligations under the CARES Act. In total, more than 41,000 team members have opted for an early retirement, a reduced work schedule or partially paid leave."); *see also* "Delta Offers Employees Buyouts, Retirement as Coronavirus Hurts Travel Demand, While United Readies Similar Plans," *CNBC*, May 28, 2020, https://www.cnbc.com/2020/05/28/delta-offers-employees-buyouts-early-retirement-amid-weak-travel-demand.html ("Delta's announcement comes a day after American Airlines said it plans to reduce its management and administrative employees by 30%, or about 5,000 people. United also aims to cut this portion of its workforce by 30%. The airlines are urging employees to accept buyouts or early retirements to avoid involuntary cuts"); *and* "Thousands of American Airlines Pilots, Flight Attendants Take Leave, Early Retirement," *USA Today*, April 13, 2020, https://www.usatoday.com/story/travel/airline-news/2020/04/13/american-airlines-crew-take-leave-buyouts-amid-coronavirus-crisis/2983289001/ ("More than 700 American pilots accepted the early retirement offer, according to the Allied Pilots Association… More than 4,800 American pilots accepted voluntary leave offers, ranging from one to six months… The Association of Professional Flight Attendants, which represents more than 27,000 American Airlines flight attendants, said nearly 8,000 of its members have accepted early retirement and leave offers ranging from three months to a year."); *and* "Even More Iconic Planes Are Disappearing from the Sky Earlier than Planned as the Coronavirus Continues to Wreak Airline Havoc," *Business Insider*, July 17, 2020, https://www.businessinsider.com/coronavirus-havoc-forces-airlines-to-retire-iconic-planes-sooner-2020-3#air-frances-airbus-a380-15; *and* "Inside the Massive Effort by US Airlines to Transport Medical Supplies and Mail on Cargo-Only flights Using Passenger Jets," *Business Insider*, April 4, 2020, https://www.businessinsider.com/coronavirus-airlines-flying-cargo-only-planes-for-medical-supplies-mail-2020-4; *and* "Here Is a List of CEOS Taking Pay Cuts Amidst the Coronavirus Crisis," *Yahoo Finance*, March 30, 2020, https://finance.yahoo.com/news/heres-a-list-of-ce-os-taking-pay-cuts-amidst-the-coronavirus-crisis-171206258.html; *and* "North American Carriers Hunker Down During Crisis," *FlightGlobal*, June 3, 2020, https://www.flightglobal.com/strategy/north-american-carriers-hunker-down-through-crisis/138620.article ("While hard hit North American carriers may have found some comfort from state support packages and the size of its home markets, they have taken action swift action to limit cash burn to protect their businesses while waiting for passenger demand to return.").

[51] *See*, "Impact of COVID-19: Data Updates," *Airlines for America*, July 17, 2020, https://www.airlines.org/dataset/impact-of-covid19-data-updates/#.

3. COVID-19 Will Have a Longer and More Severe Impact Than Originally Anticipated and Negatively Impact Demand for Air Transportation

In March, it was entirely reasonable to believe that six months of PSP funding would provide airline workers with sufficient financial assistance to bridge the worst of the pandemic.[52] But the state of the pandemic is very different today than it was when Congress signed the CARES Act into law on March 27. On that day, the U.S. was averaging about 17,000 confirmed cases per day (with the outbreak largely limited to the Northeast, particularly New York City), COVID-19-related deaths had reached roughly 2,000 people nationwide, and there no firm confirmation from public health entities that asymptomatic individuals could spread the virus.[53] Further, many scientists and public health officials were hopeful that the virus would subside during the summer months and that most consumers and businesses would be comfortable resuming their typical travel patterns by the fall.[54]

Those hopes have been dashed. Today the U.S. is averaging about four times as many (over 65,000) confirmed cases per day—with infections reaching their all-time high in many states across the

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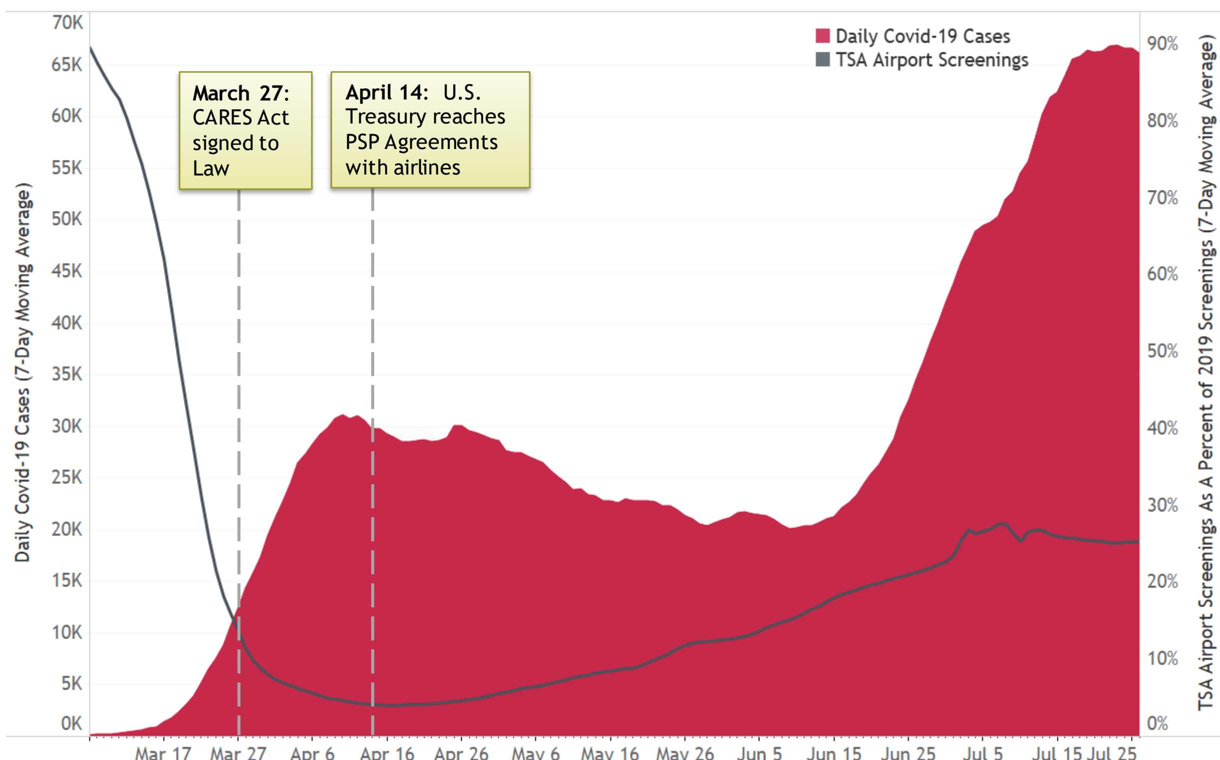
[52] *See, e.g.*, Senate Session, Part 1, 116th Cong., March 24, 2020 (According to Sen. Roy Blunt, "In fact, at the big business level, I think one of the criteria for some of the potential programs would be that you have to keep your employees in place through maybe, in case of airlines, I hear it could be as long as sometime in September. And hopefully by September that business has recovered to the point that it's not a hardship to keep those businesses in place."); *see also* "Sen. Ted Cruz & Rep. Same Graves: Coronavirus Recovery – Helping Airlines Take Wing Will Boost Entire Economy," *Fox News*, April 7, 2020, https://www.foxnews.com/opinion/coronavirus-airlines-recovery-boost-us-economy-ted-cruz-sam-graves ("Soon, when the virus has been constrained and curtailed, there will be an American recovery, and a healthy and vibrant domestic airline industry will help lead it."); *and* "'We can't afford to wait': Many coronavirus relief measures are set to soon expire. But the crisis is still raging," *NBC News*, July 20, 2020, https://www.nbcnews.com/politics/politics-news/we-can-t-afford-wait-many-coronavirus-relief-measures-are-n1233098 ("'The federal government did the right thing by acting quickly to put measures in place to incentivize staying at home and provide Americans with much needed support,' Gary Cohn, President Donald Trump's former director of the National Economic Council, told NBC News in a statement. 'At the time there was an expectation that we would see some form of decline in COVID-19 cases by this point,' he said. 'That has obviously not been the case everywhere and more relief is needed.'"); *and* "Coronavirus Models Are Nearing Consensus, but Reopening Could Throw Them Off Again," *The New York Times*, May 12, 2020, https://www.nytimes.com/interactive/2020/05/12/upshot/coronavirus-models.html ("A model from the University of Washington, once frequently cited by the White House for its relatively optimistic mortality estimates, has been retooled, and its expected death totals have risen. . . . As the past record of the models depicted above shows, some of the older predictions have missed by quite a bit.").

[53] *See* Institute for Health Metrics and Evaluation, https://covid19.healthdata.org/united-states-of-america; *see also* "Infected But Feeling Fine: the Unwitting Coronavirus Spreaders," *The New York Times*, March 31, 2020, https://www.nytimes.com/2020/03/31/health/coronavirus-asymptomatic-transmission.html, ("Researchers do not know precisely how many people are infected without feeling ill, or if some of them are simply presymptomatic. But since the new coronavirus surfaced in December, they have spotted unsettling anecdotes of apparently healthy people who were unwitting spreaders.").

[54] *See, e.g.*, "Scientists Hoped Summer Temperatures Would Tamp Down COVID-19 Cases. What Happened?" *The Wall Street Journal*, July 13, 2020, https://www.wsj.com/articles/scientists-hoped-summer-temperatures-would-tamp-down-covid-19-cases-what-happened-11594632601, ("Just a few months back, some scientists hoped summer conditions might help tamp down coronavirus transmission.").

South and West—and over 150,000 Americans have lost their lives to the virus in just a few short months.[55] With confirmed cases rising and evidence of asymptomatic spread, consumer confidence in flying is far from restored.[56] Indeed, as show in Figure 12, as the daily rate of confirmed COVID-19 cases moderated during April, May, and first half of June, air traffic began to steadily (albeit slowly) return. However, with the surge in new case activity that began in late June and that has continued to the present day, traffic gain began to reverse, and travelers began postponing their summer vacation plans (or altering them in ways that circumvent air travel).[57]

Figure 12: Daily Confirmed COVID Cases vs. Travelers Passing Through TSA Checkpoints (7-day Moving Average)



Source: The COVID Tracking Project; Transportation Security Administration.
Notes: 7-day moving average of U.S. Covid-19 cases and TSA airport screenings. Data through July 26, 2020.

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[55] *See* "Coronavirus in the U.S.: Latest Map and Case Count," *New York Times*, July 29, 2020, https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html.

[56] *See, e.g.*, "Evidence Supporting Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 While Presymptomatic or Asymptomatic," *CDC*, July 2020 https://wwwnc.cdc.gov/eid/article/26/7/20-1595_article.

[57] *See, e.g.*, Harris Poll, COVID-19 Tracker: Wave 19, July 10-12 (surveying 2000 U.S. adults and finding (i) 58% of leisure travelers will substitute vacations with staycations, (ii) 50% will substitute holiday travel for virtual gatherings; and (iii) 65% of leisure travelers will travel by car as opposed to plan this summer).

Many travelers will not resume their traditional travel patterns until an effective vaccine is widely available[58]—which public health officials are optimistic may occur in the first half of 2021.[59] Exacerbating the problem, the pandemic's persistence has forced businesses to extend corporate travel bans, which has consequently led to slower recovery of business travel than originally anticipated.[60] The airline industry is highly seasonal, demand in the months of October, November, December and January (with the exception of the holidays) traditionally is driven disproportionately by business traffic, and there is no sign that business travel will rebound any time soon. Several airlines have been transparent that they do not believe a more normal demand environment will return until there is an available vaccine. For example, United's CEO has stated that he predicts a gradual rebound in demand up to 50% and then a rapid recovery beyond that once a vaccine is available.[61] Southwest has echoed these sentiments, stating in its quarterly earnings release that travel demand will likely remain depressed until a vaccine or effective therapeutic treatment becomes available.[62] And industry forecasts now predict that global traffic will not return to 2019 levels before 2024, a year later than previously projected.[63]

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[58] *See, e.g.*, IPSOS: Travel and Hospitality in the Time of COVID-19, June 17, 2020, https://www.ipsos.com/sites/default/files/ipsos-topline-travel-hospitality-061720-v2.pdf (surveying 1,000 U.S. adults and finding that (i) nearly 20% of responded will not take a vacation via air travel until a vaccine or treatment is available, whereas another 17% will not travel by for at least a year, 12% will not travel for at least another seven months, and 11% will not travel for another four to six months; and (ii) 18% of business travelers will not feel comfortable traveling for business until a vaccine or treatment is available).

[59] *See, e.g.*, "US Gets Reality Checks on COVID-19 Vaccine, Duration of Symptoms," *CNN*, July 24, 2020, https://www.cnn.com/2020/07/24/health/us-coronavirus-friday/index.html ("'I think as we get into 2021, several months in, that you would have [a] vaccine that would be widely available to people in the United States,' Fauci told the Washington Post's Bob Costa during a Post Live event.").

[60] *See, e.g.*, "The II Fear Index: No Business-as-Usual Anytime Soon," *Institutional Investor*, June 2, 2020, https://www.institutionalinvestor.com/article/b1lww63gcm71lj/The-II-Fear-Index-No-Business-as-Usual-Anytime-Soon (polling chief information officers, portfolio managers and other investment decision makers and finding that over 50% would not expect business travel to resume again until at least December 2020, at the earliest, with most believing business travel will not resume until sometime in 2021); *see also* "Best Guess on When Business Travel Will Recover? It Could Be Years," *The New York Times*, July 13, 2020, https://www.nytimes.com/2020/07/13/business/business-travel-hotels-airlines.html.

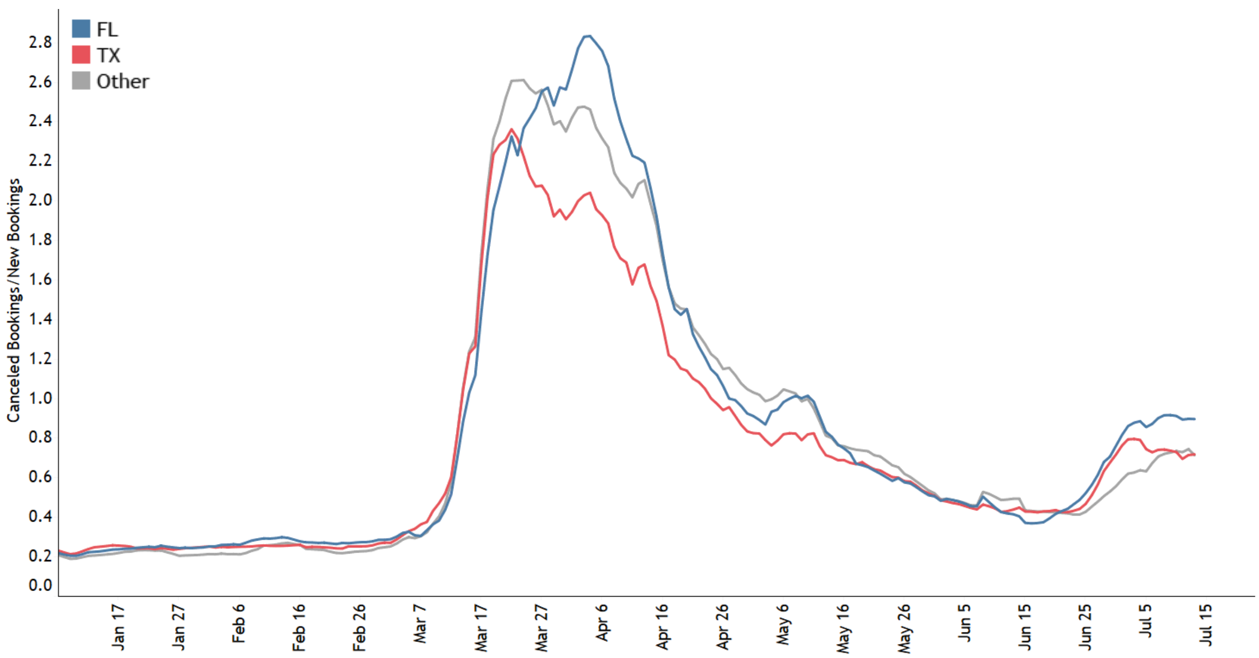
[61] *See* United Airlines Holdings, Inc. Q2 2020 Earnings Conference Call Transcript, July 22, 2020 ("*See* United Airlines Holdings, Inc. Q2 2020 Earnings Conference Call Transcript, July 22, 2020.").

[62] Southwest Airlines Co. Q2 2020 Investor Relations News Release.

[63] *See* "COVID-19: June Data and Revised Air Travel Outlook," Brian Pearce, Chief Economist, *IATA*, July 28, 2020, https://www.iata.org/en/iata-repository/publications/economic-reports/june-data-and-revised-air-travel-outlook/. *See also*, "Recovery Delayed as International Travel Remains Locked Down," *IATA*, July 28, 2020. https://www.iata.org/en/pressroom/pr/2020-07-28-02/.

It is thus increasingly apparent that air travel demand will remain severely depressed well after carriers exhaust PSP funding on September 30. Recent increases in COVID-19 cases nationwide and in hard-hit locations such as Florida have seen a reversal in positive bookings trends, with cancellations on American increasing in July, as demonstrated in Figure 13 below.[64] This is true today even in locations that had previously started to lead domestic travel recovery in April/May (such as Texas).

Figure 13: American Airlines Ratio of Cancellations to New Bookings by State

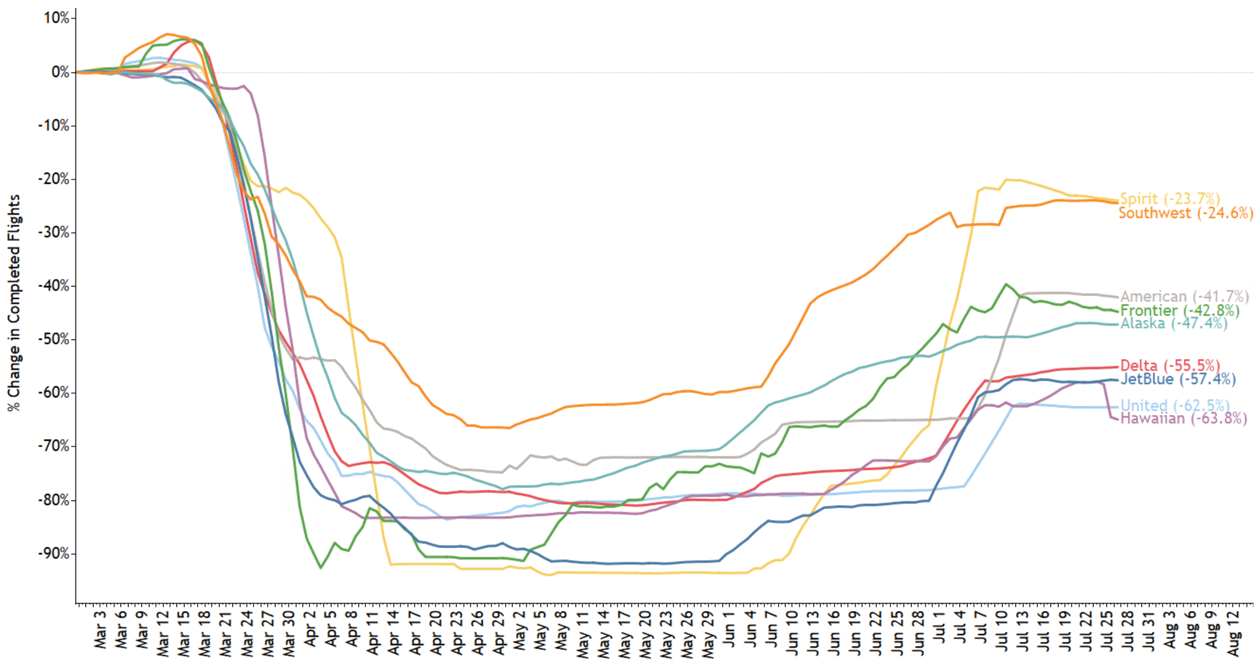


Source: American Airlines bookings data.
Notes: Seven-day moving average of ratio of canceled bookings to new bookings by O&D origin state. Domestic trips only. Data through July 13, 2020. Excludes bookings for trips going to Florida or Texas.

[64] The positive booking trends apparent early this summer were not uniform across the country, with some of the states that were initially the hardest hit (e.g., New York) not seeing the same improvements.

What is more, the paucity of business travel is likely to keep passenger traffic and yields at extremely low levels well past the exhaustion of PSP funding in September.[65] Indeed, as traffic growth has stalled, airlines have slowed—or even reversed—their capacity growth, as shown in Figure 14. For example, Delta has reduced by half its plans for additional flights in August.[66]

Figure 14: Departures by U.S. Airlines Relative to Last Year's Level of Departures



Source: MasFlight through July 27, 2020.
Notes: Percent change in U.S. marketing carrier completed flights relative to the same day of the week ending February 29, 2020. Seven-day moving average.

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[65] The second quarter has typically been the quarter where airlines achieve their highest RASM, with lower revenues in the remainder of the year. This year, however, the revenue and traffic decline following the second quarter will likely be more severe due to the slow return of business travel demand (and international business travel in particular), which is responsible for a larger proportion of revenue during the fall and winter. Indeed, IATA's Director General has said that, "Domestic traffic improvements notwithstanding, international traffic, which in normal times accounts for close to two-thirds of global air travel, remains virtually non-existent. Most countries are still closed to international arrivals or have imposed quarantines, that have the same effect as an outright lockdown. Summer — our industry's busiest season — is passing by rapidly; with little chance for an upswing in international air travel unless governments move quickly and decisively to find alternatives to border closures, confidence-destroying stop-start re-openings and demand-killing quarantine." *See* "Recovery Delayed as International Travel Remains Locked Down," *IATA*, July 28, 2020. https://www.iata.org/en/pressroom/pr/2020-07-28-02/.

[66] After announcing it would add an additional 1,000 flights per day in August, Delta reversed course and will now add 500 daily flights in August. *See* "Delta posts worst loss since 2008 and cuts flights," *CNN*, July 14, 2020, https://www.cnn.com/2020/07/14/investing/delta-losses/index.html, ("Delta (DAL) had planned to add 1,000 flights a day to its August schedule as it and other airlines reported a modest pickup in bookings for June and July. Although Delta initially added 1,000 flights a day to its August schedule, CEO Ed Bastian confirmed it will now add only 500 as rising coronavirus cases in southern states and quarantine rules on travelers to the Northeast were put in place.")

As a result, the industry is and will remain substantially overstaffed after October 1 until airlines witness a more normal demand environment.[67] For instance, American projects that it will be overstaffed by thousands of employees by September 30 when PSP funds run out. As such, on July 15 American issued WARN Act notices to over 27,000 mainline and regional employees, including 9,950 flight attendants, 4,500 fleet service agents, 3,900 customer service agents, 3,200 mechanics, and 2,500 pilots.[68] United also issued WARN Act notices in July to approximately 36,000 employees, including 15,000 flight attendants, 11,000 customer service agents, 5,500 maintenance workers, and 2,250 pilots, amongst others.[69] Spirit has recently indicated that 20% to 30% of workers may be furloughed,[70] Delta has warned its pilots that 2,500 of them may be furloughed if they do not agree to wage reductions,[71] and it is reasonable to believe that several other carriers may soon be forced to follow suit.[72] Accordingly, without an extension of the PSP, over one hundred thousand airline employees could be furloughed starting on October 1.[73] Beyond sheer job losses, mass furloughs in reverse seniority order (by contract) will put upward unit cost pressure on airlines, increasing the already-difficult task of restoring sustainable air service.

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[67] The industry will be overstaffed notwithstanding the employees voluntarily separating from airlines or taking leaves or reduced hours.

[68] *See* American Airlines Group, Inc. and American Airlines, Inc., Form 8-K, Ex. No. 99.1, July 15, 2020; *see also* "American Airlines Is Notifying 25,000 Workers of Possible Layoffs—Almost 20% of the Company," *Business Insider*, July 15, 2020, https://www.businessinsider.com/american-airlines-furlough-layoff-warn-coronavirus-2020-7.

[69] *See* United Airlines, Inc., FORM 8-K, Ex. No. 99.1, July 7, 2020; *see also* "United Airlines Will Warn 36,000 Workers of Possible Layoffs—More Than a Third of Its Entire Workforce," *Business Insider*, July 8, 2020, https://www.businessinsider.com/united-airlines-warn-furloughs-layoffs-coronavirus-2020-7.

[70] *See* "Spirit Airlines says 20% to 30% of workers at risk of furloughs: CEO's memo," *Reuters*, July 28, 2020, https://www.reuters.com/article/us-health-coronavirus-spirit-airlines-jo/spirit-airlines-says-20-to-30-of-workers-at-risk-of-furloughs-ceos-memo-idUSKCN24U064.

[71] *See* "Delta Seeks to Cut Pilots' Minimum Pay to Avoid Furloughs for a Year," *CNBC*, July 17, 2020, https://www.cnbc.com/2020/07/17/delta-seeks-to-cut-pilots-minimum-pay-to-avoid-furloughs-for-a-year.html.

[72] *See, e.g.*, "Southwest Air Says Flyer Numbers Need to Triple to Avoid Layoffs," *Bloomberg Law*, July 13, 2020, https://news.bloomberglaw.com/employee-benefits/southwest-air-says-flyer-numbers-need-to-triple-to-avoid-layoffs, ("Southwest Airlines Co. needs passenger numbers to triple by year-end if it's going to avoid the carrier's first ever involuntary job cuts . . . . Although some workers took previous shorter-term options, the carrier remains overstaffed for current operations, CEO Gary Kelly warned . . . .").

[73] The federal Worker Adjustment and Retraining Notification Act (WARN Act) requires 60 days' advance written notice for mass furloughs. *See* Department Labor WARN Act Frequently Asked Questions, https://www.dol.gov/sites/dolgov/files/ETA/Layoff/pdfs/WARN%20FAQ%20for%20COVID19.pdf. Similarly, many states' WARN Act laws require 90 to 60 days' notice prior to mass layoffs. *Compare* Cal-WARN Act, https://www.dir.ca.gov/dlse/Cal-WARNAct.html (requiring 60 days' advance written notice) *with* New York WARN Act, https://labor.ny.gov/formsdocs/factsheets/PDFs/p483.pdf (requiring 90 days' advance written notice). As a result, in most cases any airline that is planning to mass furlough on or shortly after October 1 may not have yet been required to issue WARN Notices.

Consequently, airlines will soon be forced to make capacity decisions that incorporate the cost of labor into their flight profitability decisions, which will result in less service options and fewer flights. In turn, reduced service options for consumers and businesses will lead to a slower the recovery of the broader U.S. economy by inhibiting tourism, commerce and trade.

4. Extending the PSP for Airline Employees Will Continue the Well-Documented Payroll-Related Benefits to the U.S. Treasury and State Treasuries

By extending the PSP for six months until March 31, 2021, by which time a vaccine is likely to become available,[74] U.S. airlines can delay—and potentially avoid altogether—the bulk of the involuntary furloughs that would otherwise occur and enable airlines to continue to operate significantly more capacity than they otherwise would. As with the initial PSP, an extension of the relief for airline employees that would otherwise be involuntarily furloughed will be "fully funded" and create more benefits to the U.S. Treasury and state treasuries and the broader economy than the cost of the payroll support. Just like the initial PSP, the payroll-related benefits will take the form of additional tax receipts and avoided unemployment-related costs, and increased spending in the U.S. economy.[75]

Specifically, extending the PSP by six months will unlock \$1.9 to \$3.8 billion in in *direct benefits* to the U.S. Treasury and state treasuries, assuming that absent the PSP extension 15% to 30% of

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[74] *See, e.g.*, "A Coronavirus Vaccine: Where Does It Stand?" *Kaiser Health News*, July 16, 2020, https://khn.org/news/a-coronavirus-vaccine-where-does-it-stand/ ("Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, and other officials have remained consistent in their estimation of the timeline: 12 to 18 months from the start of the pandemic, or roughly the late spring of 2021."); *see also* "Coronavirus Vaccine Tracker," *The New York Times*, https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html *and* "Dr. Fauci Says Coronavirus Vaccine Likely Won't Be 'Widely' Available Until Several Months Into 2021," *CNBC*, July 24, 2020, https://www.cnbc.com/2020/07/24/dr-fauci-says-coronavirus-vaccine-likely-wont-be-widely-available-until-months-into-2021.html, ("'It is likely that at the beginning of next year we would have tens of millions of doses available,' Fauci said, adding that some drugmakers have predicted more doses than that. 'I think as we get into 2021, several months in, that you would have vaccines that would be widely available.'").

[75] Similar to the quantified benefits in the CARES Act white paper, the benefits of the PSP extension that are quantified here are conservative estimates, as they exclude other avoided federal and state-level cost such as Medicaid and corporate income taxes.

U.S. passenger airline employees would be furloughed on October 1, 2020.[76] The quantified economic benefits of extending the PSP include:[77]

- **Increased Federal Income Tax Revenues of $462-$924 million**: By extending the PSP by six months and enabling the airlines to avoid furloughs, employees will have higher incomes for the six-month PSP extension than if they had been furloughed. These higher incomes are subject to standard Federal income tax, which is estimated to be $462-$924 million;[78]

- **Increased State Income Tax Revenues of $74-$148 million**: Similarly, the additional income from the PSP extension will be subject to standard state income tax which is estimated to be $74-$148 million;[79]

- **Increased Municipal Tax Revenues of $0.9-$1.8 million:** The higher incomes protected by the PSP extension will also be subject to municipal income tax in some jurisdictions which is estimated to be $0.9-$1.8 million;[80]

- **Reduced State Unemployment Insurance Claims of $0.9-$1.8 billion**: Absent the PSP extension, the employees who would be furloughed would then be eligible for state unemployment insurance benefits estimated at $0.9-$1.8 billion between October 1, 2020 and March 31, 2021. Because the Federal Pandemic Unemployment Compensation contained in the CARES Act is set to expire on July 31, 2020, we do not assume any additional Federal unemployment benefits would be available to furloughed airline

[76] The high end of this range is consistent with United's announced WARN notices, (see footnote 69 above). The exact number of necessary industry furloughs absent a PSP extension is uncertain and depends on the speed of the recovery and ability of airlines to achieve voluntary reductions in staffing or other voluntary changes.

[77] These benefit estimates are based on the benefits estimated and discussed in the Compass Lexecon CARES Act white paper. Each type of direct benefit that is based on avoided furloughs is proportional to the amount of avoided furloughs (i.e., benefits of avoiding 30% furloughs are twice the benefits of avoiding 15% furloughs and half the benefits of avoiding 60% furloughs).

[78] *See* Compass Lexecon CARES Act white paper. These estimates are conservative because they are proportional to the avoided furloughs in the Compass Lexecon CARES Act white paper and those estimates of incremental federal income tax revenue included only tax revenue that would be paid above and beyond the federal income taxes that would be owed for the state unemployment insurance claims *and federal pandemic unemployment compensation* that employees would receive in the absence of the initial PSP. Because the federal pandemic unemployment compensation has not been extended, the incremental federal income tax revenue would be larger by the amount of tax that would otherwise be owed on the federal pandemic unemployment compensation.

[79] *See* Compass Lexecon CARES Act white paper. State income tax estimate includes income taxes in 42 states plus the District of Columbia, Puerto Rico, and the Virgin Islands. These estimates are conservative because they are proportional to the avoided furloughs in the Compass Lexecon CARES Act white paper and those estimates are based on the incremental employee income above and beyond the state unemployment insurance claims *and federal pandemic unemployment compensation*. Because the federal pandemic unemployment compensation has not been extended, the incremental state income tax revenue would be larger by the amount of tax that would otherwise be owed on the federal pandemic unemployment compensation.

[80] *See* Compass Lexecon CARES Act white paper. While many municipalities collect income-based taxes, these estimates include only the municipal income taxes in New York City, Philadelphia, San Francisco, Indianapolis, Detroit, Louisville, Baltimore, and Columbus.

employees, absent the PSP extension, although it remains to be seen whether additional similar programs are approved or extended by Congress and the Administration,[81]

- **<u>Increased Social Security and Medicare Tax Contributions of $465-$930 million</u>**: The incomes protected by the PSP extension would also be subject to the employee and employer paid Social Security and Medicare taxes and protecting these incomes will result in an estimated $465-$930 million of additional Social Security and Medicare tax contributions;[82] and

- **<u>Increased State Unemployment Insurance Tax Contributions of $15-$30 million</u>**: Employers, like the U.S. passenger airlines are also required to pay state unemployment insurance taxes and the wages maintained by the PSP extension would result in an estimated $15-$30 million in additional contributions.[83]

Moreover, by keeping over one hundred thousand airline employees who would otherwise be furloughed on October 1, 2020, on the payroll, a PSP extension will also provide additional benefits to the local economies where airline employees and their families live and spend their disposable income. Each dollar of incremental income received by airline employees due to the PSP extension (*i.e.*, the difference between the salary and benefits they will receive through payroll continuation and what they would have received if furloughed in the form of state unemployment benefits) generates approximately $0.50 in additional economic activity in the U.S economy, an economic effect known as the "induced multiplier."[84] This well-understood economic impact is attributable to the extra income of airline employees being spent in their local communities (and beyond), which

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[81] *See* Compass Lexecon CARES Act white paper. Because the CARES Act extended unemployment benefits by up to 13 weeks, this calculation assumes that all eligible furloughed employees would have received unemployment compensation for the period between October 1, 2020 and March 31, 2021, if the PSP is not extended. Although some states provide increased unemployment benefits for unemployed workers with dependents, these estimates conservatively do not contain increased payments for dependents.

[82] *See* Compass Lexecon CARES Act white paper. Estimated Social Security and Medicare tax contributions include both employer and employee paid portions, as applicable, for wages estimated to be paid for work between October 1, 2020 and March 31, 2021 that would not have been paid absent the PSP extension. To the extent additional Federal support allows the deferral of the employer portion of Social Security taxes, these taxes will continue to accrue as a liability that will need to be paid once the deferral period ends and the increased Social Security and Medicare tax contributions remain a benefit to the U.S. Treasury and taxpayers. While some states—including California, Massachusetts, Nevada, and New York—have additional payroll tax deductions, these additional taxes that would be paid to the states are not included in the estimates.

[83] *See* Compass Lexecon CARES Act white paper. Estimated contributions based on the average state contribution rates applied to the wages maintained as a result of the PSP extension.

[84] The induced multiplier of $0.50 per dollar of airline wages is based on the average of the 0.4 multiplier in a study by Oxford Economics and the 0.6 multiplier from government spending on real private consumption during a recession in a well-cited academic paper estimating multipliers during recessions. *See* Oxford Economics, "Economic Benefits from Air Transport in the US," 2011, p. 14 and "Fiscal Multipliers in Recession and Expansion," by Alan Auerbach and Yuriy Gorodnichnko, Chapter 2 in <u>Fiscal Policy after the Financial Crisis</u>, Alberto Alesina and Francesco Giavazzi, Editors, University of Chicago Press, 2013, Table 2.1.

then continues to recirculate throughout the economy. Based on this multiplier effect, a PSP extension would result in an additional ***$1.8-$3.7 billion of induced economic activity***.[85]

5. Extending the PSP for Airline Employees Will Unlock Tens of Billions of Dollars in Benefits—More than the Cost of the PSP—to the Broader U.S. Economy from Increased Capacity

Beyond payroll-related benefits, a six-month PSP extension will also generate *significant* benefits (tens of billions of dollars) from the incremental capacity that carriers will be incentivized to add, including benefits throughout the airline supply chain and benefits from increased travel. Specifically, keeping airline employees on the payroll and by lowering the marginal cost of flying and break-even load factors, extending the PSP beyond September 30, 2020, will create significant incentives for U.S. carriers to offer even more capacity than the initial CARES Act funding created.[86] In our initial CARES Act white paper, we presented a range of assumptions (5, 10, and 15 percentage points) regarding the incremental capacity that carriers would be able to offer because of the PSP. However, as discussed in section 2.b., in the four months since the initial PSP has been in place, the power of the PSP's incentives for carriers to add additional capacity has become increasingly evident and U.S. airlines in July, on average, offered nearly 20 percentage points more domestic flights than carriers in other parts of the world as shown in Figure 5 above.

Moreover, analysis of American's route level profitability reports reveals that, in June 2020, of the 35 percentage points of domestic capacity American offered (relative to June 2019), 27 percentage points would have operated at a *cash loss* absent the CARES Act support.[87] Given this analysis, it is reasonable to conclude that the assumptions regarding the incremental capacity that carriers would be able to offer because of the PSP contained in our initial CARES Act white paper were highly conservative. It is therefore reasonable to conclude that by extending the PSP beyond

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[85] These estimates of induced spending account for the fact that the federal pandemic unemployment compensation has not been extended and include the induced spending effects of the incremental income provided by the PSP above and beyond state unemployment insurance claims.

[86] *See* Compass Lexecon CARES Act white paper, pp. 17-19.

[87] Routes that would have operated at a cash loss absent the CARES Act support are those that have a negative "System Direct Contribution" when payroll costs are included, which measures the cash contribution of an individual route when only direct expenses are considered. Direct expenses are the costs that American allocates to flights that are largely variable with levels of flying and primarily include frontline employee salaries and benefits, fuel, aircraft maintenance, landing and navigation fees, selling expenses, catering expenses, ground maintenance, and cargo expenses.

September 30, 2020, U.S. airlines, *on average*, will be enabled to add at least 10 to 15 percentage points of incremental capacity.[88] And as described in the CARES Act white paper, this additional capacity results in economic benefits by generating additional demand by U.S. airlines within their supply chains and stimulating additional *domestic* travel by creating more opportunities and options for travel.[89]

As was the case with the initial PSP, the additional capacity from a PSP extension will increase spending throughout U.S. carriers' supply chain, and this increase is captured by the *indirect multiplier*. The indirect multiplier captures the downstream economic activity that is generated when firms in an upstream industry (*e.g.*, airlines) purchase the goods and services they need to perform their operations (*e.g.*, operate flights) and is expressed as a ratio of the upstream firms' direct spending.[90] Assuming that the PSP extension incents and enables U.S. airlines on average to restore capacity (relative to pre-pandemic planned levels) by an additional 10 to 15 percentage points between October 1, 2020, and March 31, 2021, through the indirect multiplier effect, this increase of flying translates into a $3.3-$5.0 billion increase in economy activity throughout the airline supply chain.[91]

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[88] This additional capacity is incremental to the capacity benefits from the initial PSP estimated in the Compass Lexecon CARES Act white paper. While some carriers have added more capacity than others, these estimates are for the industry average. For example, American Airlines has so far added relatively more PSP-enabled capacity than the rest of the industry, flying 55% of its domestic capacity in July. *See* "Bring on Summer: American Airlines Increases Domestic Flying for Summer Travel Season, Begins Reopening Admirals Clubs and Increases Flexibility," *American Airlines*, June 4, 2020, http://news.aa.com/news/news-details/2020/Bring-on-Summer-American-Airlines-Increases-Domestic-Flying-for-Summer-Travel-Season-Begins-Reopening-Admirals-Clubs-and-Increases-Flexibility-OPS-DIS-06/default.aspx. *See also* "Why American Airlines Is Growing Twice as Fast as Delta and United," *Forbes*, June 28, 2020, https://www.forbes.com/sites/willhorton1/2020/06/28/why-american-airlines-is-growing-twice-as-fast-as-delta-and-united.

[89] *See* Compass Lexecon CARES Act white paper, pp. 19-22.

[90] Based on a study of the economic impact of the U.S. airline industry by Oxford Economics, we assume an indirect multiplier of 1.09. *See* Oxford Economics, "Economic Benefits from Air Transport in the US," 2011, p. 14.

[91] The direct spending by airlines on salaries and benefits needed to produce 10 percent of their pre-pandemic capacity for six months is approximately $3.0 billion. When multiplied by the indirect multiplier of 1.09, this results in supply chain economic benefits of $3.3 billion, much of which will flow to hard hit sectors such as those that supply jet fuel and airline catering services.

Similarly, by enabling additional capacity, the PSP extension will stimulate additional domestic travel—as the initial PSP-enabled incremental capacity has done this summer—which is estimated to result in $4.3-$6.5 billion in additional passenger spending over this period.[92]

Moreover, by keeping over one hundred thousand airline employees who would otherwise be furloughed on October 1, 2020 on the payroll, a PSP extension will also help to accelerate the restoration of capacity over the next two years—particularly as international markets start to re-open—thereby providing substantial economic dividends to the U.S. economy. Based on the same assumptions described in the CARES Act white paper,[93] it is reasonable to conclude that by enabling the retention of airline employees and facilitating additional capacity, the PSP extension will provide enduring benefits through incremental industry-wide capacity of 10 to 15 percentage points—above and beyond the additional capacity incentivized by the initial PSP, as described in the CARES Act white paper—relative to pre-pandemic capacity from April 1, 2021, to March 31, 2022, and an incremental 5.0 to 7.5 percentage points relative to pre-pandemic capacity from April 1, 2022, to March 31, 2023. These trailing effects of additional capacity over the two years following the PSP extension result in $10.0-$15.0 billion in supply chain benefits and $12.6-$18.9 billion in additional domestic tourism spending.[94]

In sum, the primary quantifiable benefits resulting from the PSP extension for U.S. airline employees, namely (1) the direct quantifiable benefits to the U.S. Treasury and state treasuries (in the form of additional taxes and reduced unemployment claims), (2) the additional consumer spending in the U.S. economy due to higher disposable income for airline employees, and (3) the

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[92] Like in the Compass Lexecon CARES Act white paper, to be conservative, we assume that even with the highly discounted pricing that carriers are likely to continue to use to encourage passengers to resume flying, the incremental capacity will still be relatively empty, with only 50% of the incremental seats filled. This assumption is highly conservative because for example, American's load factor averaged 61.8% during the first three weeks of July and only 29.0% of flights operated with load factors of 50% or less. For example, assuming airlines restore 15 percentage points more of pre-pandemic domestic capacity than they otherwise would have, it would result in an increase of 78.0 million seats and 39.0 million onboard passengers between October 1, 2020 and March 31, 2021. Further assuming that 26% of passengers make a connection (based on analysis of U.S. DOT DB1B data), this translates into approximately 15.4 million incremental round-trip domestic travelers. Based on average spending of $420 per round-trip passenger (Source: US Travel Association, "U.S. Travel and Tourism Overview (2019)," March 2020), this capacity will result in $6.5 billion in additional spending in the U.S. economy over the six month period.

[93] *See* Compass Lexecon CARES Act white paper, pp. 30-31.

[94] As discussed above, because foreign tourism benefits may be slower to materialize, we conservatively do not quantify any incremental benefits from the PSP extension due to increased foreign visitors, although by enabling the airlines to maintain their payroll and better position them for expansion when demand returns, the PSP extension would likely result in additional benefits to the U.S. economy from foreign tourism.

direct benefits to the U.S. economy arising from the incremental capacity offered by U.S. airlines that the PSP extension enables, both during the period covered by the PSP extension and beyond, are $34-$53 billion. These primary quantifiable benefits are summarized above in Figure 1.

Lastly, while the primary economic impacts that flow from the PSP extension enumerated above are substantial, they still dramatically *understate* the true and full economic benefit of the CARES Act's assistance for U.S. passenger airlines employees on the U.S. economy. Initially, because of the ongoing international travel restrictions severely limiting foreign travel to and from the United States, much of the estimated benefits from the CARES Act payroll support that was due to increased foreign visitors will likely be deferred until travel restrictions are removed. Because these benefits may be slower to materialize, we conservatively do not quantify any incremental benefits from the PSP extension due to increased foreign visitors, although by enabling the airlines to maintain their payroll and better position them for expansion when demand returns, the PSP extension would likely result in additional benefits to the U.S. economy from foreign tourism. Moreover, similar to the initial PSP, the primary benefits are also understated because the primary economic impacts quantified above do not capture the secondary spillover benefits that a larger and more robust U.S. airline industry provides through facilitating more face-to-face business meetings—that will no doubt lead to an accelerated economic recovery—or the broader societal benefits that come from friends and families being able to more easily resume their normal lives by attendings weddings, reunions, and other events, all of which depend in large part on the vital role of air travel.

6. Conclusions

The CARES Act PSP for airlines is set to expire having achieved a very important part—but not all—of its purpose, the blame for which can be placed squarely on the coronavirus's tenacity. Indeed, the evolution of the pandemic threatens to unwind the progress made through the PSP.

The PSP has undoubtedly achieved its goals of urgently providing American workers with much needed job security against the pandemic's economic fallout and preserving the health of an industry that is vital to a well-functioning national infrastructure. The ability thus far to avoid involuntary furloughs and keep airline employees on payroll has enabled airlines to maintain more domestic service than they otherwise would have in the midst of the pandemic. This additional service has enormously benefitted airlines' supply chains and stimulated more travel and additional spending throughout the country than would have otherwise occurred over the last four months. As fully funded relief for workers, the PSP has provided billions in additional tax revenues and avoided costs and will provide tens of billions more in economic activity over the next two years. It has also afforded U.S. carriers the time to engage in aggressive self-help measures to increase liquidity, avoid bankruptcy, and minimize the number of involuntary furloughs needed once the funding expires on September 30.

But now the runway needed for airlines to promote and lead the U.S. economic recovery is longer than originally anticipated and extends in time to early 2021 when the world will be closer to a vaccine. While a six-month relief package for airline industry workers made sense in late March given our experience with and expectations of the virus at that time, the pandemic's persistence has extended the industry's employees' need for bridge assistance. Without a six-month extension of the PSP, over one hundred thousand airline employees will be furloughed on or shortly after October 1. These job losses will not only be devastating to U.S. passenger airline employees, but will increase the degree of difficulty in restoring sustainable service and will jeopardize the broader economic recovery.

A six-month extension of the PSP, through March 31, 2021, can help deny this painful road ahead, allow the airlines to retain their workforces in place, and, instead, provide a more robust path to recovery that invests in American jobs while providing billions in incremental benefits to the economy and appropriate compensation for American taxpayers. A PSP extension would be self-funded, and deliver between \$34 and \$53 billion in incremental, quantifiable benefits to the economy, with the ability to unlock billions more once foreign travel recommences. Likewise, an extension of the PSP would allow the DOT to extend the service commitments for another six months resulting in many small communities maintaining air service. By continuing the "virtuous cycle" of economic recovery through March 2021, the PSP's third more elusive goal of positioning airlines to lead the economic recovery in the United States can be achieved.

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Darin Lee is an Executive Vice President at Compass Lexecon and has published numerous articles on various aspects of airline economics in journals such as *The Journal of Law & Economics*, the *Journal of Labor Economics*, *Economics of Transportation* and the *Journal of Competition Law & Economics*. Dr. Lee is also the editor of volumes I and II of the *Advances in Airline Economics* book series published by Elsevier. Dr. Lee has over 20 years of experience in the airline industry analyzing issues such as alleged anti-competitive behavior, bankruptcy reorganization, codesharing, joint ventures and antitrust immunity, labor disputes and business interruption. Dr. Lee has frequently testified as an expert on the airline industry in U.S. Federal Court and before numerous arbitration panels, and has also presented empirical analyses of airline competition issues before the U.S. Departments of Justice, State, and Transportation, as well as and numerous foreign competition bureaus. Dr. Lee holds a Ph.D. in Economics from Brown University, an M.A. in Economics from Queen's University and a B.Sc. in Economics from the University of Victoria.

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