



SUPER SUNDAYS, TROUBLED TUESDAYS

THE GROWING CHALLENGE OF DAY-OF-WEEK FLUCTUATIONS IN AIR TRAVEL

Chaddick Air Travel Brief | June 17, 2022

Our analysis of air travel patterns since late April indicates that:

- Saturday and Sunday are outperforming other days compared to pre-pandemic times,
- The traditional Tuesday and Wednesday drop-off in demand has intensified,
- As airline capacity shortages ease, day-of-week imbalances will likely further escalate,
- Day-of-week traffic variations from reduced business flying put upward pressure on leisure fares, compounding the effects of high fuel prices.

The recovery of domestic air travel has reached a point where changes in passenger travel in the wake of the pandemic can be more fully understood than only a few months ago. This independently produced brief examines changing travel volumes across different days of the week for April 30 through June 13, 2022, while also exploring the ramifications of these changes for airlines. This evaluation period coincides with the lifting of the mask mandate for airline passengers on April 18.

To make these estimates, the study team reviewed:

- The estimated number of passengers passing through TSA checkpoints at U.S. airports between 2019 and 2022. Such estimates allow for comparing travel volumes on the same day of the week across years.
- Various statistical measures of the fluctuation in passenger count between days.
- Data on major flight activity at major airports at different times of the day and week.

We provide additional details on our methods of analysis in the Appendix.

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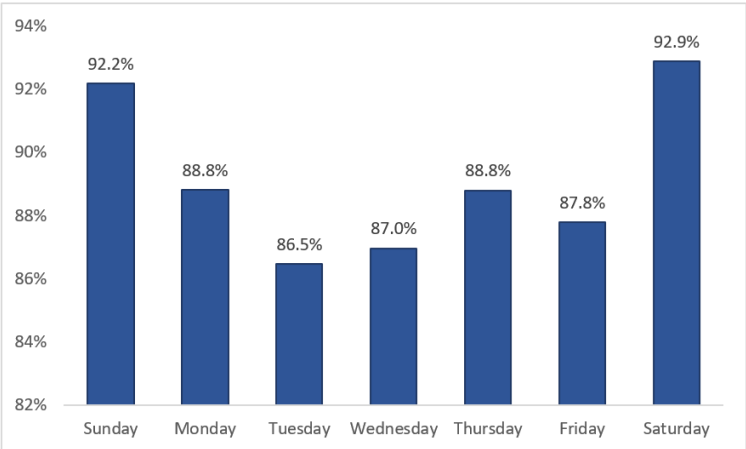
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PHOTO CAPTION (TOP): *New York LaGuardia International Airport, Sunday May 8, 2022*

MAJOR FINDINGS FROM OUR ANALYSIS:

Finding 1. Saturdays and Sundays are outperforming other days of the week by a considerable margin when compared to pre-pandemic patterns. The weakness of Tuesdays and Wednesdays, meanwhile, has intensified. These trends are driven by strong leisure travel coupled with a sharp falloff in traditional business trips.

The shift in day-of-week travel is readily apparent in the TSA data, which shows that passenger counts on Sundays are now 92.2% of 2019 levels and 92.9% on Saturdays. These estimates are based on TSA checkpoint numbers from the 45 days from April 30 to June 13. Average traffic levels across this period were 89.2%. The recovery on Tuesdays and Wednesdays lags the weekend days by a substantial margin, with counts at about 87% of 2019 levels. Such weakness is being driven by declines in traditional midweek business travel, which prior to the pandemic counterbalanced the limited demand for midweek non-business trips. A study by Deloitte released in April offers extensive data showing corporate travel far below pre-pandemic levels and explains why a full recovery may take at least a couple of years.¹

FIGURE 1: Volume of Passenger Traffic by Day of Week 2022 as a percentage of 2019, April 30 - June 13



Falling in between these peaks and valleys, Monday, Thursday, and Friday, are performing close to the all-day average. This is due to strong leisure traffic partially offsetting sluggish business traffic.

The U-shaped pattern evident in Figure 1, which is bookended by the weekend, has profound implications for airlines and their leisure-oriented customers, who we discuss in the Conclusion & Prognostication section. Even when Memorial Day weekend is excluded, a similar pattern emerges, with Saturday and Sunday both

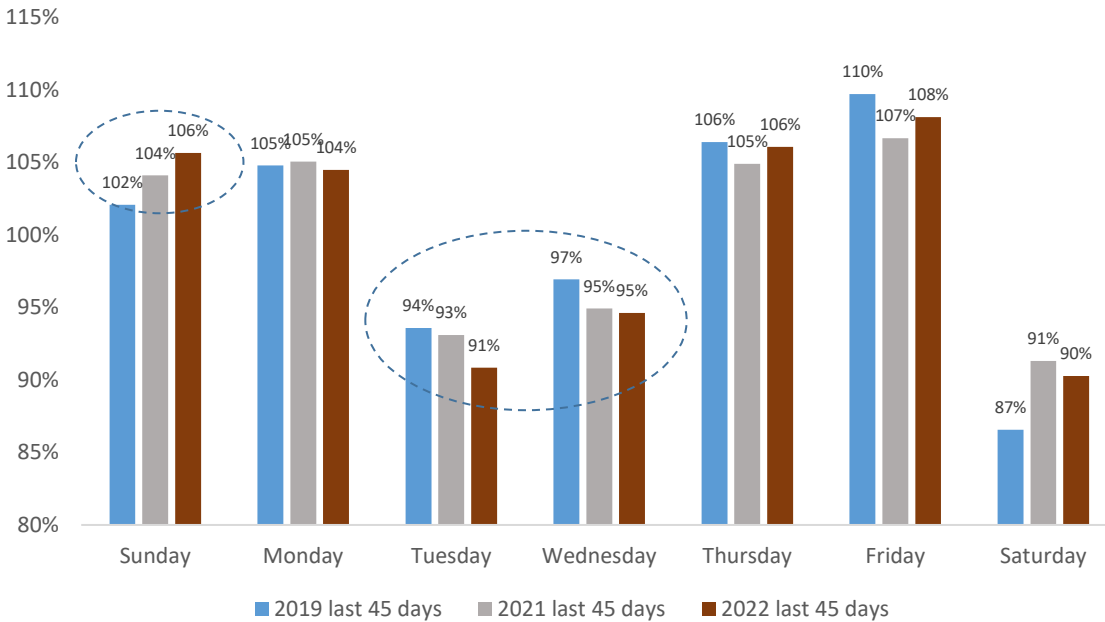
experiencing more than 92% of pre-pandemic traffic and Tuesday and Wednesday less than 88%. In fact, our analysis also shows that holidays are tending to have a diminished effect on day-of-week travel patterns than before the pandemic.

Finding 2. Sunday passenger traffic is now nearly as high as Thursday and Friday, which remain the busiest travel days. Sunday traffic averaged 6% higher over the most recent 45-day period, compared to 4% last year and 2% prior to the pandemic.

The sharp recovery of Sunday travel has pushed traffic on this day above that of Monday, which was the third busiest day of the week before the pandemic, behind Thursday and Friday. Typically, much of the Sunday traffic takes place after noon, when many passengers embark on return journeys. Monday,

Thursday, Friday, and Saturday experienced up-and-down patterns over the three years; only Sunday traffic consistently grew compared to other days.

FIGURE 2: Traffic by Day of Week versus Average Day over 45-day period, April 30 - June 13, 2022



Saturday remains the slowest day of the week, although the gap between it and Tuesday is now quite narrow. This day’s low numbers belie the increasingly frenetic nature of Saturday-morning travel, which is a popular time for leisure trips. The relatively low full-day totals for Saturday reflect a fall-off in flight activity starting in the late afternoon. Major hub operators, we found, have around 25% fewer departures after 6 pm on Saturday than on other days. See endnote 2 for a discussion of day of week flight differences.² As noted later in this brief, we expect to see an increase in Saturday evening flying.

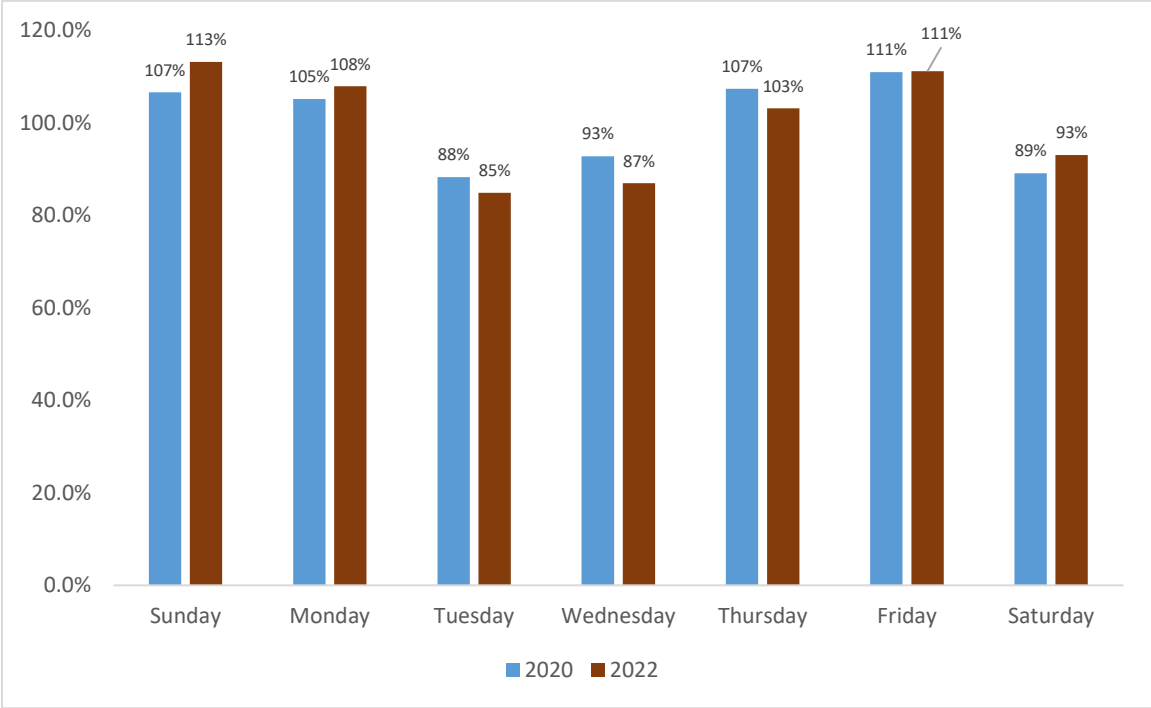


The JetBlue and Southwest tarmac at New York LaGuardia International is filled late Sunday afternoon, May 8, 2022

Finding 3. The strength of Sunday and the weakness of Tuesday-Wednesday were even more pronounced in January-February 2022, when airline capacity constraints were less acute. Compared to the same months of 2020, just before the pandemic, Sunday performed far better than any other day, while midweek days again lagged significantly.

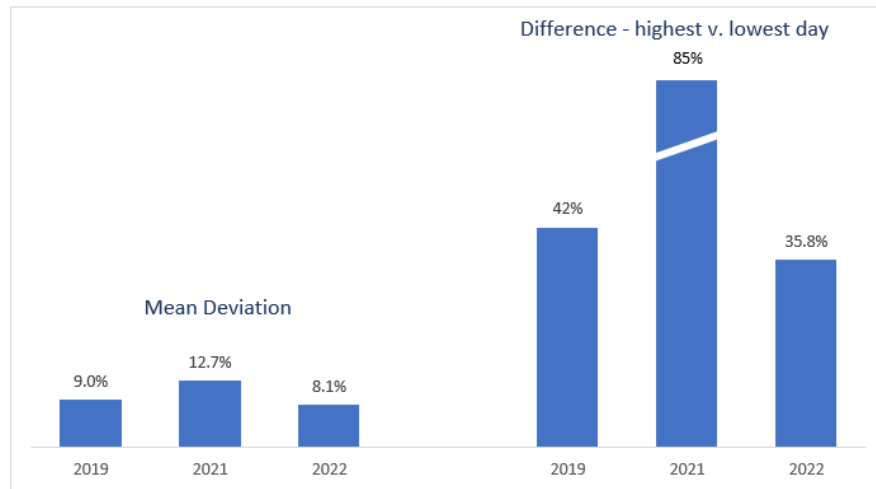
We compared travel during January and February 2022 to the same months in 2020, which were the last two months of pre-pandemic travel conditions. The results show that Sunday saw the most robust growth of any day in 2022 compared to 2020, with traffic rising from 106.5% to 113.1% of the average day. In the process, Sunday emerged as the most-traveled day of the week. Tuesday and Wednesday traffic levels fell sharply, with the former dropping from 88.3% to just 84.8% of the average day. Alternatively stated, Sunday had 33.4% more traffic than Tuesday. Sunday travel is typically strong at this time of year due in part to heavy demand for vacations to warm-weather destinations, and as of late has been even stronger.

FIGURE 3: Traffic by Day of Week versus Average Day, January & February 2020 compared to 2022



Finding 4. Airlines are benefiting from reduced *week-to-week* variation in post-pandemic travel, thus mitigating some of the problems posed by the growing day-of-week imbalances. More steady volumes from week to week are likely the result of a growing willingness of--and necessity for--passengers to alter their plans in response to price and flight-availability considerations. However, as capacity shortages ease, the fluctuation will likely again grow.

FIGURE 4: Daily Fluctuation in Passenger Traffic, April 30 to June 13



We observed much steadier traffic across the 45-day period this year than in either 2021 or 2019. Major airlines, in effect, were subjected to less guesswork about the strength of passenger demand on any particular day than before the pandemic, even as sharp differences across days of the week persist. The *mean deviation* in traffic across the 45 days (the standard deviation as a

percentage of the sample mean) surged from 9.0% in 2019 to 12.7% in 2021 but is now just 8.1%. To the extent traffic follows a normal distribution, this indicates that airlines regularly experience fluctuations of about 8% from day to day—and in rarer cases, twice or even three times that amount. We observed a similar decline in the mean deviation in the period between January 1 and April 25 as in 2022, suggesting that this is a long-term trend.

The same pattern emerges when evaluating the gap in passenger counts between the lowest day and the highest day over the 45-day periods of 2019, 2021, and 2022. The gap rose from 42% in 2019 to 85% in 2021 (when the uncertainties of COVID-19 loomed large) before plummeting to 35.8% in 2022. This same pattern was observed in traffic from January 1 – April 29.

The leveling of traffic appears to be partially driven by the inability of airlines to provide sufficient capacity to meet customer peak-period demand, which is reflected in extreme differences in fares from one day to the next. As Delta Airlines' CEO recently noted, "We're only a little over 80 percent recovered as an airline, yet the demand is already over 100 percent."³ The steadiness may also reflect the tendency for passengers to be involuntarily rebooked away from peak to off-peak days when flight cancellations arise due to staff shortages. Either way, airlines appear to be benefitting from having traffic dispersed more evenly across extended periods of time than before (or during) the pandemic.

This stability, however, is likely to partially evaporate as capacity shortages ease, which will give more consumers the ability to travel at their preferred time. Airlines unable to cater to consumer desires to depart at certain times (and pay a certain fare) will recapture fewer of these passengers on other flights if they fail to meet these desires. As airlines compete more heavily based on price and convenience, the weakness of midweek travel and week-to-week variation in traffic will both likely grow worse.

Conclusion & Prognostications

Offering several conclusions and prognostications:

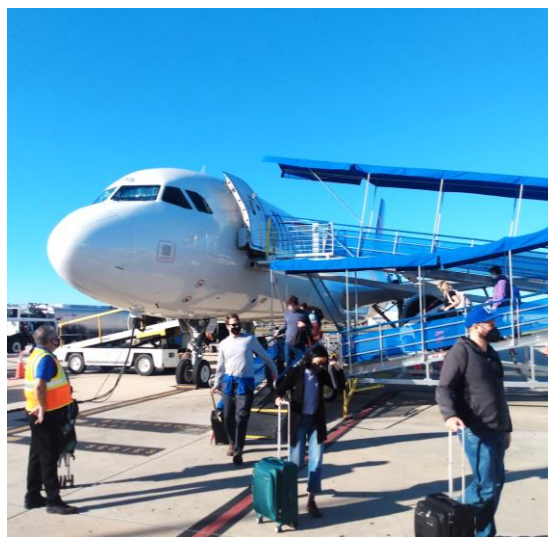
1. Airlines will “ramp up” Saturday evening and Sunday morning schedules in response to growing interest in travel on these days. Travelers can expect to see more late-afternoon and evening Saturday flights as growing leisure traffic strains airline networks at other times.

2. Weakness in high-fare business travel, exemplified by low Tuesday-Wednesday passenger volumes, will continue to exert upward pressure on leisure fares, particularly for Thursday – Sunday flying. The relative dearth of business traffic deprives airlines of high-yield business that once covered much of the fixed cost generated by their vast networks. Shifting this cost to leisure and personal-trip flyers, who tend to be more price-elastic, is difficult. Ultimately, however, it will require leisure travelers to pay higher fares than before the pandemic, even if this suppresses passenger volumes.

3. The surge in fuel costs puts airlines in a conundrum, having to balance the benefits of flying larger planes, which reduce per-passenger fuel consumption, with the problem of having too many seats during the midweek. Dealing with this conundrum requires airlines to find new ways to smooth out traffic. Discounts for passengers willing to shift from peak days to Tuesday and Wednesday will likely be larger than before the pandemic. Increased coordination with hotels and cruises to promote midweek is also likely in the offing.

4. Continuing weaknesses in midweek traffic may compel airlines to continue operating regional jets on certain business-oriented routes to avoid having excess capacity in low-demand times, even though this drives up seat-mile costs. Airlines are, in some ways, facing the same problem as intercity bus lines, which also have strong Thursday – Monday traffic but soft midweek demand. Although certain bus lines sideline their fleets during low-demand days, this is a less viable strategy for airlines, which must pay the formidable fixed costs of maintaining their fleets. This compels them to keep planes in the air so long as flights make at least a modest contribution toward covering fixed costs.

5. Steadier flow of passengers from week to week suggests that airlines now benefit from the willingness of consumers to adjust their trips in response to seat-availability and price considerations. Such adjustments are helping lessen some of the dramatic swings in traffic observed during the pandemic. Airline load factors could reach record levels in upcoming months as a result. As supply shortages ebb, however, consumers will have greater choice. As result, both week-to-week and day-to-day fluctuations in traffic will likely rise and become an unwelcome “new normal” in air travel.



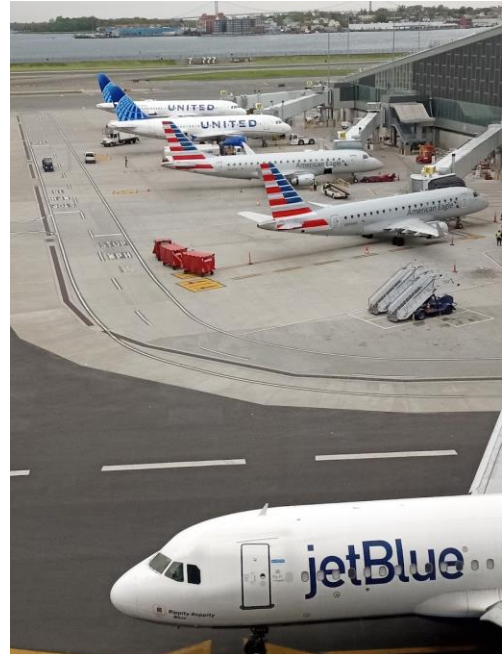
Passengers deplane an Allegiant Airlines jet at St. Pete-Clearwater International Airport in January 2022

Appendix: Notes on using the TSA Checkpoint Numbers

The primary sources of data used in this brief are the “TSA checkpoint travel numbers (current year versus prior year(s)/same weekday,” TSA matches travel numbers for each day in 2022 with travel on the same day and same week in previous years, back to 2019. TSA checkpoint numbers are widely used to measure the pace of recovery. A key advantage of this data is its immediate availability, being published only a day after the travel day in question. By comparison, Bureau of Transportation Statistics Form 41 aviation data is not available until several months after the travel day, and airlines generally do not report day-by-day travel numbers before then.

Among the *disadvantages* of the data set is that it does not provide an exact measure of fare-paying passengers. The data includes non-revenue passengers (e.g., those on free tickets) and non-travelers who pass through checkpoints. The data may also double-count certain passengers who pass through security checkpoints more than once due to flight delays, gate changes, or other factors. At the same time, any biases that exist due to these factors should be consistent from year to year, making year-on-year comparisons informative. Another drawback is that TSA does not provide details on how data is collected or how it matches a particular travel day with that date on the same day of the week in the previous year. Finally, the data includes a mix of domestic and international passengers, which precludes more focused analyses.

Despite these caveats, much can be learned from this expansive data set. We are unaware of previous studies that have used the data to evaluate the nuances of airline traffic flow.



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¹ See “Reshaping the landscape: Corporate travel in 2022 and beyond”, published on April 18, 2022, which is available [here](#) or at <https://www2.deloitte.com/us/en/insights/focus/transportation/business-travel-trends-outlook-2022.html>.¹ Average traffic levels across the period were 89.5% .

² Our review of flight activity of major airlines shows wide variation between carriers with respect to flight reductions on Saturday starting in late afternoon, but the reductions are commonly in the 25- 30% range.

³ Comments by Delta Airlines CEO on the limited supply of seat can be found at this Daily Mail article published on June 6, 2022, “[Staffing shortages, overbooked flights and doubling ticket costs threaten summer travel plans](#)”.