

The State of U.S. Commercial Aviation

Updated December 21, 2024

https://www.airlines.org/dataset/state-of-us-aviation/

U.S. Airlines Facilitate the Safe and Efficient Movement of People and Goods Worldwide

Data Reflects Passenger and Cargo-Only Operations*

> 1M
employees
around the world



Powering ~27K flights per day across the globe



carrying ~2.7M
 passengers
per day to/from
 ~80 countries



Moving ~61K tons of cargo per day to/from more than 220 countries



Sources: A4A, Bureau of Transportation Statistics, Diio by Cirium and company literature

* Headcount as of October 2024; other statistics are average for 12ME September 2024



Key Points

- » Demand for air travels remain healthy, but growth rates have slowed.
- » Air cargo demand has subsided since its 2021 all-time high but remains solidly above 2019 levels.
- » Post-pandemic YOLOism and the prevailing (though not universal) shift toward hybrid work have been positive for the sector and bode well for future demand.
- » Airlines of all shapes and sizes continue to retool products and networks to reflect the changing face of demand and to cope with inflation, but growth rates—and profit margins—differ widely.
- » ATC issues, aircraft/engine deliveries, labor supply, parts scarcity, MRO bottlenecks and workforce juniority have curbed growth and led airlines to hold onto older equipment to accommodate demand.
- » In large part, airlines have been using cash flow to add staff (most since Sept. 2001), renew fleets, upgrade IT and retire the massive debt accumulated in 2020 and 2021 to weather the pandemic.
- » Through favorable supply/demand dynamics and product improvements, airlines are pursuing highmargin revenue diversification, earnings durability, equity appreciation and balance sheet strength.



Airlines Are in Stage Three of the Multiyear Recovery From the Pandemic

Contain the Virus



Stabilize the Economy



Increase Efficiency

Aviation-Government Collaboration on Health/Facilitation/Safety/Technology

Traffic Recovery



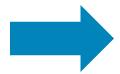
Revenue Recovery



Financial Recovery

Cost-Reduction Initiatives + Business Model Adaptation + Debt Reduction

Reduce Cash Burn



Restore Profitability & Rebuild Margins



Repair Balance Sheets



Airline Equity Analyst Perspectives

Fall 2024

"We saw much-needed capacity rationalization at the lower-end of the cabin unfold across the industry in 3Q... Meanwhile, industry-wide cost pressures continue, stemming from (1) elevated labor costs following updated contracts, and (2) continued aircraft manufacturing / delivery delays, which translates into higher maintenance costs, higher costs from less optimal planes in the air, and misalignment of employees on hand vs. employees actually needed (i.e., end up paying for employees not actually generating expected levels of revenue) when capacity plans get thrown off."

Bernstein Research (Oct. 31, 2024)

"The outlook for the consumer isn't perfect (housing affordability is still a very real concern), but a near-term shock appears unlikely...setting up well for all things travel.... [A]s consumer confidence improves, spend will continue to gravitate towards travel, where the relative value remains quite attractive. Parts of the U.S. economy remain unaffordable, housing values are now up 50% since '19, eggs are up 253%, McDonald's Happy Meal is up +130%, Disney World day pass +28%...the list goes on. Air fares, however, are only up 10%, cruise pricing up 15%, hotel ADRs up 20% and rideshare rates up approx. 40%.

Melius Research (Nov. 17, 2024)

Sources: David Vernon and Justine Laufer, Bernstein Research (Oct. 31, 2024) and Conor Cunningham and Patrick Coleman, Melius Research (Nov. 17, 2024)



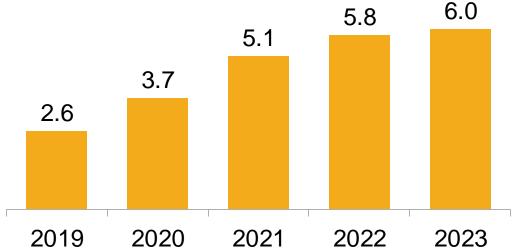
Airlines Have Prioritized Debt Reduction, Accompanied by Heavy Cash Outlays for Interest Interest Expense Doubled From 2019-2021 and Reached \$6B in 2023

"To suggest that the airlines should have better prepared for this environment seems akin to suggesting Pompeii should have invested more heavily in firefighting technology." (Jamie Baker, JPMorgan, March 22, 2020)

"For 2021 and beyond, we anticipate a major deleveraging cycle as **the industry will have no choice but to address its significant debt load**." (Michael Linenberg, Deutsche Bank, July 1, 2020)

Year-End Total Debt* (\$ Billions) 165 168 150 143 2019 2020 2021 2022 2023

Interest Expense (\$ Billions)



Source: SEC filings of Alaska, Allegiant, American, Delta, Frontier, Hawaiian, JetBlue, Southwest, Spirit and United

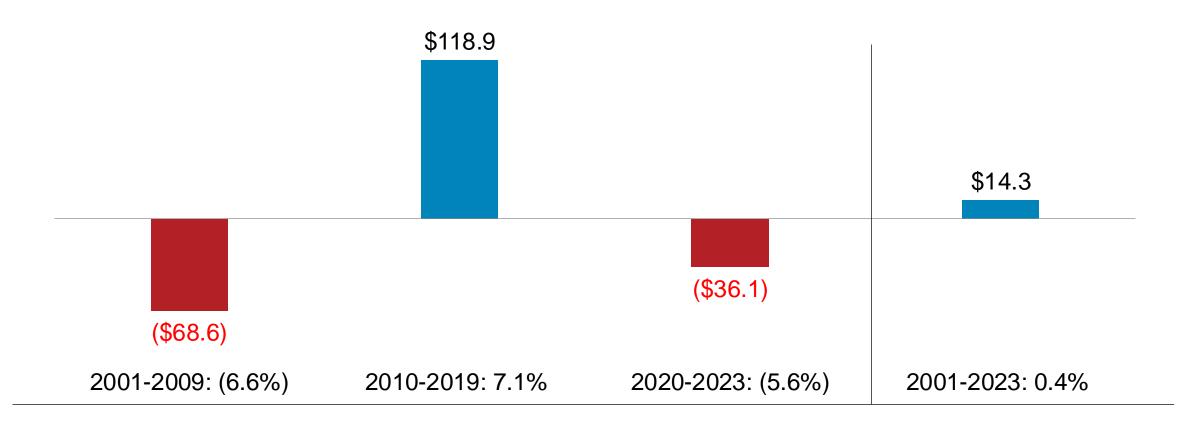


^{*} Includes lease and pension obligations

From 2001-2023, U.S. Airlines Posted a Razor-Thin 0.4% Pre-Tax Profit Margin

From 2020-2023, \$36B in Pre-Tax Losses Translated to a Negative 5.6% Margin

U.S. Passenger Airlines' Pre-Tax Profit/(Loss) in Billions and Profit Margin



Source: A4A Passenger Airline Cost Index and Bureau of Transportation Statistics



In YTD 2024, U.S. Passenger Airlines Collectively Posted a Pre-Tax Profit Margin of 3.4%

Higher Operating Expenses Outpaced Operating Revenues, Reducing Profits by 23%

Financial Results: YTD 3Q 2024	\$ Billions	% Chg. YOY	% of Category
Passenger (RPMs +4%, yield -2%)	154.5	2	89.2
Cargo	2.7	6	1.6
Other ¹	15.9	9	9.2
Total operating revenues	173.2	3	100.0
Salaries, wages and benefits	54.0	7	32.8
Aircraft fuel and taxes (consumption +3%, price -7%)	36.8	(4)	22.4
Maintenance materials and repairs	9.3	9	5.7
Landing fees and airport (terminal/hangar) rents	10.9	13	6.6
Depreciation and amortization ²	8.3	6	5.1
Other ³	45.2	4	27.4
Total operating expenses	164.6	4	100.0
Interest and other non-op expenses, net	(2.7)	0	n/a
Pre-tax profit/(loss)	5.9	(23)	n/a
Pre-tax margin ⁴	3.4%	(1.1 pts)	n/a

- 1. Sale of frequent flyer award miles to airline business partners, transportation of pets, in-sourced aircraft and engine repair, flight simulator rentals, inflight sales, etc.
- 2. Related primarily to ownership of aircraft, ground support equipment, information technology, etc.
- 3. Aircraft rents, professional fees, food/beverage, insurance, commissions, GDS fees, communications, advertising, utilities, office supplies, crew hotels, payments to regionals, etc.
- 4. Pre-tax profit/(loss) ÷ total operating revenues

Source: Alaska/Hawaiian, Allegiant, American, Delta, Frontier, JetBlue, Southwest, Spirit and United

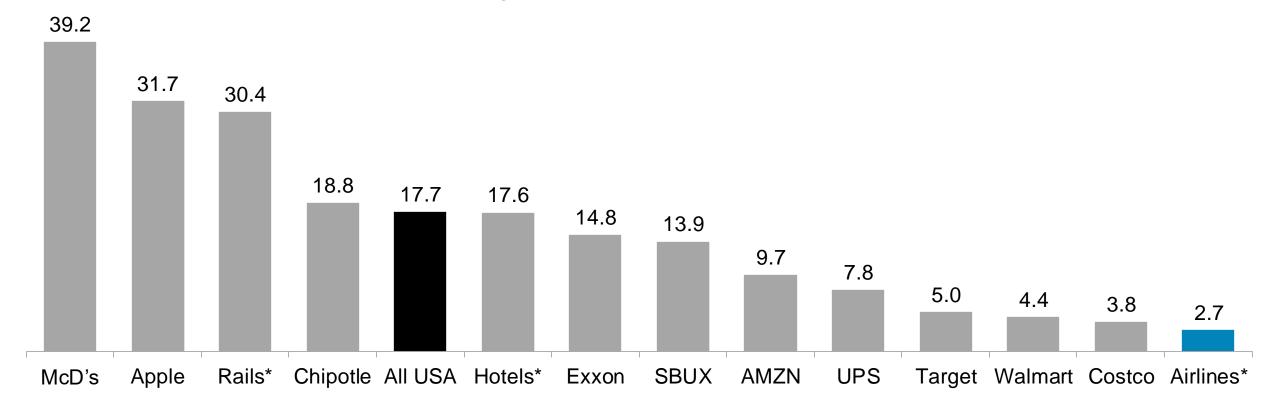


In 1H 2024, the Average U.S. Corporation Was 6.5 Times More Profitable Than U.S. Airlines

McDonald's Was 14.5 Times More Profitable Than Airlines

Pre-Tax Profit Margin (%) for Selected U.S. Companies and Industries, 1H24

Note: Profit Margin = (Revenues – Expenses) ÷ Revenues



Sources: Bureau of Economic Analysis and company SEC filings

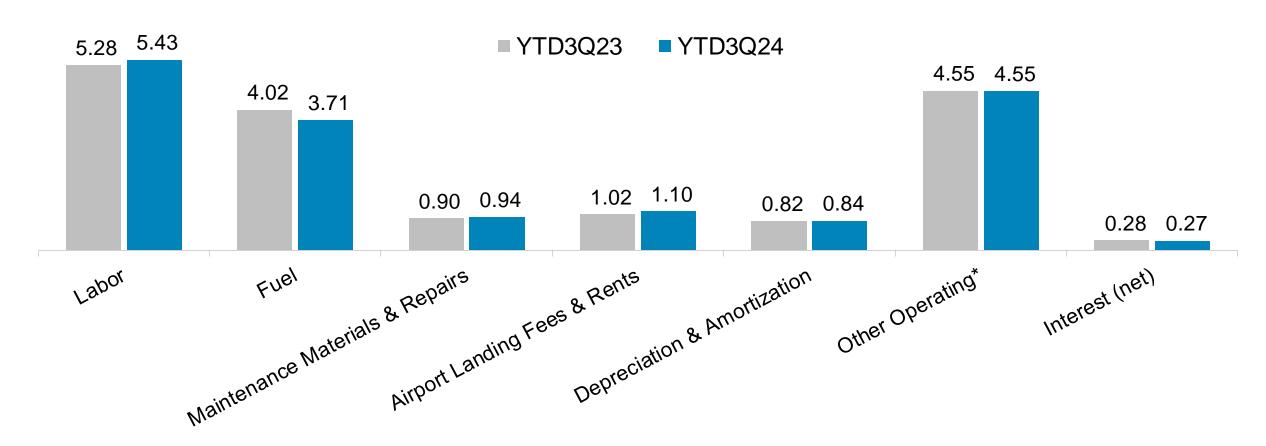


^{*} Airlines = ALK/ALGT/AAL/DAL/ULCC/HA/JBLU/LUV/SAVE/UAL; Hotels = Choice/Hilton/Hyatt/Marriott/Wyndham; Rails = CSX/Norfolk Southern/Union Pacific

In YTD 2024, U.S. Airlines' Pre-Tax Unit Costs Fell 0.2% YOY on 7.7% Lower Fuel CASM

Labor CASM Up 3%, Maintenance CASM Up 4.3%, Airport CASM Up 8.2%

U.S. Passenger Airlines: Cost (in Cents) per Available Seat Mile



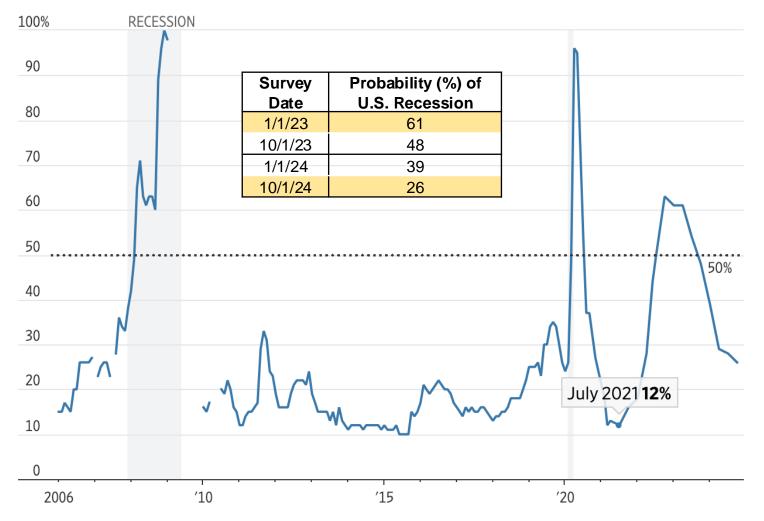
Source: SEC filings of Alaska, Allegiant, American, Delta, Frontier, Hawaiian, JetBlue, Southwest, Spirit and United



^{*} Professional fees, food/beverage, insurance, commissions, GDS fees, communications, advertising, utilities, office supplies, crew hotels, payments to regional carriers, etc.

Economists Now Deem Chance of a U.S. Recession Within Next 12 Months Far Less Likely

Probability Most Recently Gauged at 26%, Down From 39% in Jan-2024 and 61% in Apr-2023



Oct-2022 — Economists Now Expect a Recession, Job Losses by Next Year

Jan-2023 — Economists...Still See Recession This Year Despite Easing Inflation

Jan-2024 — It Won't Be a Recession—It Will Just Feel Like One

Apr-2024 — 'Envy of the World'—U.S. Economy Expected to Keep Powering Higher

Oct-2024 — Economists Say Inflation, Deficits Will Be Higher Under Trump Than Harris

Source: The Wall Street Journal Economic Forecasting Survey and "Economists Say Inflation, Deficits Will Be Higher Under Trump Than Harris," The Wall Street Journal (Oct. 14, 2024)



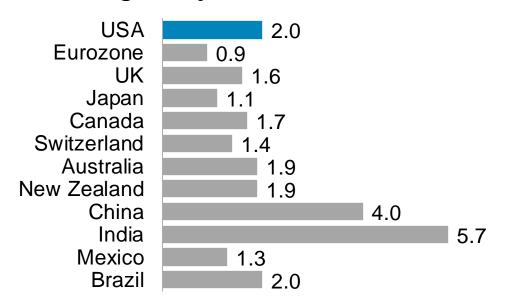
U.S. Consumer Spending Strong, But Slower Economic Growth Expected in 2025

Many Mature Economies Are Expected to Grow Less Than 2%

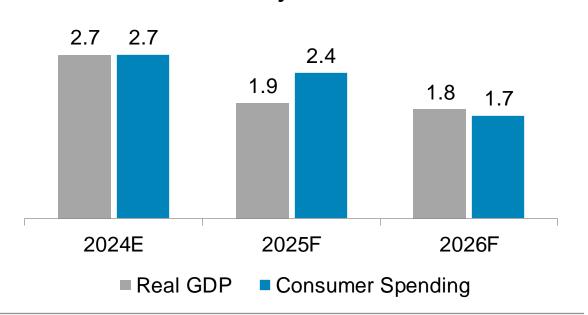
"Tariffs will likely result in higher selling prices, affecting consumer purchasing power. Reduced consumer purchasing power is likely to lead to reduced corporate profits, lessening corporations' ability to invest for the future and hire/maintain current labor forces."

"We continue to expect the US economy is on course for a soft landing, but the changing policy landscape introduces a setback in our forecast and some new risks, both negative and positive."

Wells Fargo: Projected 2025 Real GDP Growth (%)



S&P Global: Projected U.S. Growth

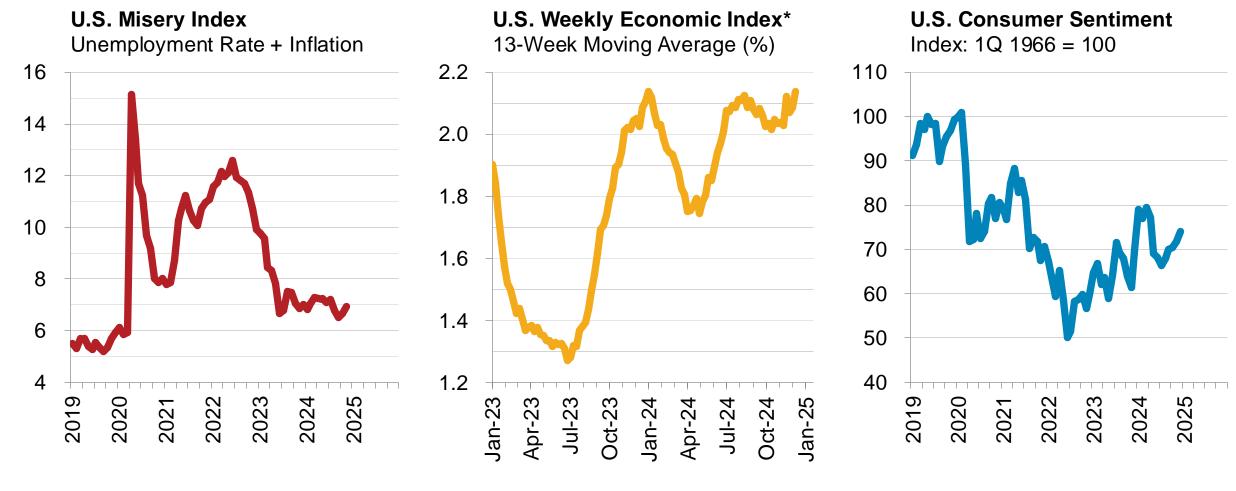


Source: Wells Fargo 2025 International Economic Outlook (Dec. 4, 2024) and S&P Global Market Intelligence US Economic Outlook (December 2024)



U.S. Consumer Sentiment Rose in August/September/October/November and December Prelim

U.S. Misery Index Remains Low, Weekly Economic Index Holding Steady

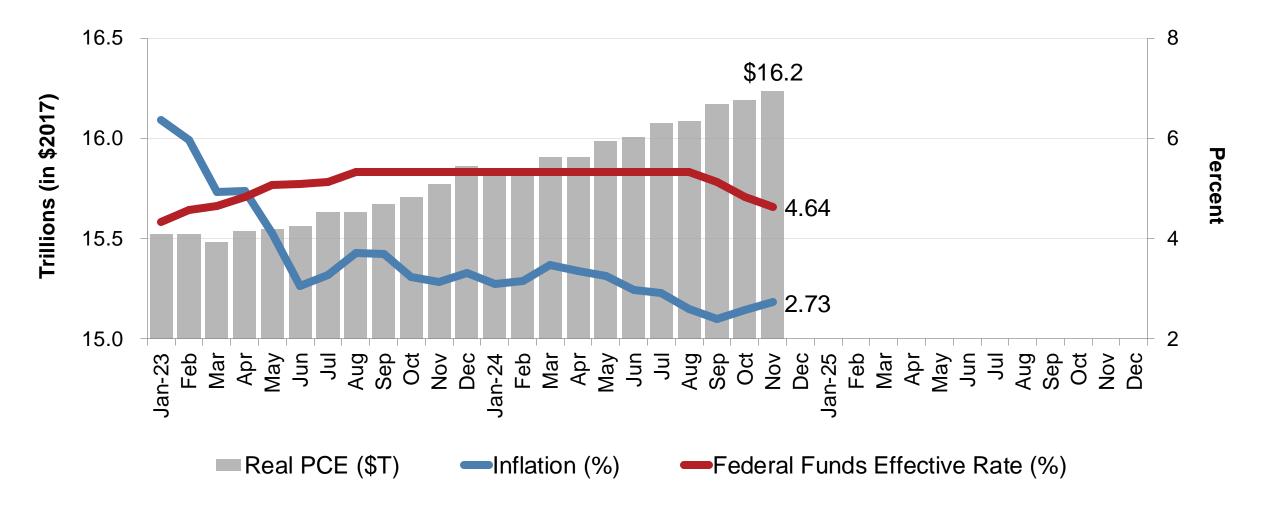


Sources: Bureau of Labor Statistics, Federal Reserve Bank of Dallas for index of 10 daily and weekly indicators of real economic activity; developed by Daniel J. Lewis, Karel Mertens and James H. Stock; University of Michigan



Inflation-Adjusted (Real) Consumer Spending Reached an All-Time High in November 2024

U.S. Consumers Have Been Buoyed by Declining Inflation Rate, Undaunted by Elevated Interest Rates



Source: U.S. Bureau of Economic Analysis and Bureau of Labor Statistics via Federal Reserve Bank of St. Louis

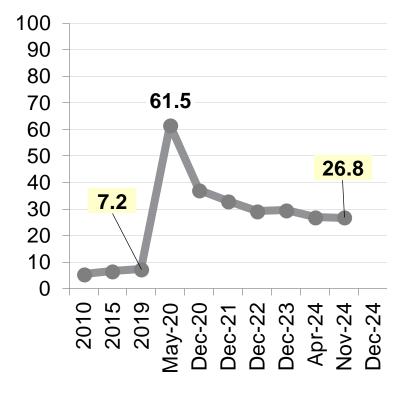
Note: Personal consumption expenditures (PCE) and inflation are seasonally adjusted and annualized



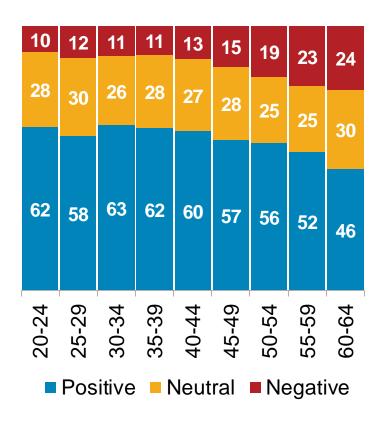
Share of Remote Work Remains Well Above 2019; Preference for Hybrid Work Persists

Younger Workers Are Most Enthusiastic About Hybrid Work, Which Commands Greater Earnings

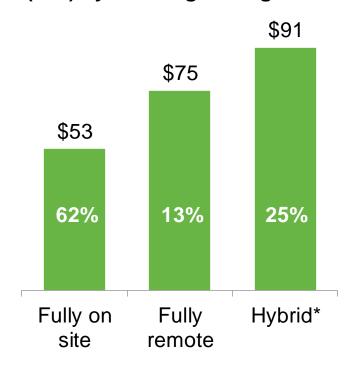
% of U.S. Resident Paid Workdays Conducted Remotely



Attitude Toward Hybrid* Work (% Viewpoint by Age Group)



U.S. Resident Average Earnings (000) by Working Arrangement



Source: Survey of Working Arrangements and Attitudes (SWAA), Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. "Why working from home will stick," National Bureau of Economic Research Working Paper 28731.

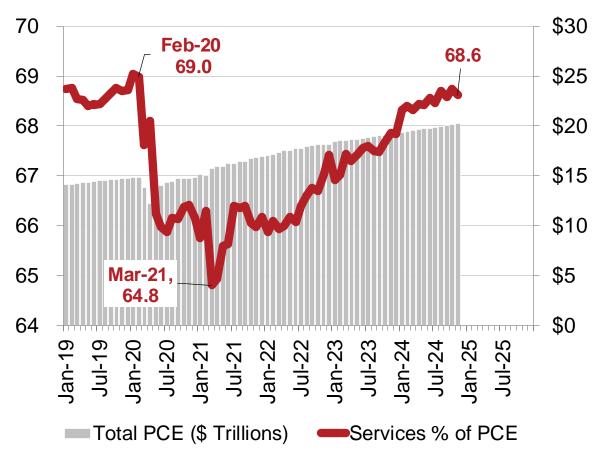


^{*} Two to three days per week

Since Spring 2021, U.S. Consumers Have Increasingly Directed Spending Toward Services

Every Percentage Point Increase Translates to ~\$200 Billion in Shifted Spending

Services Share (%) of Personal Consumption



Air Travel Share (%) of Personal Consumption



Source: Bureau of Economic Analysis

Note: PCE = personal consumption expenditures; 2024 = through September.



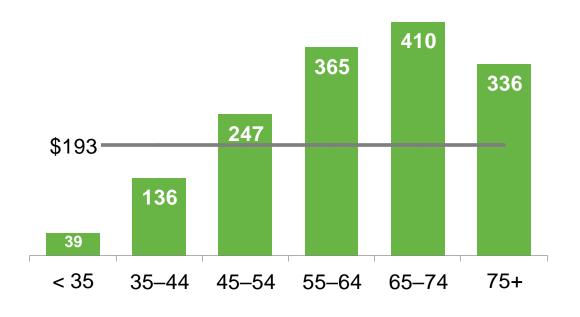
The Older (and Wealthier) Share of the U.S. Population Is Expected to Continue Growing

That Subset of the Population Has Time and Money to Spend on Air Travel

U.S. Population Age: Median and 55+ Share

40.6 35.2 33.4 31.9 29.3 25.0 21.1 2000A 2010A 2020A 2030F 2040F 2050F ■55+ Share —Median Age

Median Household Net Worth (\$000) by Age, 2022



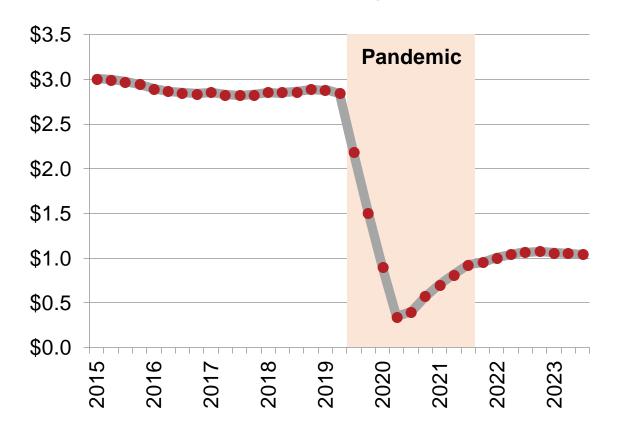
Source: U.S. Census Bureau and Federal Reserve 2022 Survey of Consumer Finances (Oct. 18, 2023)



Revenues From Reservation Change Fees Have Fallen Sharply as Carriers Relaxed Restrictions

Widespread Elimination of Change Fees Has Boosted Traveler Flexibility

U.S. Airline Change-Fee Revenues (Billions)
Four-Quarter Rolling Basis



"It makes me feel a lot better as a consumer. It makes me feel more willing to book something now."

Brett Snyder, CrankyFlier.com (Aug. 31, 2020)

"One of the best changes that the airlines made in their policies over the past two years was to quietly get rid of change fees."

Scott Keyes, Scott's Cheap Flights (April 4, 2022)

Sources: Bureau of Transportation Statistics Form 41; Kyle Arnold, The Dallas Morning News (Aug. 31, 2020); Savannah Levins, 11 Alive (April 4, 2022)

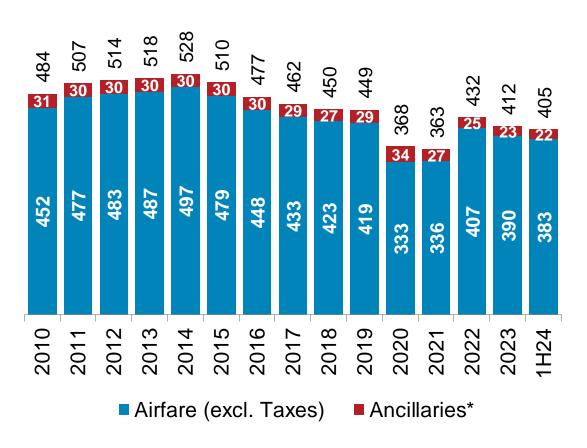


Government Data Show That Inflation-Adjusted Fares/Fees Have Trended Down Since 2014

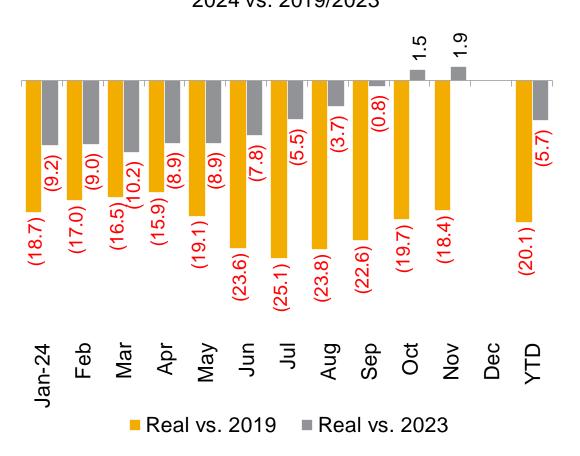
In 2024, Airfare CPI Has Fallen 5.7% From 2023 When Adjusted for Inflation, 20% From 2019

Round-Trip Ticket Price (in \$ 1H 2024)

Down 10% From 2019, 16% From 2010



Change (%) in Inflation-Adjusted Airfare 2024 vs. 2019/2023



Source: A4A analysis of DOT Data Bank 1B and DOT Form 41 via Airline Data Inc.; Bureau of Labor Statistics (CPI Series CUUR0000SETG01, not seasonally adjusted)

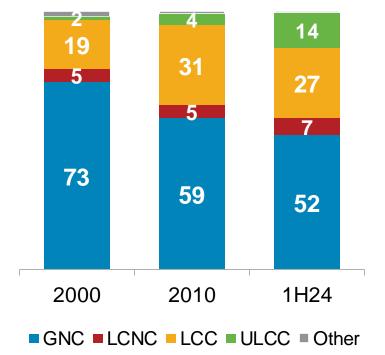


^{*} Fees for reservation changes and transport of bags

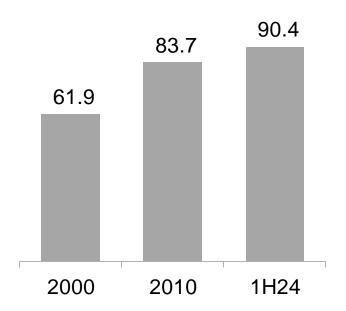
From 2000-1H 2024, the Number of Competitors per Domestic Air Trip Rose From 3.33 to 3.48

Global Network Carrier Share of Domestic Passengers Fell From 73% in 2000 to 52% in 1H 2024



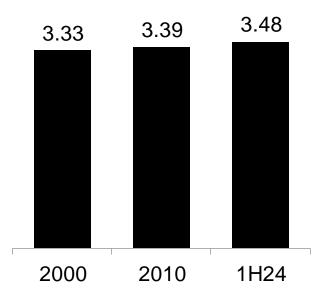


% of Domestic O&D Pax With Access to Lower-Cost Carriers



Average # of Competitors* in Domestic O&D City Pairs

* Per DOT and GAO, carrying at least 5% of O&D passengers in the city pair; average is passenger-weighted across city pairs.



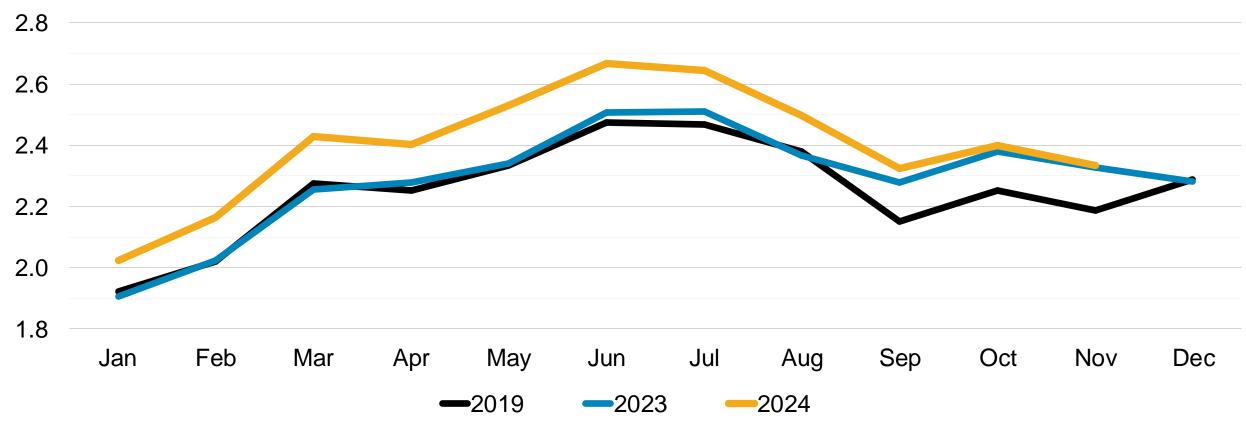
Source: DOT Data Bank 1B and Compass Lexecon. Global network carriers (GNCs) include AA/DL/UA and predecessor airlines (e.g., US Airways, America West, TWA, Northwest, Continental) and defunct legacy network carriers (e.g., Eastern, Braniff). Low-cost carriers includes Southwest, JetBlue, Breeze, Reno Air, Midway, Pro Air, Kiwi International, AirTran, Accessair, Independence, Eastwind, National, ValuJet, ATA, Skybus, People Express, Vanguard, Virgin America, Western Pacific, Air South, and Morris Air). Lower cost network carriers include Alaska, Hawaiian and Aloha. Ultra low-cost carriers (ULCCs) include Allegiant, Frontier, Spirit, Sun Country, and Avelo.



TSA Is Experiencing Record-High Checkpoint Volumes in 2024

Through November, Daily Average Throughput Rose ~5% From 2023





Source: A4A analysis of data from the Transportation Security Administration

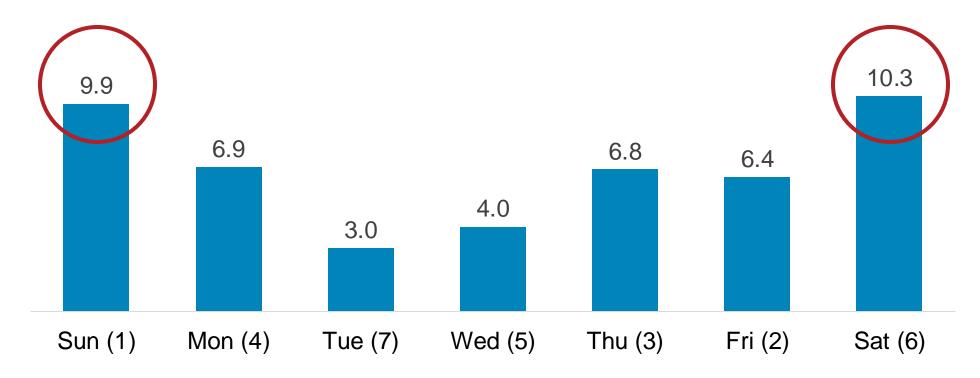


 $^{^* \} U.S. \ and \ for eign-carrier \ customers \ (\textit{exclude}s \ Known \ Crewmember \\ ^{\circledcirc} \ personnel) \ traversing \ TSA \ checkpoints$

Change in Day-of-Week Air-Travel Patterns Provides Evidence of Increased Leisure Mix

Big Winners = Leisure-Oriented Saturday/Sunday; Sunday Now the Busiest Day, Tuesday the Slowest

Change (%) in YTD November TSA Checkpoint Volume: 2024 vs. 2019



Day of Week and Rank (by Volume)

Source: A4A analysis of data from the Transportation Security Administration

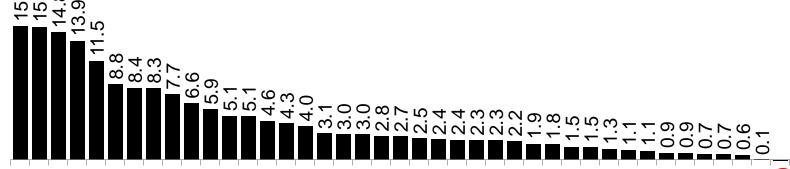
Note: Volume reflects travelers only, not Known Crewmember® personnel; 2019 base adjusted for 2024 leap day



In 1Q 2025, Hartford/Boise/San Juan/Washington Dulles Leading U.S. Airports' Seat Growth

Oakland/Chicago Midway/Fort Lauderdale Seeing the Deepest Year-Over-Year Cuts

Change (%) in Systemwide *Daily* Average Scheduled Seats: 1Q25 vs. 1Q24





Source: Cirium published schedules (Dec. 20, 2024) for all U.S. and non-U.S. airlines providing scheduled service to all U.S. and non-U.S. destinations

Note: 2024 adjusted for Leap Day



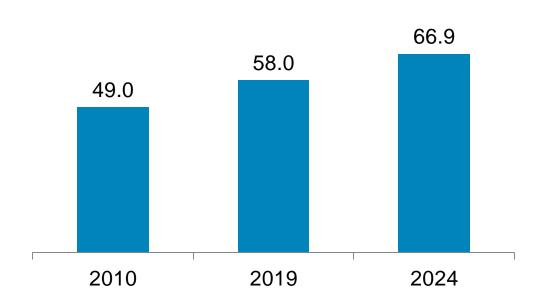
Increases in Mainline Flying and in Aircraft Size Have Fueled Domestic Up-Gauging

Mainline Now Accounts for Two-Thirds of Domestic Flights, Up From Half in 2010

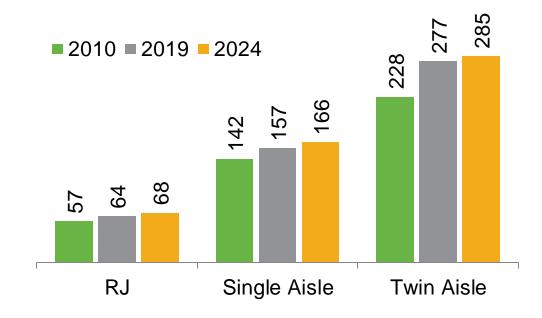
"[Y]ou're never again gonna see the **50-seat aircraft** have the level of prominence in the industry." (Delta CEO Ed Bastian, Sept. 20, 2022)

"Expect the [regional jet] fleet to still be around..., but it will become a smaller and smaller percentage of the business." (United CEO Scott Kirby, Oct. 16, 2024)

Mainline* % of Domestic U.S. Flights



Average Seats per Domestic U.S. Flight

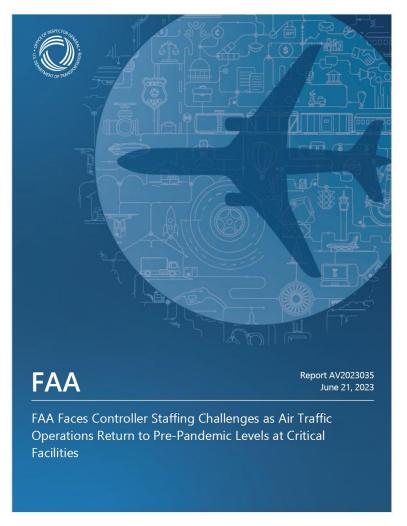


Source: Cirium published schedules (Dec. 6, 2024)



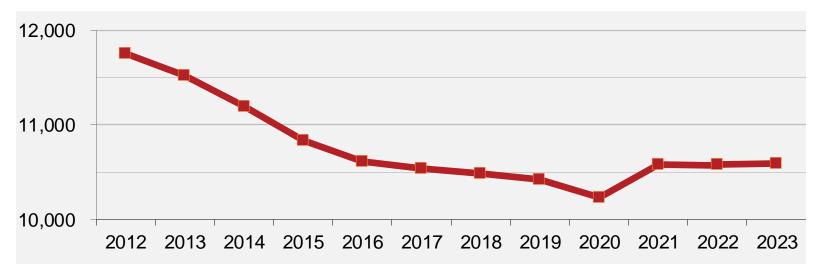
^{*} Mainline = operated by the marketing airline itself rather than a regional airline codeshare partner

DOT Inspector General: FAA Faces Controller Staffing Challenges as Air Traffic Operations Return to Pre-Pandemic Levels at Critical Facilities



"FAA has made limited efforts to ensure adequate controller staffing at critical air traffic control facilities. The Agency also has yet to implement a standardized scheduling tool to optimize controller scheduling practices at these facilities... As a result, FAA continues to face staffing challenges and lacks a plan to address them, which in turn poses a risk to the continuity of air traffic operations."

FAA Certified Professional Controller Staffing by Fiscal Year



Source: DOT Office of Inspector General, Report AV2023035 (June 21, 2023) and FAA Air Traffic Controller Workforce Plan (May 10, 2024)

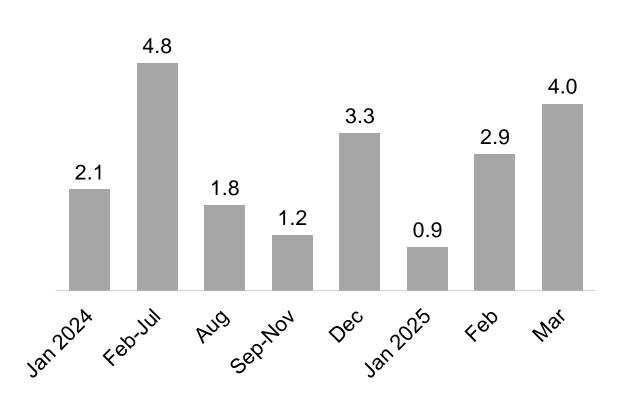


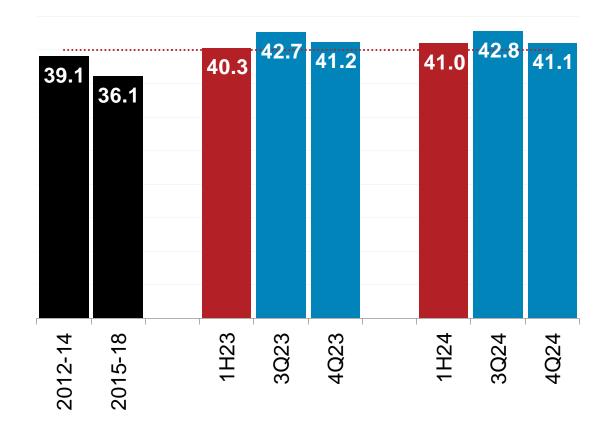
Multiple Factors Led to Reductions in Domestic U.S. Capacity Growth

After Six-Month 2024 Surge, Domestic Capacity-to-GDP Ratio Has Returned to 2023 Levels

% Change YOY in Daily Avg. Sched. Domestic ASMs

Sched. Domestic ASMs per \$1K of Real U.S. GDP



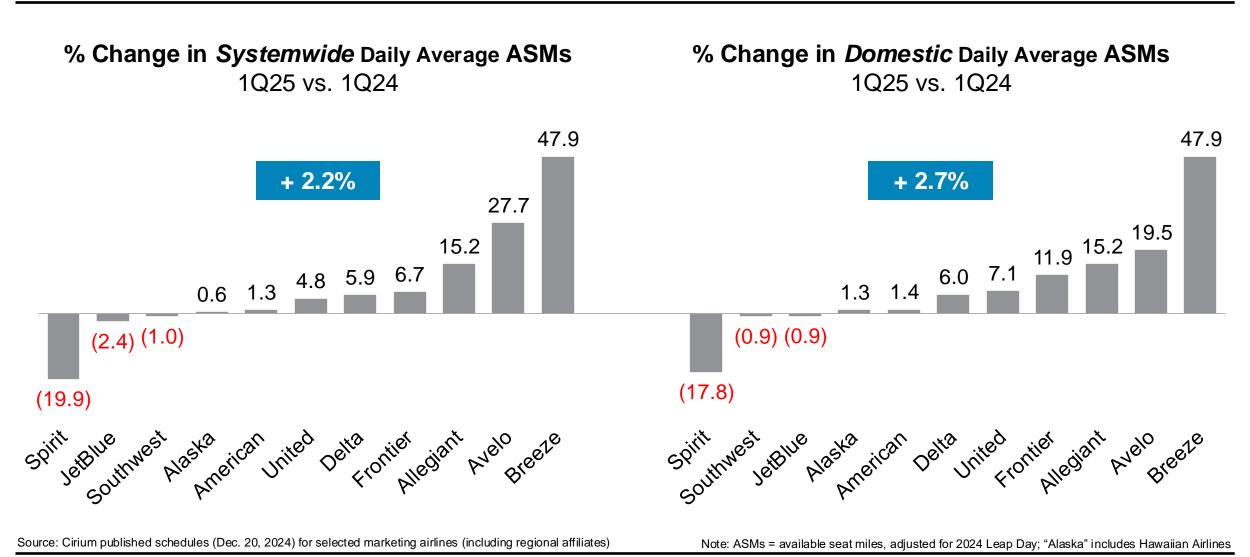


Sources: Bureau of Economic Analysis for GDP; Diio by Cirium (Dec. 20, 2024) for published schedules



U.S. Airlines Poised to Grow 2.2% Systemwide, 2.7% Domestically in 1Q 2025

Companies Showing Widely Differing Rates of Growth





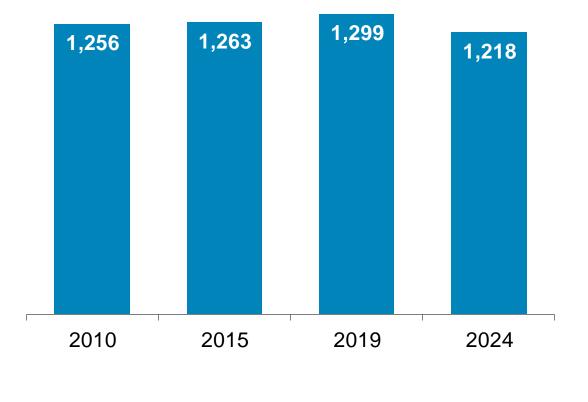
Airlines Have Up-Gauged Domestic Flying and Pared Schedules in New York City

2019-2024: Aircraft Size Up 16% at EWR, 12% at LGA; Flights Down 6% Across the Four Airports

Seats per Domestic Departure at NYC* Airports



Daily Domestic Departures at NYC* Airports



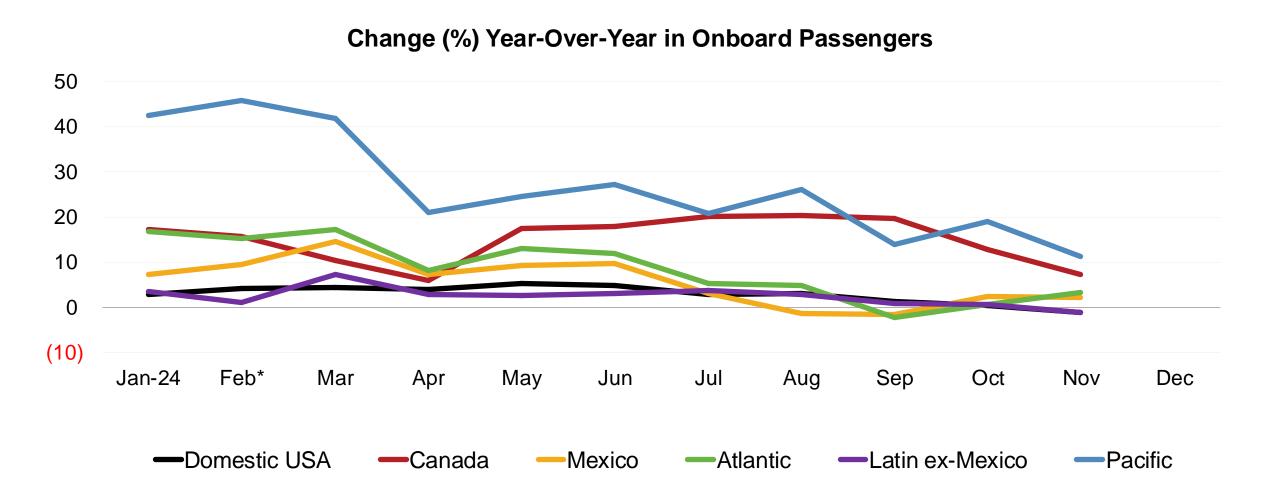
Source: Cirium published schedules (Nov. 8, 2024)

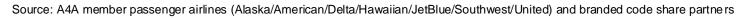
* EWR/HPN/JFK/LGA



A4A Member Airlines Continue to See Saw Strong Transpacific and U.S.-Canada Pax Growth

November Volumes Affected by YOY Shift in Timing of Thanksgiving Return





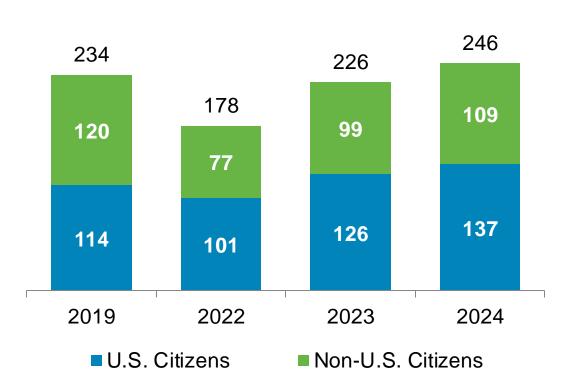


^{*} Adjusted for Leap Day

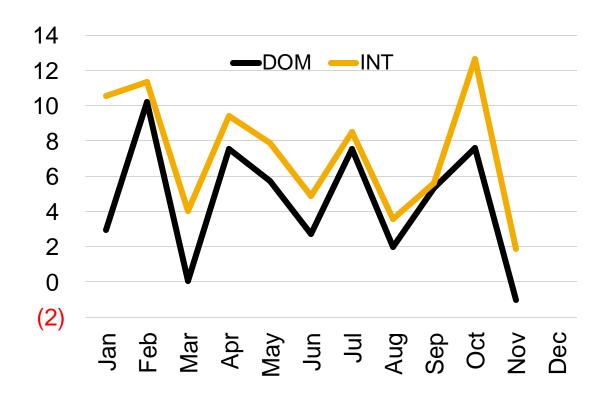
In the First 11 Months of 2024, U.S.-International Air Travel Rose ~9% Year Over Year

Growth in Sales for International Trips Outpacing Domestic

U.S.-International Airline Passengers (Millions)
January through November



Change (%) in U.S. Ticket Sales* — 2024 vs. 2023



Sources: DHS I-92 / APIS via Commerce and A4A analysis of data from Airlines Reporting Corporation (ARC)

* Net tickets (gross sales minus refunds) for travel to/from U.S. airports

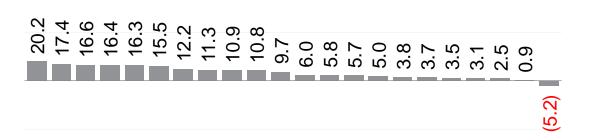


In the First 11 Months of 2024, U.S.-Italy Routes Saw a 20% YOY Increase in Passengers

Relative to 2019, U.S.-Colombia Volumes Rose 43% While U.S.-China Volumes Fell 75%

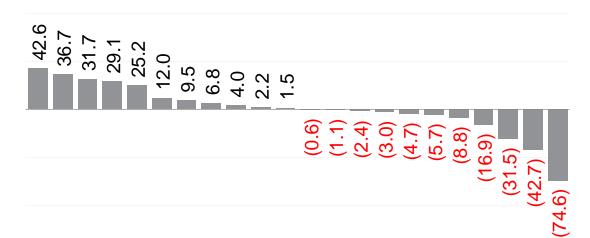
YTD Nov-2024 Change (%) in Passengers* vs. 2023

Note: 2023 Ranking in Parentheses



YTD Nov-2024 Change (%) in Passengers* vs. 2019

Note: 2019 Ranking in Parentheses





Colombia (15) Dominican Rep. (8) Hong Kong (20) France S. Korea Canada **Germany** Australia Costa Rica Spain UAE Jamaica Bahamas reland **Netherlands** Panama

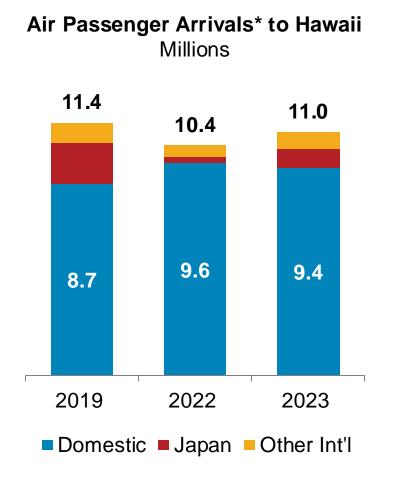
Source: DHS I-92 / APIS data compiled by U.S. Department of Commerce National Travel and Tourism Office

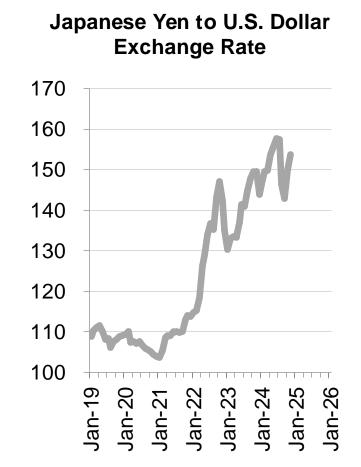


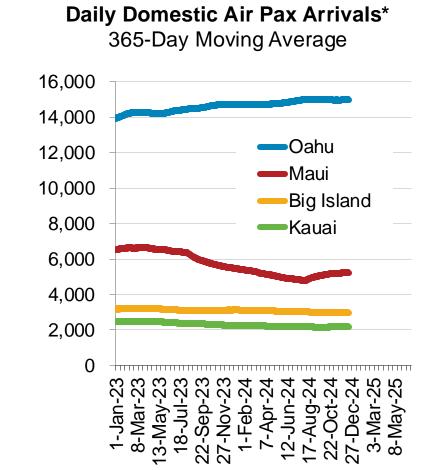
^{*} Gateway-to-gateway passengers on U.S. and foreign scheduled and charter airlines

International Air Arrivals (Especially From Japan) to Hawaii Remained Depressed in 2023

Weak Yen Challenging Japanese Point of Sale in 2024; Maui Arrivals Lagging as Oahu Grows







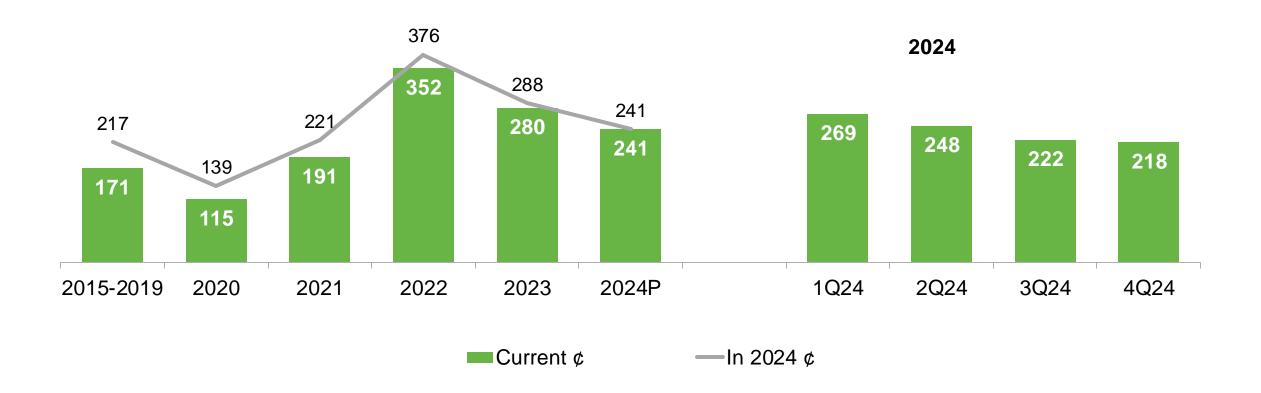
Source: Hawaii Department of Business, Economic Development & Tourism and Federal Reserve Bank of St. Louis * Includes returning residents, intended residents and visitors but exclude interisland and Canada passengers



Jet Fuel Less Expensive Than in 2022-2023 But 24% Higher Than the 2015-2019 Average

Nationwide Spot Price Has Fallen in Each Quarter of 2024 (Through October)

Argus US Jet Fuel Index™ — Average Spot Price (Cents per Gallon)*



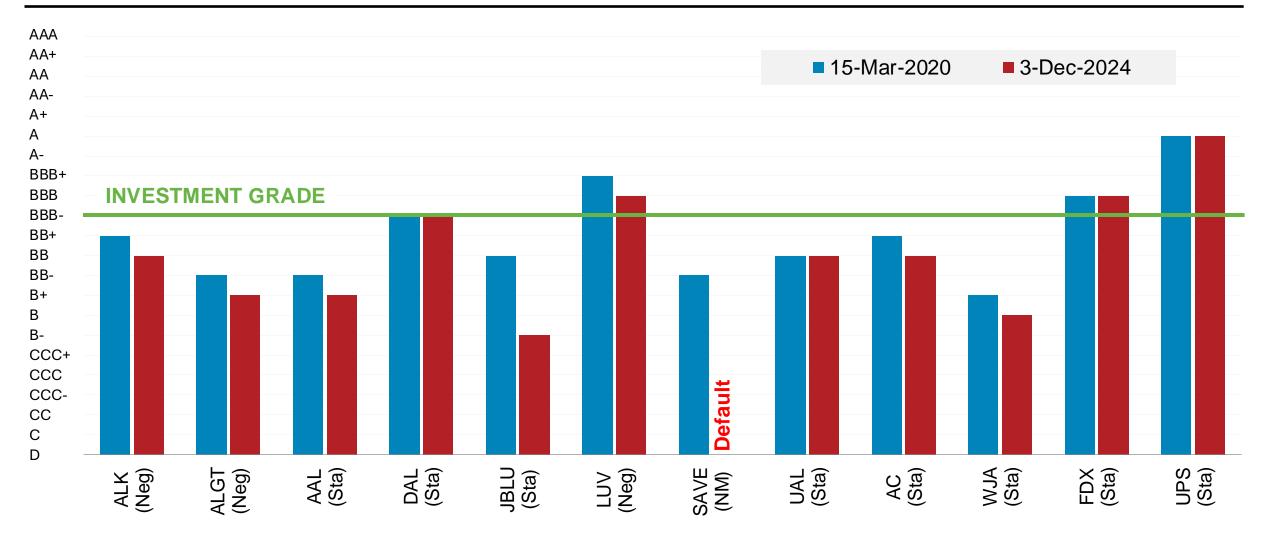
Sources: Argus Media (https://www.airlines.org/dataset/argus-us-jet-fuel-index/)



^{*} Simple average for Chicago, Houston, Los Angeles and New York; excludes transportation costs, taxes, storage and into-plane fees

Per Standard & Poor's, Pax Airline Balance Sheet Quality Remains Depressed Post-Pandemic

Ratings Reflect Assessment of Financial Condition and Risk



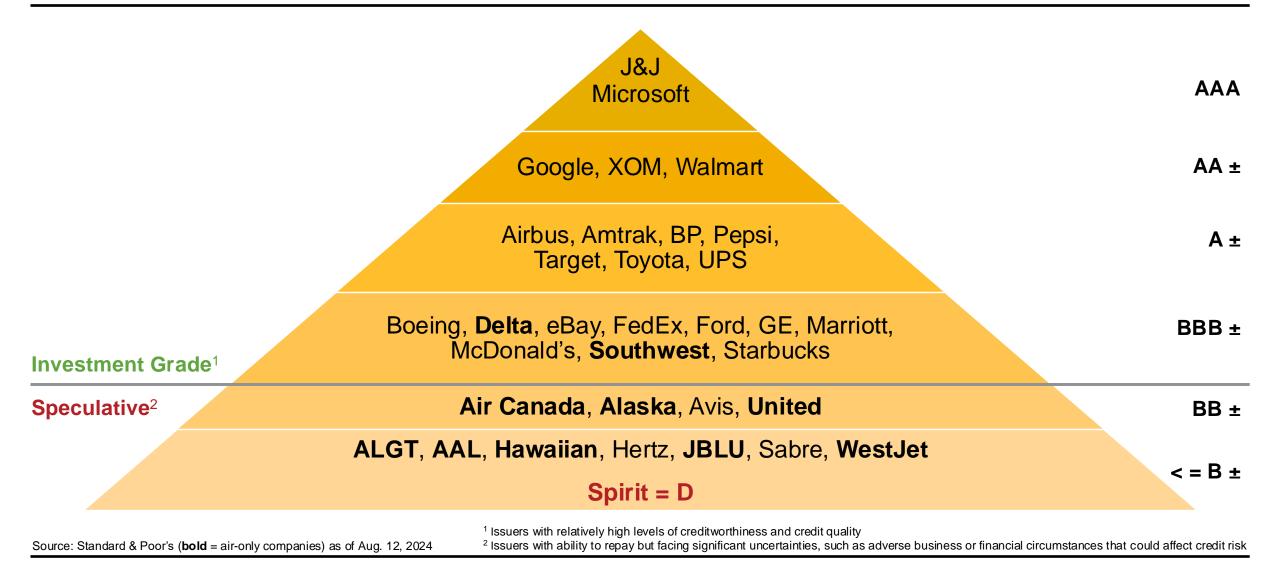
Source: Standard & Poor's issuer ratings and outlook (in parentheses) for publicly traded U.S. and Canadian carriers in the S&P coverage universe

Note: Pos = positive outlook; Neg = negative outlook; Sta = stable



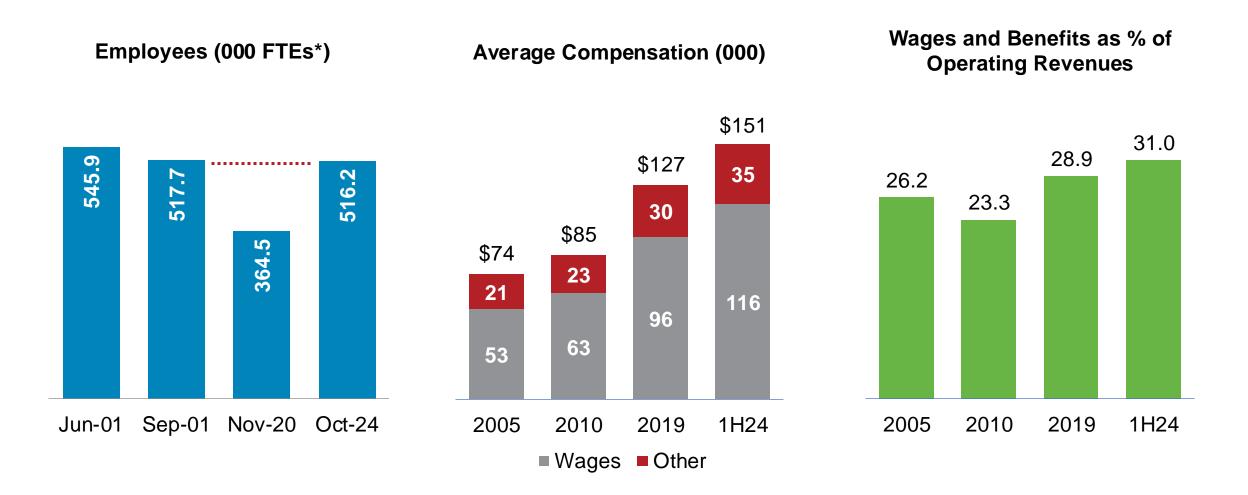
Airline Balance Sheets Continue to Lag Those of Many Fortune 500s and Amtrak

S&P Credit Ratings Reflect Assessment of Financial Condition and Risk for Selected Companies



Airlines for America*
We Connect the World

Firmer Financial Footing Has Enabled Airlines to Re-Invest in Employees, Whose Average Wage Rose 85% from 2010-1H 2024 (vs. 43% U.S. CPI) and Who Now Garner 31% of Airline Revenues



Source: Bureau of Transportation Statistics for scheduled U.S. passenger airlines and A4A Passenger Airline Cost Index



^{*} Full-time equivalents (FTE) = full-time workers plus 0.5 * part-time workers

Real (Inflation-Adjusted) Airline Wages Grew 29% From 2010 to the First Half of 2024

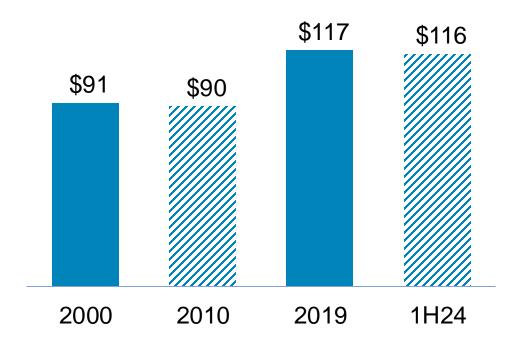
The Average Private Sector Wage Grew Just 12% in Real Terms Over That Period

Average Wage (000) in Constant 1H 2024 Dollars

U.S. Private Sector
Real Wages *Up* 12% Since 2010

\$70 \$74 \$80 \$83 | \$70 | \$74 | \$80 | \$83 | \$2000 2010 2019 1H24

U.S. Passenger Airlines
Real Wages *Up* 29% Since 2010



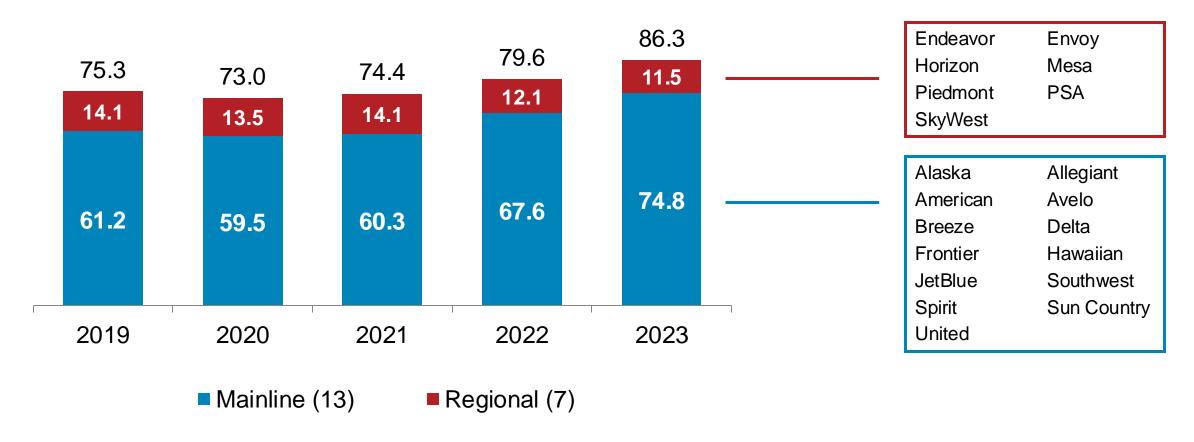
Source: A4A Passenger Airline Cost Index



U.S. Passenger Airlines Added ~6,700 Pilots in 2023 — Up 8.4% From 2022

Mainline Pilot Levels Ended the Year 22% Above 2019, But Regional Pilot Levels Were 18% Lower

Year-End Active Pilots (000) at 20 U.S. Passenger Airlines



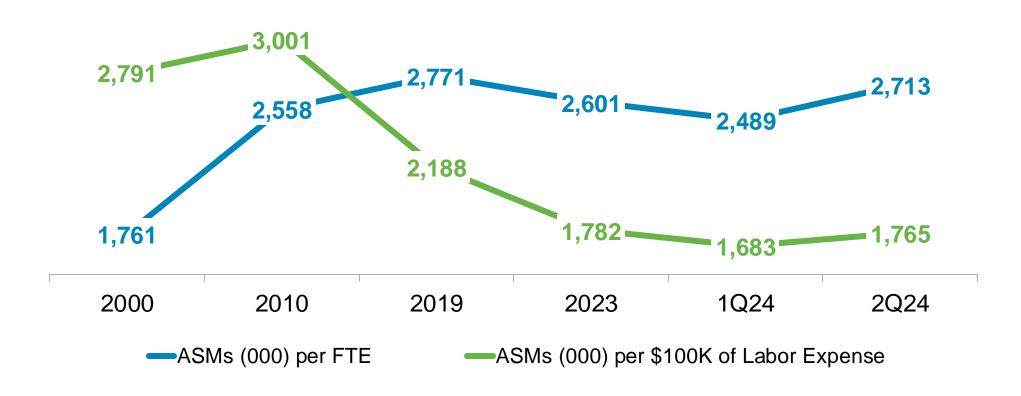
Source: Company SEC filings or direct reports



U.S. Airline FTE Productivity Recovering in 2024, But Labor-Dollar Productivity Down ~19%

Greater Labor Expense Needed to Generate Pre-Pandemic Levels of Capacity

Trends in U.S. Passenger Airline Productivity



39

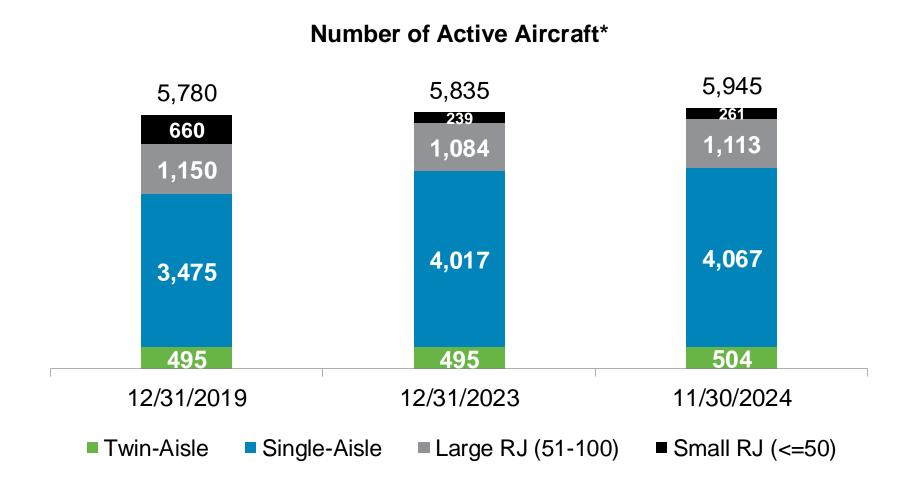
Source: A4A Passenger Airline Cost Index

* ASM = available seat mile (basic unit of passenger airline capacity)



U.S. Passenger Airlines Are Operating ~600 More Mainline Aircraft Than at YE 2019

But the Fleet of Small Regional Aircraft Is Down ~400 Units (60%)



Source: Anuvu

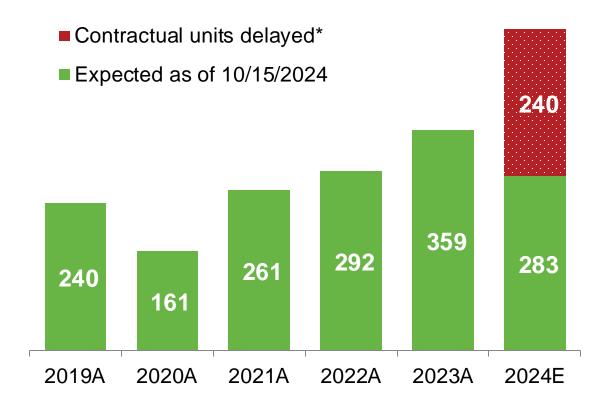


^{*} Operated by or on behalf of Alaska/Allegiant/American/Avelo/Breeze/Delta/Frontier/Hawaiian/JetBlue/Southwest/Spirit/Sun Country/United in any of the previous seven days

Aircraft Delivery Expectations in 2024 Reduced Materially by Production/Certification Delays

U.S. Passenger Airlines Now Expect 46% Fewer Deliveries Than Contractually Stipulated

New-Aircraft Deliveries for 11 U.S. Passenger Airlines



"A weakened supply chain that still hasn't fully recovered from the pandemic is one of the main culprits. As a result, the dearth of airplanes has left many carriers unable to respond fully to resurgent demand for air travel, growing competition and pressure to fly cleaner fleets."

Anthony Palazzo, Jinshan Hong, William Wilkes and Mary Schlangenstein, *Bloomberg Government*, "A Lost Decade of Planemaking Costs Airlines Thousands of Jets" (Oct. 29, 2024)

Source: Alaska, Allegiant, American, Breeze, Delta, Frontier, Hawaiian, JetBlue, Southwest, Spirit and United as of Oct. 15, 2024

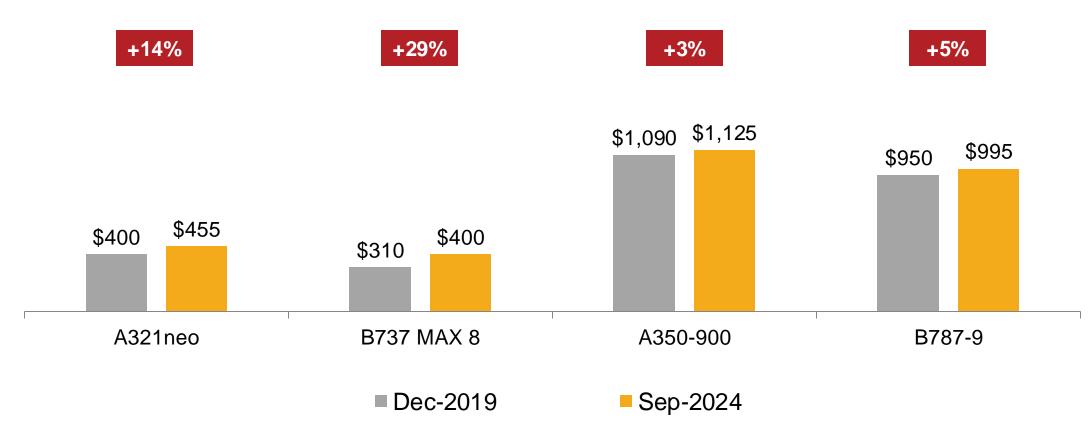
* Based on contractual fleet plans as of 10/31/2023



Single-Aisle Airplanes Have Gotten Significantly More Expensive

Monthly Lease Rates on New Builds Reflect Supply Chain (e.g., Labor, Materials) Tightness

Monthly Market Lease Rates (000)



Source: Cirium and Deutsche Bank (December 2024)



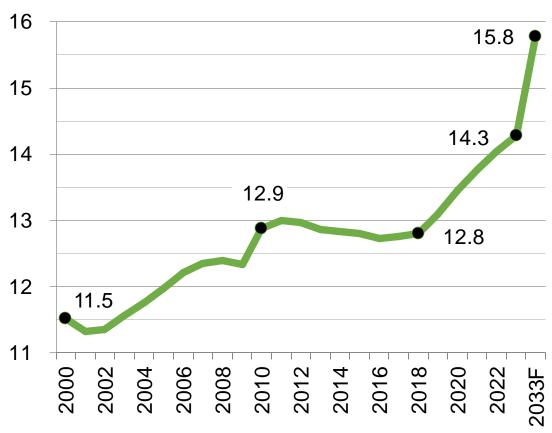
Globally, Delivery Delays Are Translating to an Aging Fleet

Average Fleet Age Expected to Rise to ~16 Years by 2033

"Commercial airplane fleets are aging at an alarming rate, and the implications—ranging from higher maintenance, repair and overhaul costs to reduced ability to meet ambitious sustainability targets—are troubling for operators... [We do] not expect a return to 2018 delivery levels until around 2027, and that milestone may slip to the right with the fallout from strikes and the whack-a-mole nature of supply chain bottlenecks that are difficult to contain... To return the fleet age to 2019 levels by 2033, 5-10% more narrowbodies and 30-40% more widebodies would have to be delivered than are forecast to be handed over."

Mike Stengel, AeroDynamic Advisory, "Up Front," Aviation Week & Space Technology, (Nov. 25, 2024)

Average Age (Years) of Global Airline Fleet



Source: CAPA (https://centreforaviation.com/) and Mike Stengel, AeroDynamic Advisory, Aviation Week & Space Technology, (Nov. 25, 2024)



^{*} Based on contractual fleet plans as of 10/31/2023

Supply Chain Issues Are Exacerbating Airline Cost and Operating Pressures

Tight Capacity of Maintenance/Repair/Overhaul (MRO) and Parts Could Last Several Years

"External MRO capacity is not likely to move materially higher in the near-term, as facility operators are concerned about overcapacity in the future. The view here is that MROs are likely only 25% of the solution. To get out of this environment, it's going to take higher OE production, which should accelerate retirements and allow for more parts scrapping. All indicators are that it should take another two and half to three years before that plays out." (Stephen Trent, AeroDynamic Advisory, Nov. 13, 2024)

"Integral parts of the supply chain like engines are also seeing delays, with CFM's delivery target for LEAP engines in 2024 now down 10% year-over-year vs. up 20% to 25% in February 2024. Aircraft availability is further exacerbated by tight MRO supply, both in terms of slot availability and longer turnaround times. Several airlines in the US are also materially impacted by mandatory accelerated maintenance for GTF-powered A230neos and A220s..." (Catherine O'Brien, Goldman Sachs Equity Research, Nov. 15, 2024)

"For airlines, an aging fleet increases pressure on maintenance costs... Inflation has certainly played a role..., but older fleets also drive nonroutine tasks during maintenance events, and parts become more difficult to source... [M]ost airlines will find their options limited..." (Mike Stengel, AeroDynamic Advisory, Nov. 25, 2024)



U.S. Airlines Are Investing Heavily in Aircraft, Ground Equipment, Facilities and Technology

Financial Recovery Has Enabled Significant Reinvestment, Including All-Time High in 2023

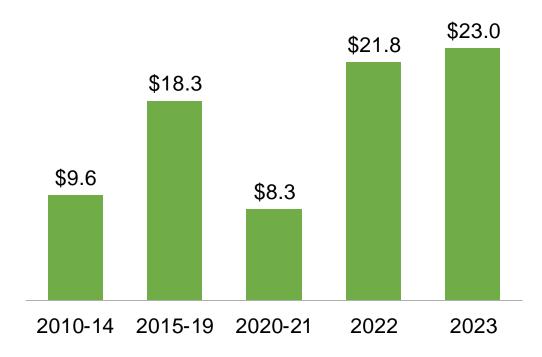








Annual Capital Expenditures* (Billions) U.S. Passenger Airlines



^{*} Includes payments made for aircraft and other flight equipment, ground and other property and equipment (e.g., baggage carts, lavatory trucks, deicing vehicles), airport and other facility construction and technology Sources: CapEx from SEC filings of Alaska/Allegiant/American/Delta/Frontier/Hawaiian/JetBlue/Southwest/Spirit/Sun Country/United and predecessors

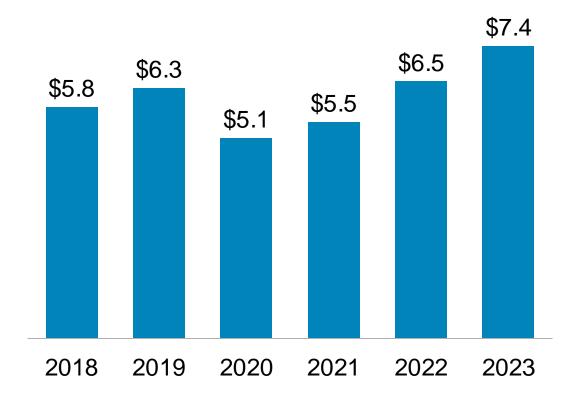


From 2018-2023, U.S. Passenger Airlines Spent ~\$36.5 Billion on Information Technology

Goal: Boost Operational Resiliency/Redundancy/Security and Customer Self-Service Functionality

Annual IT Expenditures (Billions)

U.S. Passenger Airlines





Making it easier for travelers to:

- Shop for tickets
- Modify itineraries
- Check in for their journeys
- Navigate airports
- Check and/or track bags
- Stay apprised of flight status
- Redeem vouchers/loyalty points

Sources: Alaska/Allegiant/American/Avelo/Breeze/Delta/Frontier/Hawaiian/JetBlue/Southwest/Spirit/Sun Country/United

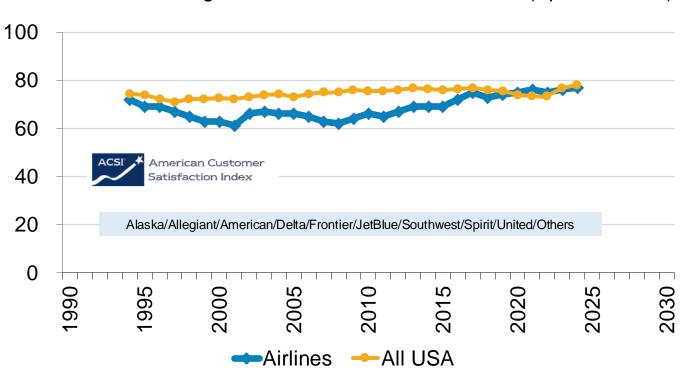


ACSI Airline Customer Satisfaction Index Reached an All-Time High in 2024

Airlines Scored 80+ on 14 of the 19 Satisfaction Benchmarks; Scores Rose on All 19 From 2019-2024

"Carriers have bounced back strongly, showing that innovations and service improvements implemented during the last two years have resonated with customers."

Forrest Morgeson, Dir. of Research Emeritus, (April 23, 2024)



Satisfaction Benchmark	2019	2024	Diff
Ease of making reservation	81	84	+3
Mobile app quality	82	84	+2
Mobile app reliability	82	84	+2
Ease of check-in	82	83	+1
Website satisfaction	80	83	+3
Cabin and lavatory cleanliness	78	82	+4
Courtesy: flight crew	80	82	+2
Baggage handling	79	81	+2
Boarding experience	79	81	+2
Call center satisfaction	78	81	+3
Courtesy: gate staff	80	81	+1
Timeliness of arrival	80	81	+1
Loyalty program	75	80	+5
Range of flight schedules	77	80	+3
Overhead storage	73	79	+6
Food and beverage: purchased	73	78	+5
Inflight entertainment	71	78	+7
Food and beverage: free	73	76	+3
Seat comfort	69	76	+7

Source: The American Customer Satisfaction Index (ACSI[®]), the only national cross-industry measure of customer satisfaction, measures the satisfaction of U.S. household consumers with the quality of products and services offered by firms with significant share in U.S. markets. The ACSI Travel Study 2023-2024 reflects interviews with 16,352 customers, chosen at random and contacted via email between April 2023 and March 2024.



ACSI Study Shows Airline Customer Satisfaction in Line With Other Transport/Travel Sectors

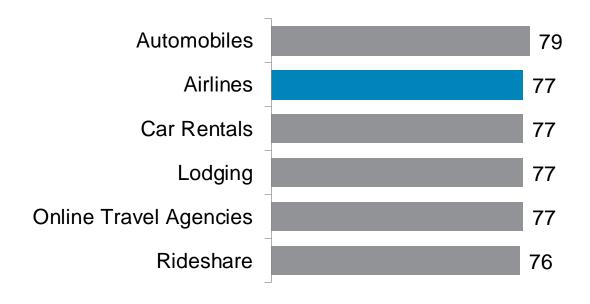
Latest Survey Research Shows Airlines Tied With Car Rentals/Lodging/OTAs, Ahead of Rideshare



The National Cross-Industry Measure of Customer Satisfaction

ACSI: "Airlines today face more challenges than perhaps any other industry but are rising to the task. Ensuring passenger safety, satisfaction, and profitability can seem daunting, but ACSI's solution forecasts the expected results from various improvement strategies in terms of customer satisfaction, retention, and financial returns."

Customer Satisfaction Scores (0 to 100) by Industry



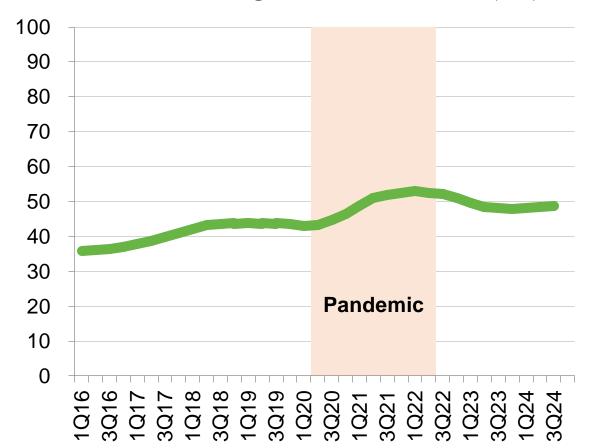
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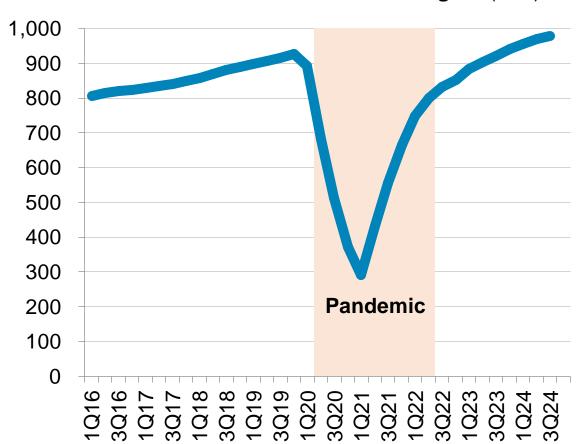
For U.S. Airlines, Air-Travel and Air-Cargo Demand Exceed Pre-Pandemic Levels

Air Cargo Stabilized After a Pandemic Surge, Whereas Air Travel Has Continued to Rise in 2023-2024

Annualized Air Cargo Revenue Ton Miles* (Bils)



Annualized Scheduled-Service Passengers (Mils)



Source: Bureau of Transportation Statistics (Form 41 Schedule T1 and T100 segment data)

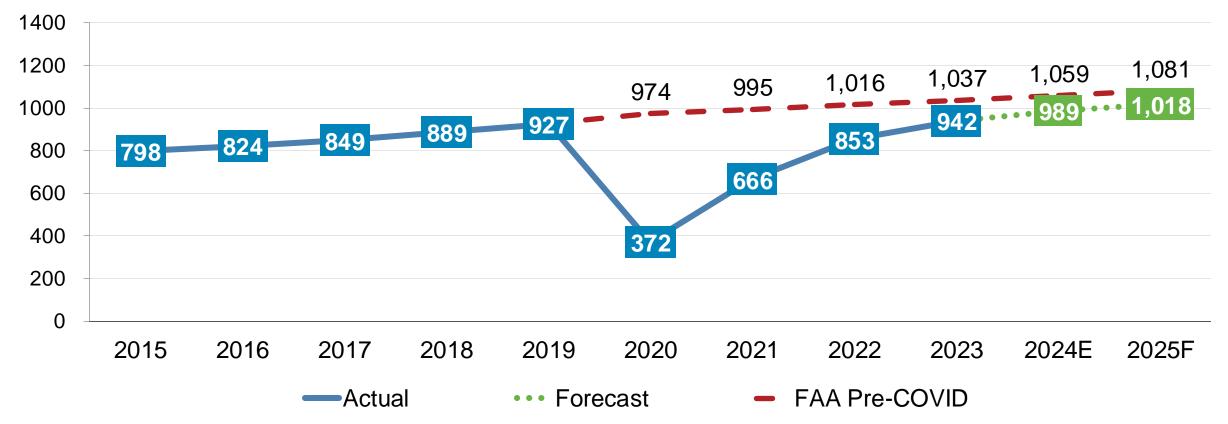


^{*} Cargo revenue ton miles (RTMs) flown on U.S. passenger and cargo-only airlines in scheduled and nonscheduled services

U.S. Airline Passenger Volumes Projected to Reach All-Time Highs in 2024 and 2025

Forecast Assumes Continued U.S. Job Growth and Disinflation

U.S. Airline Scheduled-Service Passengers Enplaned (Millions)



Source: A4A and U.S. Bureau of Transportation Statistics (Form 41 Schedule T-1)

Note: F= forecast; 2024 projection assumes 5% year-over-year growth





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