

Appendix A: Alternative Forecast Scenarios

Uncertainty exists in all industries, but especially in the commercial air travel industry. As volatility in the global environment has increased, the importance of scenarios for planning purposes has increased. To help stakeholders better prepare for the future, the FAA provides alternative scenarios to the baseline forecasts of airline traffic and capacity.

To create the baseline domestic forecast, economic assumptions from S&P Global's November 2024 30-year U.S. Macro Baseline were used. To develop the alternative scenarios, assumptions from S&P Global's 30-year optimistic and pessimistic forecasts

from their August 2024 *US Economic Outlook* were utilized. Inputs from these alternative scenarios were used to create “Optimistic” and “Pessimistic” traffic, capacity, and yield forecasts.

International passengers and traffic are primarily driven by country specific Gross Domestic Product (GDP) forecasts provided by S&P Global. Thus, the alternative scenarios use inputs based on ratios derived from S&P Global's Major Trading Partner and Other Important Trading Partners optimistic and pessimistic forecasts to create high and low cases.

Scenario Assumptions

The FAA's domestic baseline forecast assumes growth slightly above trend in 2025 followed by a slowdown in 2026 and 2027. GDP growth in 2025 comes in at about 2.1 percent but drops to 1.7 percent in subsequent years, somewhat below its long-term potential rate. The below-trend rate in the medium term causes the unemployment rate to rise and peak at 4.7 percent in 2027. Slower growth and higher unemployment contribute to tamp down inflation, and the Federal Reserve can begin lowering interest rates. By the end of the decade, slowing population growth restrains potential GDP growth, and the economy stabilizes with GDP growth at 1.6 percent and unemployment at 4.2 percent. Crude oil prices bottom out at \$61 in 2026 before gradually rising throughout the remainder of the forecast. With increasing global demand, the oil price

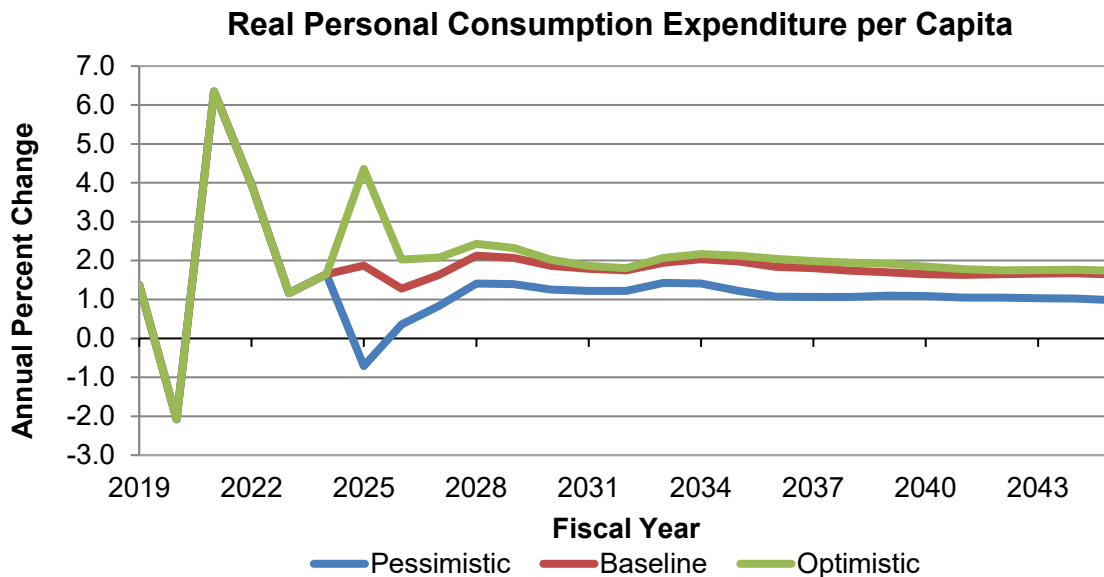
rises to \$99 per barrel at the end of the forecast.

The FAA's high case forecast draws from S&P Global's optimistic forecast. The optimistic scenario is characterized by a faster resolution to the fighting in Gaza and a cessation of fighting in the Russia-Ukraine war resulting in lower energy prices. Near-term differences from the baseline include GDP growth of 5.3 percent in 2025 compared to 2.1 percent in the baseline, driven mainly by stronger consumer spending. Consumer spending surges in 2025 by 5.3 percent before moderating to 2.7 percent in 2026, versus 2.6 percent and 1.7 percent in the base forecast. Stronger spending results from lower energy expenditures and increased confidence due to lessened political tensions. The unemployment rate still rises but peaks about 3 tenths of a percent lower than in the baseline.

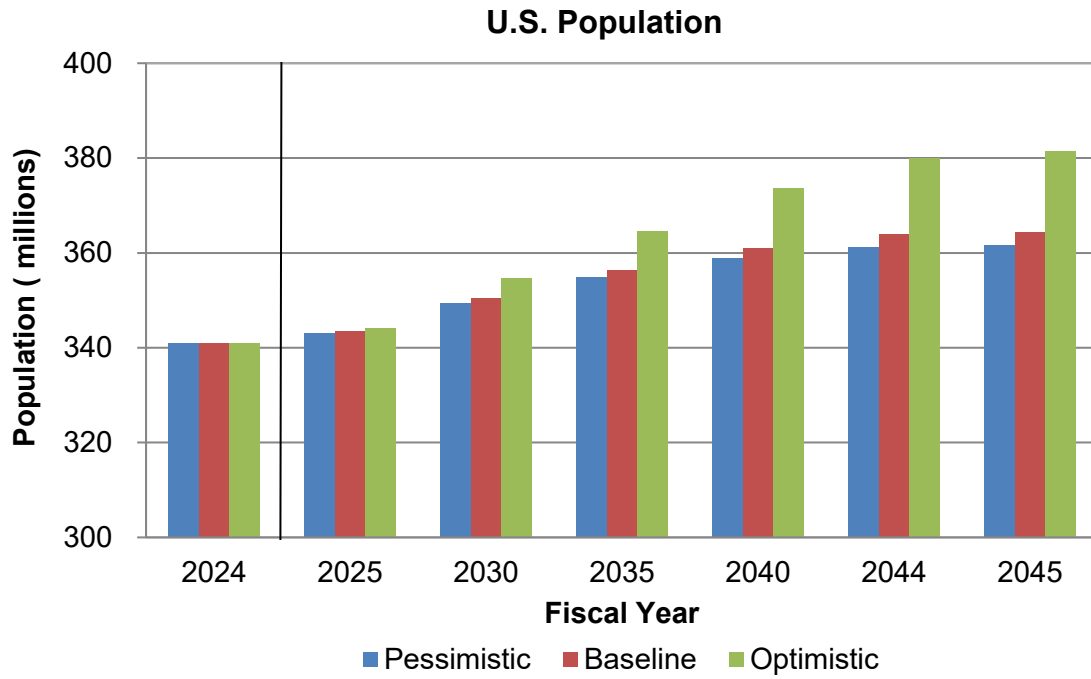
FAA Aerospace Forecast Fiscal Years 2025–2045

Conversely, FAA's low case forecast relies on S&P Global's pessimistic scenario. In this forecast, the worse outcome is mainly due to a decline in consumer spending caused by banking sector turmoil and tighter lending standards. Meanwhile, worsening conflicts in Ukraine and Gaza contribute to slumping consumer demand and drive oil prices higher. GDP declines in 2025 by 1.0 percent compared to an increase of 2.1 percent in the baseline while consumption shrinks 0.1 percent compared to the baseline's increase

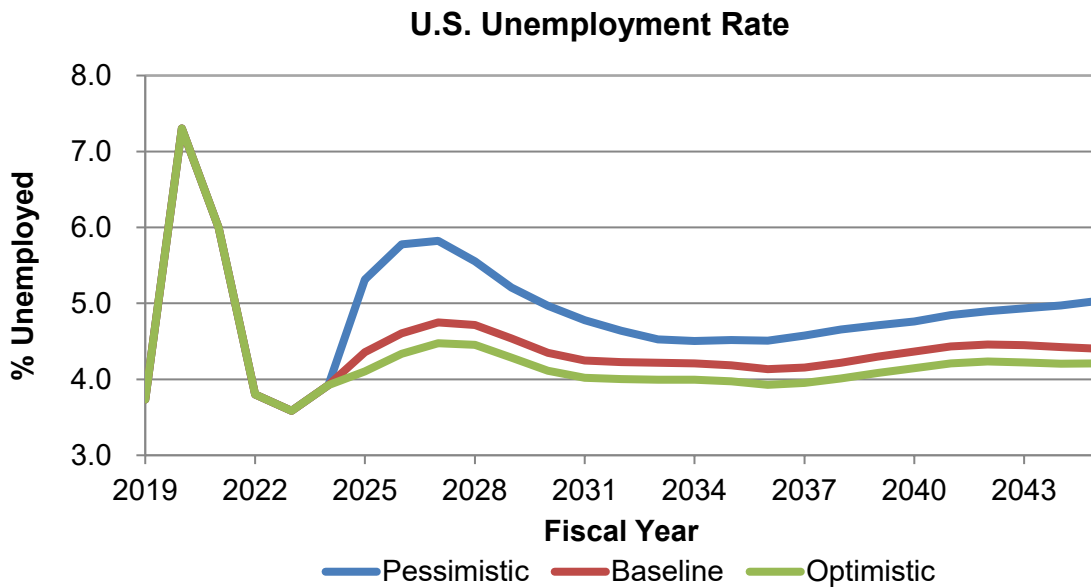
of 2.6 percent. Over the forecast horizon, average GDP growth is almost seven tenths slower than in the baseline. Oil prices rise sharply throughout the forecast to end at \$174 in 2045 -- 76 percent higher than the baseline. As in the baseline, the unemployment rate peaks in 2027 but is one and a tenth percentage points higher than the baseline at that time. It remains elevated by about half a percentage point through the end of the forecast.



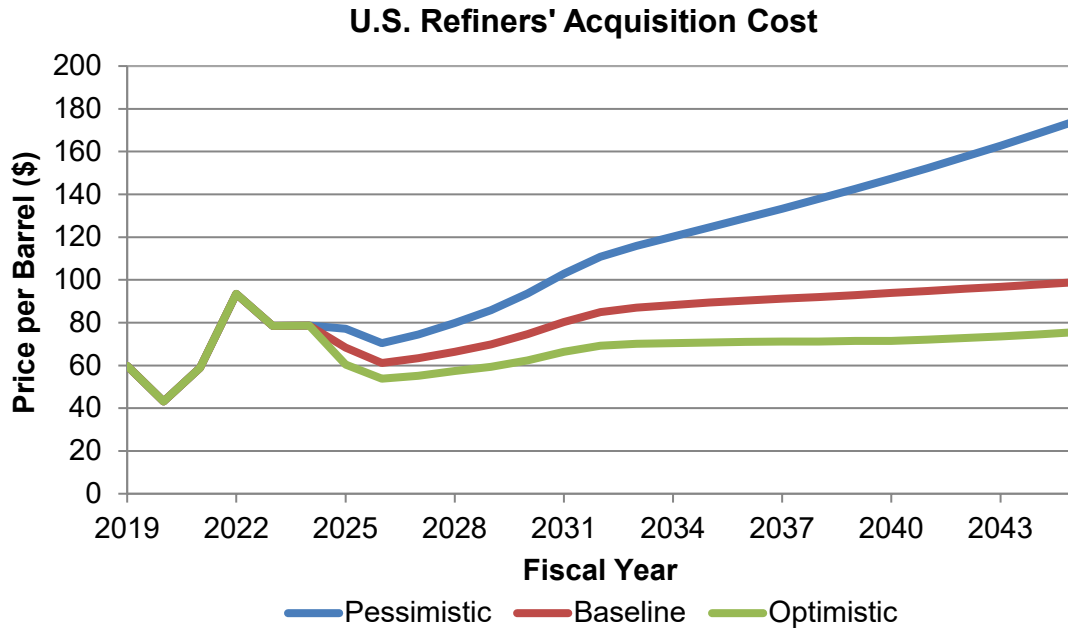
Source: S&P Global



Source: S&P Global



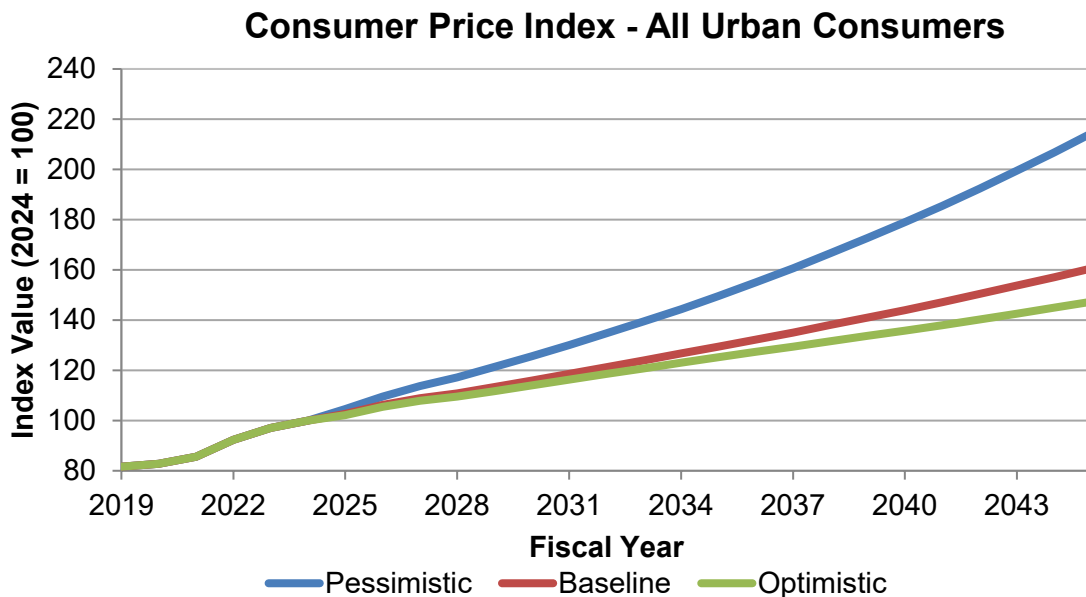
Source: S&P Global



Source: S&P Global

The price of energy is one of the drivers in the growth of consumer prices over the forecast period. In the optimistic case, slow growth of energy prices and import prices counteracts faster growth of other consumer

goods prices, causing the optimistic CPI to rise somewhat slower than the baseline. In the pessimistic case, energy prices, wages and import prices all rise more rapidly compared to the baseline.



Source: S&P Global

Alternative Forecasts

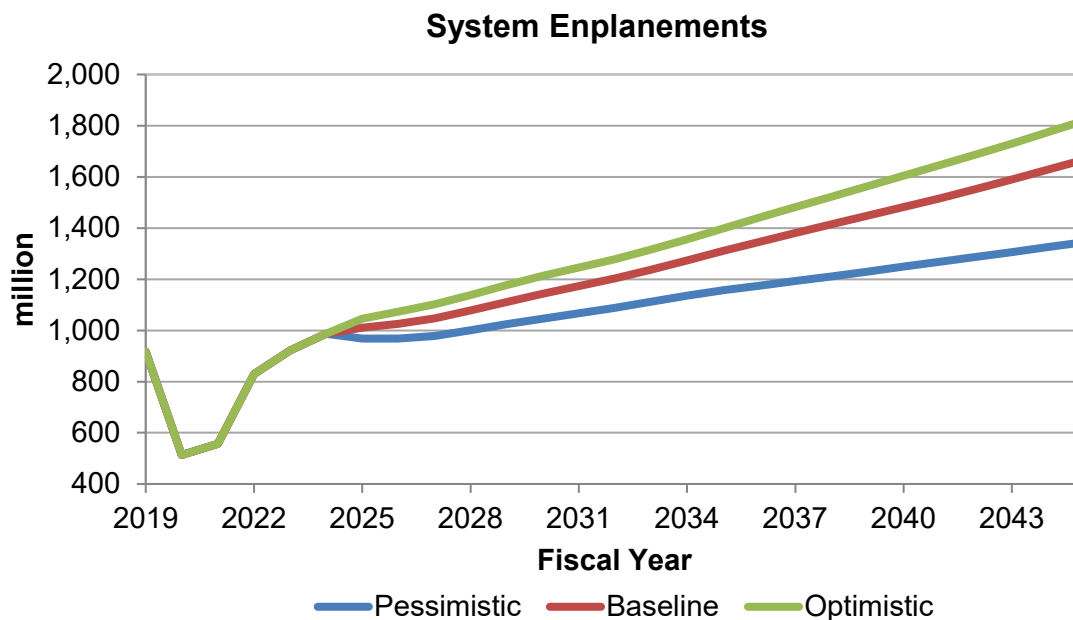
Enplanements

In the baseline forecast, system enplanements are forecast to grow at an average annual rate of 2.5 percent a year over the forecast horizon of 2025-2045 (with domestic and international passengers increasing at rates of 2.4 and 3.1 percent, respectively).

In the optimistic case, enplanements grow at a slightly quicker pace, averaging 3.0 percent per year (up 2.9 percent domestically and 3.2 percent internationally). This scenario is marked by a more favorable business environment and lower fuel prices which make the price of flying more affordable to business and leisure travelers. By the end of the forecast period in 2045, system

passengers in the optimistic case are 9 percent above the baseline, totaling 1.8 billion, 153 million greater than in the baseline.

The pessimistic case is characterized by a period of weakened consumer spending combined with high inflation, leading to higher interest rates, and curtailed investment. In this scenario, enplanements grow an average of 1.5 percent per year (domestic up 1.3 percent and international up 2.8 percent). In the pessimistic case, system passengers in 2045 are 19 percent below the baseline case, totaling 1.3 billion, or 322 million fewer than in the baseline.



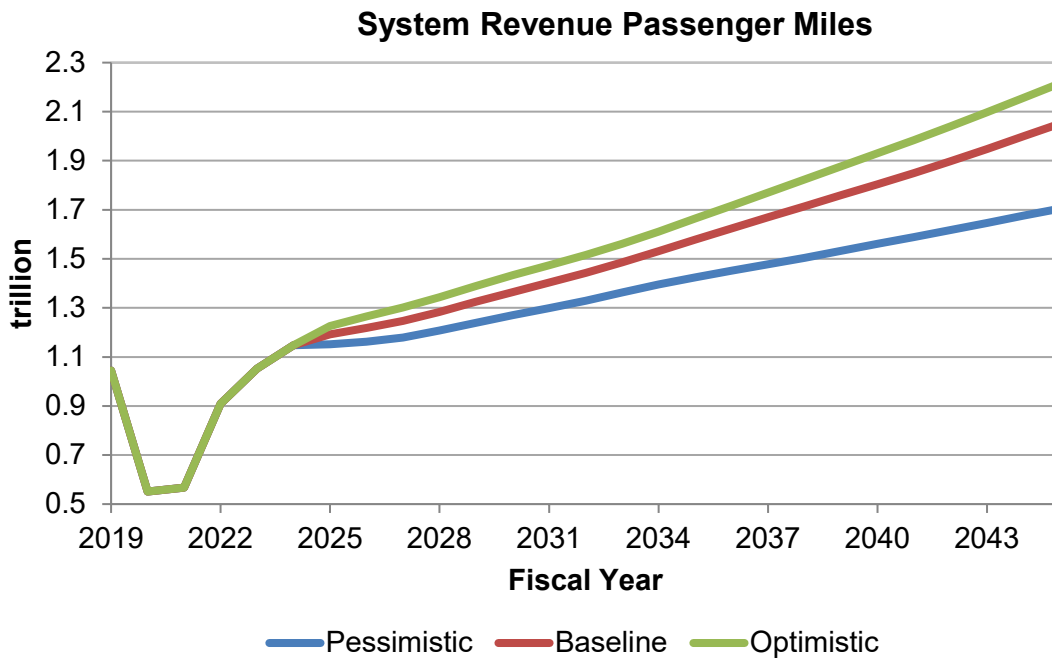
Revenue Passenger Miles

In the baseline forecast, system RPMs grow at an average annual rate of 2.8 percent a year over the forecast horizon (2025-2045), with domestic RPMs increasing 2.8 percent annually and international RPMs growing 2.9 percent annually.

In the optimistic case, the faster growing economy coupled with lower energy prices drives RPMs higher than the baseline, with

growth averaging 3.2 percent per year (domestic and international RPMs up 3.2 and 3.0 percent, respectively).

In the pessimistic case, the combination of a slower growing economy and higher energy prices result in RPM growth averaging 1.9 percent annually with domestic markets growing 1.6 percent a year while international traffic grows 2.6 percent annually.



Available Seat Miles

In the base case, system capacity is forecast to increase an average of 2.7 percent annually over the forecast horizon with growth averaging 2.6 percent annually in domestic markets and 2.8 percent a year in international markets.

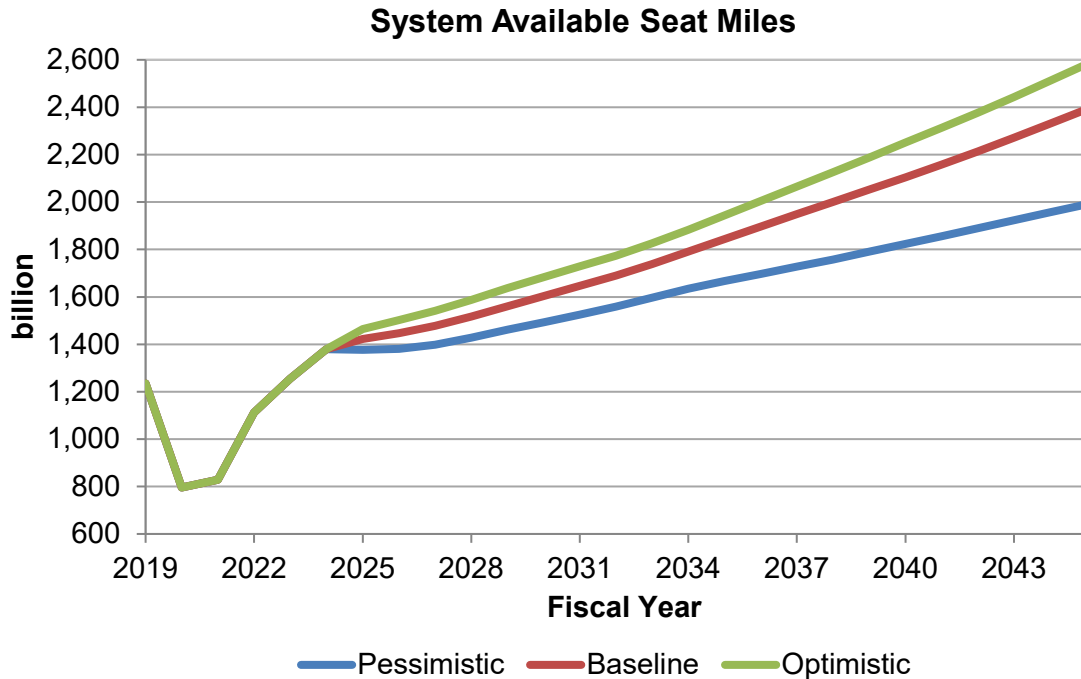
In the optimistic case, capacity grows somewhat faster than in the baseline forecast, averaging 3.0 percent annually system-wide (3.1 and 2.9 percent for domestic and international markets, respectively). Carriers increase capacity compared to the baseline forecast to accommodate increased travel

FAA Aerospace Forecast Fiscal Years 2025–2045

demand brought about by a more favorable economic environment.

In the pessimistic case, demand for air travel is lower than in the baseline, thus system

capacity grows at a slower pace of 1.8 percent annually (domestic growth of 1.4 percent annually and international up 2.5 percent annually).



Load Factor

System load factors over the 20-year forecast period are similar for all three forecast scenarios. System load factor rises from 83.2 percent in 2024 to 85.8 (optimistic), 85.7 (pessimistic), and 85.8 (baseline) percent in 2045.

In all three scenarios it is assumed that carriers will keep load factors on the high side by actively managing capacity (seats) to more precisely meet demand (passengers).

The domestic load factor increases over the forecast horizon from 83.7 percent to 86.9 percent in the baseline, optimistic and pessimistic scenarios.

The international load factor rises in the baseline from 82.1 percent to 83.4 percent in all three scenarios. This reflects in part the relative growth in demand in the three (Atlantic, Latin, and Pacific) international regions and carriers' ability to manage capacity.

Yield

In the baseline forecast, nominal system yield increases 1.9 percent annually, rising from 16.11 cents in 2024 to 23.71 cents in 2045. In domestic markets, yield in the baseline forecast rises from 15.96 cents in 2024 to 23.91 cents in 2045. International yield rises from 16.46 cents in 2024 to 23.25 cents in 2045.

System yield rises in the optimistic case at a slower rate than in the baseline, up 1.5 percent annually to 21.89 cents in 2045. Domestic yield increases to 21.66 cents while international yield increases to 22.45 cents. The moderate growth in yield in both cases is due

to advancements in technology, gains in productivity, and modestly rising fuel and other costs.

In the pessimistic case, nominal yields rise more rapidly than in the baseline, growing an average of 3.1 percent annually, reaching 30.42 cents by 2045 (32.54 cents domestically and 26.38 cents internationally). This scenario reflects higher general domestic inflation and markedly higher energy prices than in the baseline, forcing carriers to increase fares to cover the higher costs of fuel, labor, and capital.

TABLE A-1
FAA FORECAST ECONOMIC ASSUMPTIONS
FISCAL YEARS 2024-2045

Variable	Scenario	Historical	FORECAST					PERCENT AVERAGE ANNUAL GROWTH				
		2024E	2025	2030	2035	2040	2045	2024-25	2025-30	2025-35	2025-40	2025-45
Economic Assumptions												
Real Personal Consumption Expenditure per Capita (2017 \$)	Pessimistic	46,712	46,380	48,872	52,139	55,018	57,902	-0.7%	1.1%	1.2%	1.1%	1.1%
	Baseline	46,712	47,585	52,008	57,140	62,308	67,629	1.9%	1.8%	1.8%	1.8%	1.8%
	Optimistic	46,712	48,748	54,290	59,959	66,033	72,046	4.4%	2.2%	2.1%	2.0%	2.0%
Refiners Acquisition Cost - Average - \$ Per Barrel	Pessimistic	78.6	77.2	93.5	124.6	147.3	173.9	-1.9%	3.9%	4.9%	4.4%	4.1%
	Baseline	78.6	68.3	74.6	89.4	93.8	98.9	-13.1%	1.8%	2.7%	2.1%	1.9%
	Optimistic	78.6	60.4	62.4	70.7	71.5	75.5	-23.2%	0.7%	1.6%	1.1%	1.1%
Consumer Price Index All Urban, 1982-84 = 1	Pessimistic	3.02	3.16	3.80	4.52	5.41	6.48	4.5%	3.7%	3.7%	3.7%	3.7%
	Baseline	3.02	3.10	3.50	3.91	4.35	4.85	2.7%	2.4%	2.3%	2.3%	2.3%
	Optimistic	3.02	3.09	3.45	3.79	4.10	4.45	2.2%	2.2%	2.1%	1.9%	1.8%
Civilian Unemployment Rate (%)	Pessimistic	3.9	5.3	5.0	4.5	4.8	5.0	35.5%	-1.3%	-1.6%	-0.7%	-0.3%
	Baseline	3.9	4.4	4.3	4.2	4.4	4.4	11.1%	0.0%	-0.4%	0.0%	0.1%
	Optimistic	3.9	4.1	4.1	4.0	4.1	4.2	4.6%	0.0%	-0.3%	0.1%	0.1%
Source: S&P Global												

TABLE A-2
FAA FORECAST OF AVIATION ACTIVITY*
FISCAL YEARS 2024-2045

Variable	Scenario	Historical		FORECAST					PERCENT AVERAGE ANNUAL GROWTH				
		2024E	2025	2030	2035	2040	2045	2024-25	2025-30	2025-35	2025-40	2025-45	
System Aviation Activity													
Available Seat Miles (BIL)	Pessimistic	1,379.6	1,376.2	1,493.2	1,666.3	1,823.5	1,990.0	-0.2%	1.6%	1.9%	1.9%	1.9%	
	Baseline	1,379.6	1,423.2	1,603.5	1,844.2	2,104.6	2,390.9	3.2%	2.4%	2.6%	2.6%	2.6%	
	Optimistic	1,379.6	1,463.9	1,683.3	1,942.9	2,250.8	2,581.0	6.1%	2.8%	2.9%	2.9%	2.9%	
Revenue Passenger Miles (BIL)	Pessimistic	1,148.3	1,152.1	1,269.9	1,424.6	1,561.2	1,704.6	0.3%	2.0%	2.1%	2.0%	2.0%	
	Baseline	1,148.3	1,191.8	1,364.6	1,578.4	1,804.2	2,051.2	3.8%	2.7%	2.8%	2.8%	2.8%	
	Optimistic	1,148.3	1,226.1	1,433.1	1,663.9	1,930.8	2,215.5	6.8%	3.2%	3.1%	3.1%	3.0%	
Enplanements (MIL)	Pessimistic	986.9	967.8	1,045.8	1,156.4	1,249.3	1,344.5	-1.9%	1.6%	1.8%	1.7%	1.7%	
	Baseline	986.9	1,010.1	1,142.7	1,310.3	1,482.0	1,666.9	2.3%	2.5%	2.6%	2.6%	2.5%	
	Optimistic	986.9	1,045.7	1,212.8	1,398.2	1,604.9	1,819.6	6.0%	3.0%	2.9%	2.9%	2.8%	
Psg'r Carrier Miles Flown (MIL)	Pessimistic	8,052.8	7,971.9	8,493.5	9,294.1	9,967.6	10,662.3	-1.0%	1.3%	1.5%	1.5%	1.5%	
	Baseline	8,052.8	8,278.3	9,191.4	10,392.1	11,639.9	12,979.5	2.8%	2.1%	2.3%	2.3%	2.3%	
	Optimistic	8,052.8	8,540.4	9,696.5	11,010.3	12,516.0	14,078.3	6.1%	2.6%	2.6%	2.6%	2.5%	
Psg'r Carrier Departures (000s)	Pessimistic	8,989.4	8,733.5	9,054.2	9,668.4	10,095.8	10,516.3	-2.8%	0.7%	1.0%	1.0%	0.9%	
	Baseline	8,989.4	9,106.2	9,891.0	10,956.2	11,976.0	13,037.5	1.3%	1.7%	1.9%	1.8%	1.8%	
	Optimistic	8,989.4	9,417.3	10,485.0	11,669.7	12,940.9	14,208.3	4.8%	2.2%	2.2%	2.1%	2.1%	
Nominal Passenger Yield (cents)	Pessimistic	16.11	17.47	19.89	22.66	26.23	30.42	8.5%	2.6%	2.6%	2.7%	2.8%	
	Baseline	16.11	17.13	18.79	20.45	21.99	23.71	6.4%	1.9%	1.8%	1.7%	1.6%	
	Optimistic	16.11	16.97	18.47	19.85	20.80	21.89	5.3%	1.7%	1.6%	1.4%	1.3%	
Includes domestic and international activity.													

TABLE A-3
FAA FORECAST OF DOMESTIC AVIATION ACTIVITY
FISCAL YEARS 2024-2045

Variable	Scenario	Historical		FORECAST					PERCENT AVERAGE ANNUAL GROWTH				
		2024E	2025	2030	2035	2040	2045	2024-25	2025-30	2025-35	2025-40	2025-45	
<u>Domestic Aviation</u>													
Activity													
Available Seat Miles (BIL)	Pessimistic	961.3	940.2	1,005.4	1,106.7	1,195.9	1,288.2	-2.2%	1.4%	1.6%	1.6%	1.6%	
	Baseline	961.3	987.9	1,112.6	1,276.6	1,450.9	1,642.3	2.8%	2.4%	2.6%	2.6%	2.6%	
	Optimistic	961.3	1,027.7	1,190.8	1,376.8	1,588.6	1,811.9	6.9%	3.0%	3.0%	2.9%	2.9%	
Revenue Passenger Miles (BIL)	Pessimistic	804.9	792.6	863.6	958.2	1,037.7	1,119.0	-1.5%	1.7%	1.9%	1.8%	1.7%	
	Baseline	804.9	832.8	955.6	1,105.2	1,259.1	1,426.5	3.5%	2.8%	2.9%	2.8%	2.7%	
	Optimistic	804.9	866.4	1,022.8	1,192.0	1,378.6	1,573.8	7.6%	3.4%	3.2%	3.1%	3.0%	
Enplanements (MIL)	Pessimistic	858.5	834.3	895.5	980.7	1,048.3	1,115.6	-2.8%	1.4%	1.6%	1.5%	1.5%	
	Baseline	858.5	876.7	990.9	1,131.2	1,271.8	1,422.2	2.1%	2.5%	2.6%	2.5%	2.4%	
	Optimistic	858.5	912.0	1,060.6	1,220.0	1,392.6	1,569.1	6.2%	3.1%	3.0%	2.9%	2.7%	
Psgr Carrier Miles Flown (MIL)	Pessimistic	6,207.6	6,055.7	6,366.8	6,866.2	7,257.3	7,647.5	-2.4%	1.0%	1.3%	1.2%	1.2%	
	Baseline	6,207.6	6,363.8	7,047.8	7,923.9	8,811.5	9,758.3	2.5%	2.1%	2.2%	2.2%	2.2%	
	Optimistic	6,207.6	6,621.8	7,545.5	8,548.7	9,651.8	10,770.8	6.7%	2.6%	2.6%	2.5%	2.5%	
Psgr Carrier Departures (000s)	Pessimistic	8,169.9	7,891.5	8,120.1	8,586.8	8,868.7	9,131.9	-3.4%	0.6%	0.8%	0.8%	0.7%	
	Baseline	8,169.9	8,262.8	8,944.5	9,848.8	10,686.9	11,549.8	1.1%	1.6%	1.8%	1.7%	1.7%	
	Optimistic	8,169.9	8,571.4	9,534.7	10,566.1	11,636.9	12,684.3	4.9%	2.2%	2.1%	2.1%	2.0%	
Nominal Passenger Yield (cents)	Pessimistic	15.96	17.67	20.64	24.09	27.98	32.54	10.7%	3.2%	3.2%	3.1%	3.1%	
	Baseline	15.96	17.23	18.86	20.58	22.15	23.91	8.0%	1.8%	1.8%	1.7%	1.7%	
	Optimistic	15.96	17.01	18.34	19.63	20.58	21.66	6.6%	1.5%	1.4%	1.3%	1.2%	
*Includes mainline and regional carriers.													

TABLE A-4
FAA FORECAST OF INTERNATIONAL AVIATION ACTIVITY*
FISCAL YEARS 2024-2045

Variable	Scenario	Historical	FORECAST				PERCENT AVERAGE ANNUAL GROWTH					
		2024E	2025	2030	2035	2040	2045	2024-25	2025-30	2025-35	2025-40	2025-45
International Aviation Activity												
Available Seat Miles (BIL)	Pessimistic	418.3	436.0	487.8	559.6	627.6	701.8	4.2%	2.3%	2.5%	2.5%	2.4%
	Baseline	418.3	435.3	490.9	567.6	653.7	748.6	4.1%	2.4%	2.7%	2.7%	2.7%
	Optimistic	418.3	436.2	492.5	566.2	662.1	769.1	4.3%	2.5%	2.6%	2.8%	2.9%
Revenue Passenger Miles (BIL)	Pessimistic	343.3	359.5	406.3	466.4	523.5	585.6	4.7%	2.5%	2.6%	2.5%	2.5%
	Baseline	343.3	358.9	409.0	473.1	545.2	624.7	4.5%	2.6%	2.8%	2.8%	2.8%
	Optimistic	343.3	359.6	410.3	471.9	552.2	641.7	4.7%	2.7%	2.8%	2.9%	2.9%
Enplanements (MIL)	Pessimistic	128.4	133.5	150.4	175.7	201.0	228.9	3.9%	2.4%	2.8%	2.8%	2.7%
	Baseline	128.4	133.4	151.9	179.1	210.2	244.8	3.9%	2.6%	3.0%	3.1%	3.1%
	Optimistic	128.4	133.7	152.2	178.2	212.3	250.5	4.1%	2.6%	2.9%	3.1%	3.2%
Psgr Carrier Miles Flown (MIL)	Pessimistic	1,845.2	1,916.2	2,126.6	2,427.9	2,710.3	3,014.8	3.8%	2.1%	2.4%	2.3%	2.3%
	Baseline	1,845.2	1,914.5	2,143.7	2,468.2	2,828.4	3,221.2	3.8%	2.3%	2.6%	2.6%	2.6%
	Optimistic	1,845.2	1,918.6	2,151.0	2,461.5	2,864.2	3,307.4	4.0%	2.3%	2.5%	2.7%	2.8%
Psgr Carrier Departures (000s)	Pessimistic	819.6	842.0	934.1	1,081.6	1,227.1	1,384.5	2.7%	2.1%	2.5%	2.5%	2.5%
	Baseline	819.6	843.4	946.5	1,107.4	1,289.1	1,487.6	2.9%	2.3%	2.8%	2.9%	2.9%
	Optimistic	819.6	845.9	950.3	1,103.7	1,304.0	1,524.0	3.2%	2.4%	2.7%	2.9%	3.0%
Nominal Passenger Yield (cents)	Pessimistic	16.46	17.05	18.27	19.72	22.76	26.38	3.6%	1.4%	1.5%	1.9%	2.2%
	Baseline	16.46	16.90	18.62	20.14	21.61	23.25	2.7%	2.0%	1.8%	1.7%	1.6%
	Optimistic	16.46	16.87	18.79	20.40	21.34	22.45	2.5%	2.2%	1.9%	1.6%	1.4%
*Includes mainline and regional carriers.												