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. In order to help stakeholders better prepare for the future, the FAA has begun to provide alternative scenarios to our baseline forecasts of airline traffic and capacity.

To create the baseline forecast, economic assumptions for both U.S. and international regions from IHS Global Insight's 30-Year Focus (released third quarter 2011) were used to generate enplanements, mainline real yield and nominal yield. The baseline forecast of passenger trip length (an input variable used to forecast mainline real yield) was derived from recent historical trends and analyst judgment. To develop the alternative scenarios, assumptions from the optimistic and pessimistic scenarios contained in IHS Global Insight's 30-Year Focus were used. Inputs from these scenarios were substituted for the baseline scenario inputs to create a "high" and "low" traffic, capacity, and yield forecast. The baseline forecast trip length was adjusted in the optimistic and pessimistic scenarios based on the movement of oil prices in Global Insight's alternative forecasts relative to the baseline forecast.

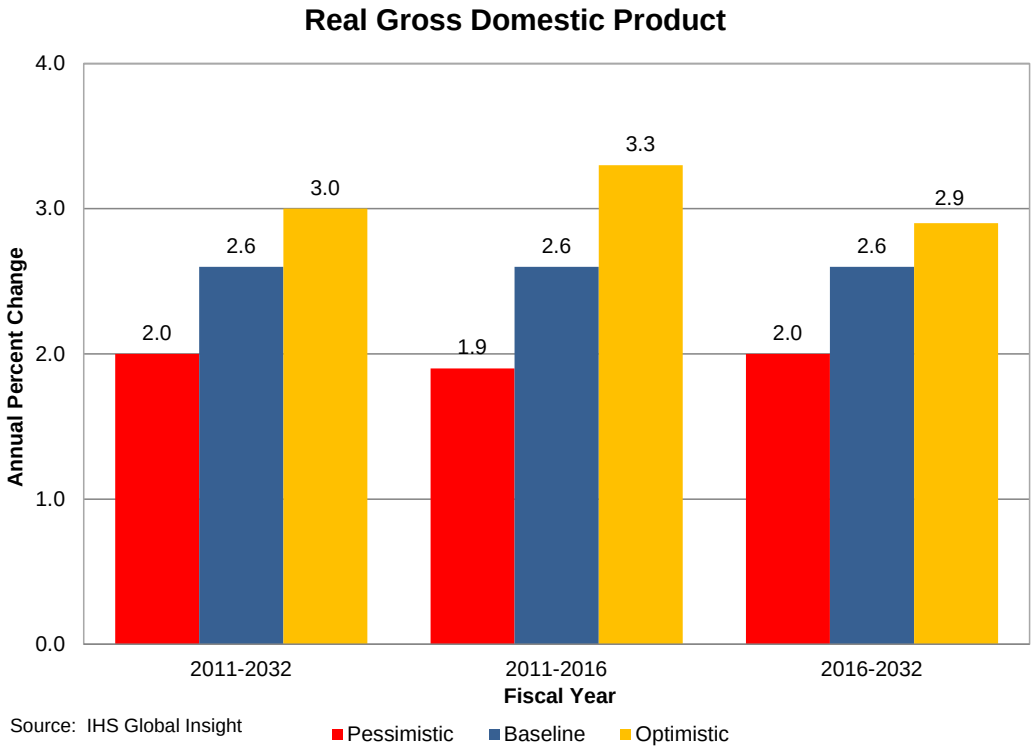
International passengers and traffic are primarily determined by GDP. Thus, the baseline forecast of GDP for both the U.S. and international regions is modified using the optimistic and pessimistic forecasts of GDP described above in order to create a high and low case.

Scenario Assumptions

The FAA's baseline forecast assumes that the economy recovers from the current downturn and suffers no major mishaps such as large oil price shocks, swings in macroeconomic policy, or financial meltdowns. In the alternative scenarios, the economy is assumed to proceed smoothly as well, however at a different pace than projected under the baseline forecast. Projections for economic growth in IHS Global Insight's alternative scenarios are rooted in demographics. In IHS Global Insight's optimistic forecast scenario, population grows more rapidly than in the baseline due to higher net immigration. The reverse is true for the pessimistic forecast; population grows more slowly than the baseline forecast due to slower net immigration.

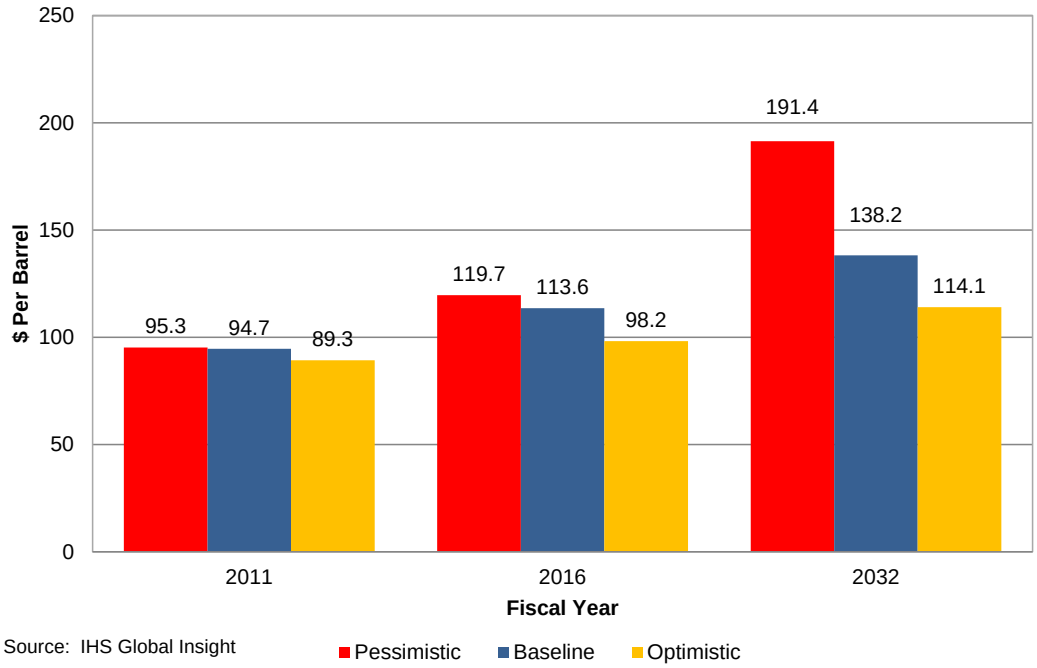
The FAA's high case forecast uses IHS Global Insight's optimistic forecast. The optimistic forecast is characterized by lower inflation and faster growth in the labor force and capital stock than in the baseline forecast. In this scenario productivity growth is higher and potential output climbs more rapidly, with GDP growing about 0.4 percentage points faster per year than the baseline forecast and unemployment averaging 0.4 points lower on an annual basis than the baseline (GDP and unemployment are used as an input variables to the FAA's base, high and

low forecasts of enplanements). Conversely, FAA's low case forecast uses IHS Global Insight's pessimistic scenario. The pessimistic forecast is characterized by higher inflation and slower growth in the labor force and capital stock than in the baseline forecast. In this scenario, the U.S. economy grows 0.6 percentage points slower per year than in the baseline due to slower productivity and lower potential output growth, and unemployment, on average, is 0.3 points higher on an annual basis than in the baseline.



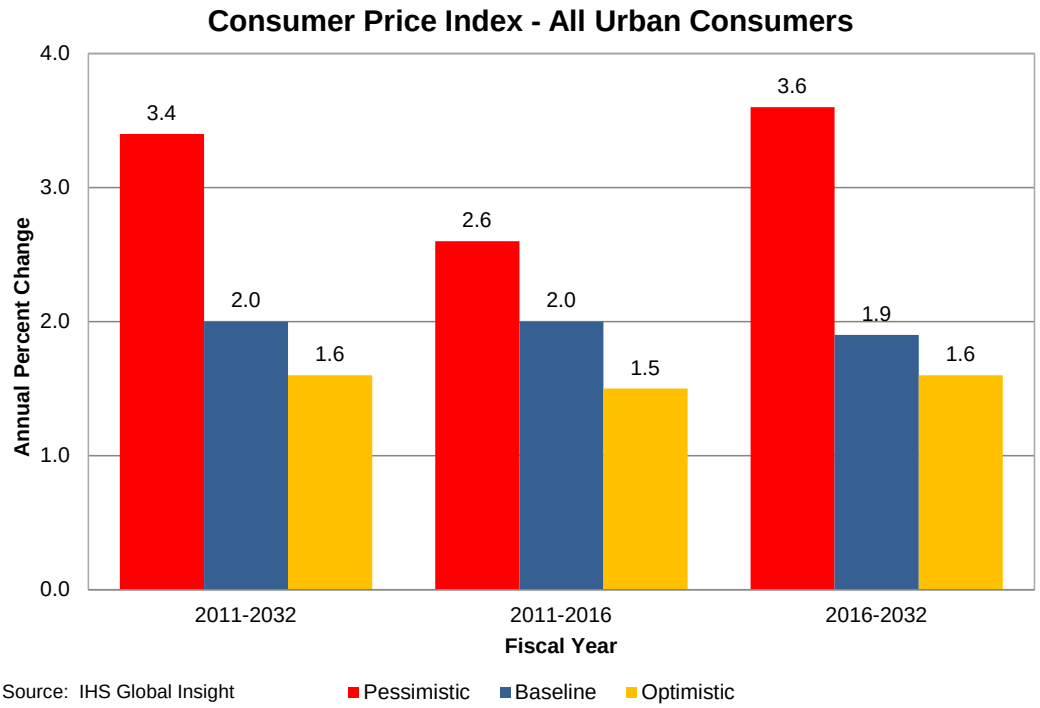
Oil prices affect the supply of and demand for air travel and have a direct impact on the profitability of the industry. In all three forecast scenarios prices remain high by historical standards. In the baseline forecast, oil prices rise as the world economy recovers from the recession, but are kept in check as technological improvements act as a counterbalance to rising prices. In the baseline, the refiners acquisition cost (RAC) of oil increases 46 percent between 2011 and 2032, rising from $95 to $138 per barrel. In the high case, the RAC increases at a slower pace than in the baseline forecast resulting in a price of $114 per barrel at the end of the forecast period. The high case is characterized by availability of energy and gains in technology which help to temper prices compared to the baseline. In the low case forecast, scarcity of oil and lower productivity gains create upward pressure in oil prices. In this scenario, the RAC doubles, rising to $191 by 2032.

U.S. Refiners' Acquisition Cost



Source: IHS Global Insight

The price of energy is one of the critical drivers in the growth of consumer prices over the forecast period. In the high case the consumer price index (CPI) grows at an average rate of 1.6 percent per year (compared to growth of 2.0 percent annually in the baseline) as energy prices, wages, and import prices grow more slowly than in the baseline. In the low case forecast the opposite assumptions hold with energy prices, wages and import prices rising more rapidly compared to the baseline. As a result, in the low case, CPI grows an average of 3.4 percent annually over the forecast period as the growth accelerates to almost 4 percent per year by the end of the forecast.

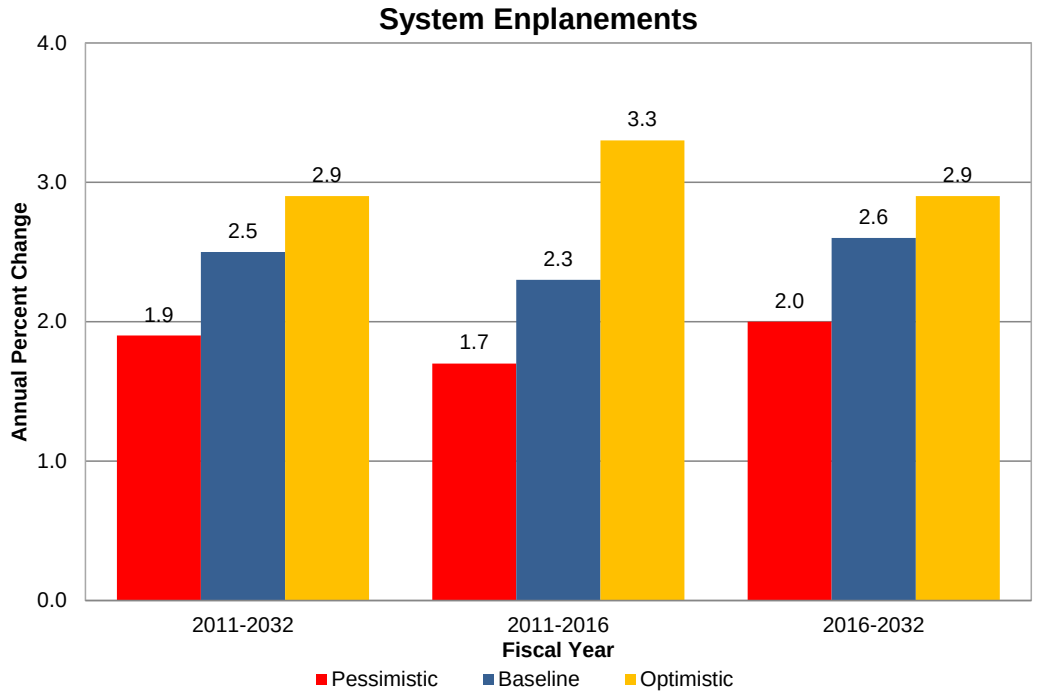


The baseline passenger trip length forecast is predicated upon analyst judgment and recent trip length trends. Carrier behavior as a result of volatile fuel prices during 2008–2011 provided the basis for adjusting trip length in the alternative forecasts. During 2008–2011, high fuel costs made flying on some longer haul routes cost prohibitive (thus unprofitable), resulting in lower trip length compared to prior years. Since the FAA's low case forecast is characterized by higher fuel prices relative to the baseline forecast, it is assumed that trip length rises at a slower pace than in the baseline forecast. In FAA's high forecast, fuel prices are lower than projected in the baseline, pushing trip length up as lower fuel prices make flying longer-haul routes more affordable.

Alternative Forecasts

Passengers

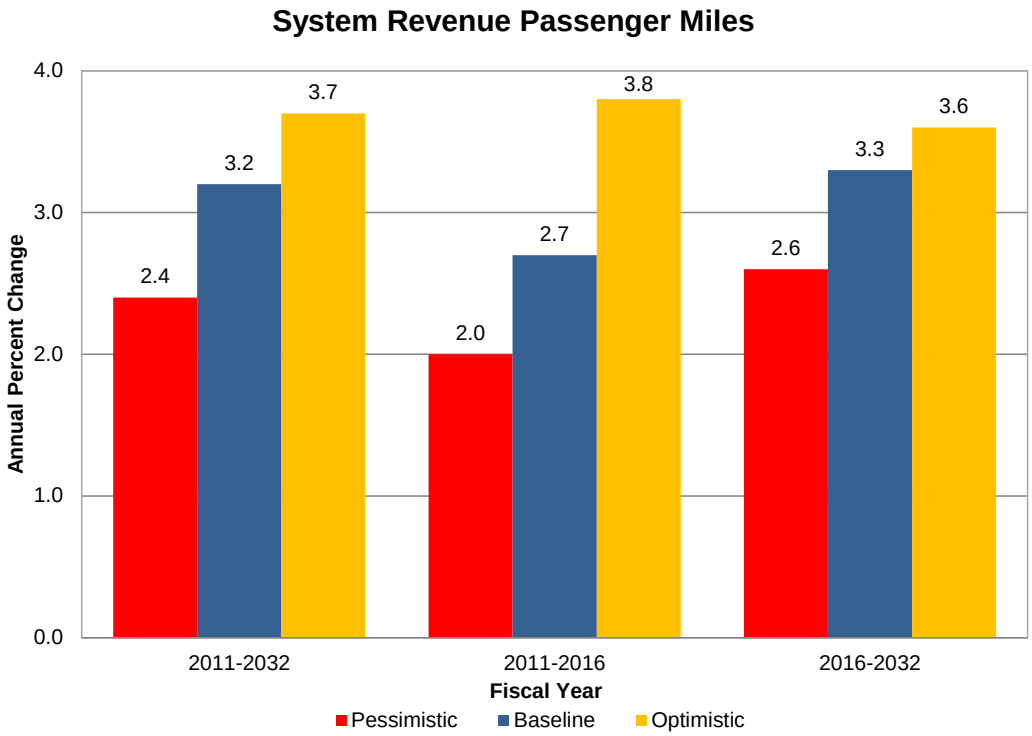
In the baseline forecast, system passengers are forecast to grow at an average annual rate of 2.5 percent a year over the forecast horizon (with domestic and international passengers up 2.3 and 4.1 percent, respectively). In the high case, passengers grow at a quicker pace, averaging 2.9 percent per year (up 2.7 percent domestically and 4.7 percent internationally). This scenario is marked by a more favorable business environment, lower inflation, and lower fuel prices which make the price of flying more affordable to business and leisure travelers. In the high case, one billion passengers are forecast for 2022, two years earlier than predicted in the baseline forecast. The low case is characterized by increased costs of capital resulting from higher interest rates, weakened consumer confidence brought on by persistent unemployment, and higher inflation. In this scenario passengers grow an average of 1.9 percent per year (domestic up 1.7 percent and international up 3.1 percent). In the low case, one billion passengers are reached in 2028, four years later than in the baseline forecast.



Revenue Passenger Miles

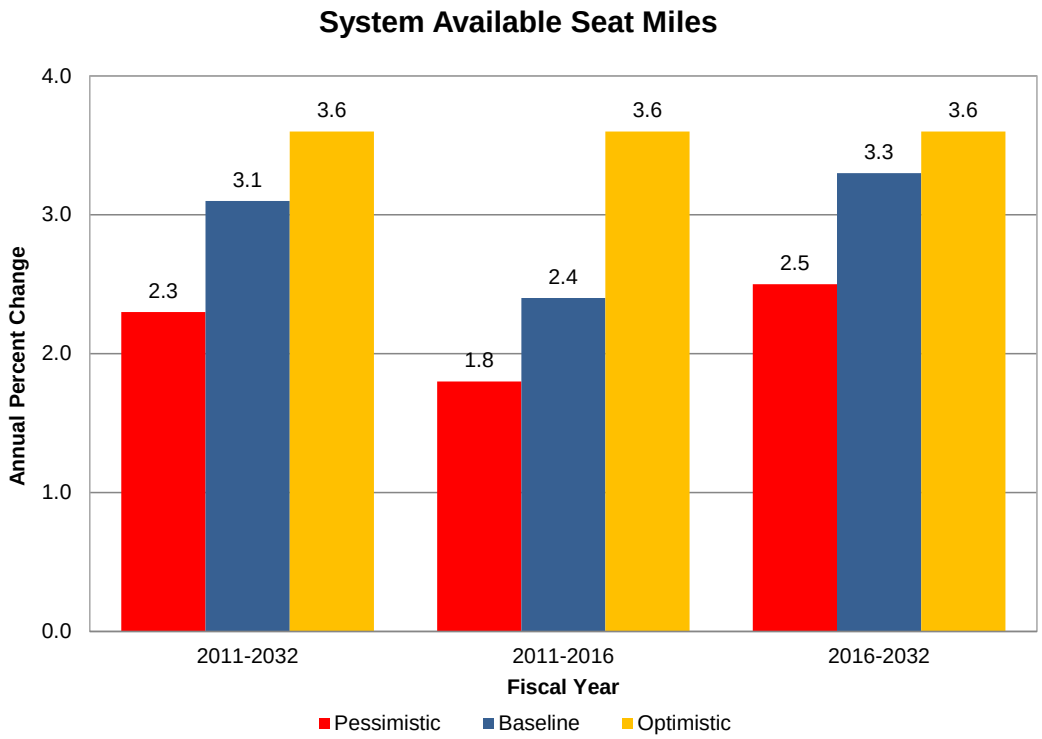
The forecast of RPMs is produced by multiplying assumptions for trip length in each forecast scenario by passengers from the same scenario. Thus, the assumptions used to create the trip length and passenger forecasts drive RPM growth. In the baseline forecast, system RPMs grow at an average annual rate of 3.2 percent a year, with domestic RPMs increasing 2.7

percent annually and international RPMs growing 4.2 percent annually. In the high case, the faster growing economy coupled with lower energy prices drives RPMs higher than the baseline, with growth averaging 3.7 percent per year (domestic and international RPMs up 3.1 and 4.7 percent, respectively). In the low case, the combination of a slower growing economy and higher energy prices result in RPM growth averaging 2.4 percent annually with domestic markets growing 2.0 percent a year while international traffic grows 3.3 percent annually.



Available Seat Miles

In the base case, system capacity is forecast to increase an average of 3.1 percent annually over the forecast horizon (with growth averaging 2.5 percent annually in domestic markets and 4.2 percent a year in international markets). In the high case, capacity grows at a faster clip than in the baseline forecast, averaging growth of 3.6 percent annually (up 3.0 percent domestically and up 4.7 percent internationally). Carriers increase capacity compared to the baseline forecast to accommodate increased travel demand brought about by a more favorable economic environment. In the low case, demand for air travel is lower than in the baseline, thus system capacity grows at a slower pace of 2.3 percent annually (domestic up 1.9 percent annually and international up 3.2 percent annually).



Load Factor

System load factors over the 20-year forecast period are relatively similar for all three forecast scenarios. In the base case, system load factor rises from 82.0 percent in 2011 to 83.4 percent in 2032. In both the optimistic and pessimistic scenarios, system load factor increases from 82.0 percent in 2011 to 83.3 percent in 2032. 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 82.5 percent to 84.8 percent in the base case, and to 84.3 percent and 84.4 percent, respectively, in the pessimistic and optimistic scenarios. The international load factor grows from 80.7 percent to 81.2 percent in the base case and 81.6 and 81.7 percent, respectively, in the optimistic and pessimistic scenarios.

Yield

In the baseline forecast, nominal system yield increases 1.2 percent annually, going from 13.95 cents in 2011 to 18.08 cents in 2032. In domestic markets, yield in the baseline forecast rises from 13.9 cents in 2011 to 17.8 cents in 2032, while international yield rises from 14.1 cents to 18.5 cents. System yield rises more slowly in the high case, up 1.0 percent annually to be 17.4 cents at the end of the forecast period. Domestic yield increases to 17.4 cents while international yield increases to 17.3 cents. The slower growth in yield in the high case is due to advancements in technology, gains in productivity, more favorable fuel prices, and lower inflation. Increased competition is also assumed in this scenario. In the domestic market fares are driven lower than baseline levels due to increased market overlap between low cost and

legacy carriers. In the international market, increased competition from growing liberalization puts downward pressure on fares. In the low case, nominal yields rise more rapidly than in the baseline, growing an average of 2.9 percent annually, reaching 25.3 cents by 2032 (25.7 cents domestically and 24.4 cents internationally). This scenario reflects higher general inflation and higher energy prices than in the baseline, forcing carriers to increase fares in order to cover the higher costs of fuel, labor, and capital.

Passenger Trip Length

Over the 21-year forecast horizon, baseline system passenger trip length is assumed to grow an average of 7.7 miles per year. In the high case, passenger trip length grows 8.3 miles per year, 0.6 miles per year faster than in the base case. In the high case, fuel prices are lower than in the baseline which allows carriers to operate longer-haul routes more profitably. Conversely, the low forecast is characterized by fuel prices that are higher than the baseline forecast. Higher fuel costs makes flying longer-haul routes less affordable to the carriers; hence passenger trip length trails the baseline forecast by 1.8 miles per year, growing an average of 5.9 miles per year.

TABLE A-1

FAA FORECAST ECONOMIC ASSUMPTIONS

FISCAL YEARS 2011-2032

Variable	Scenario	Historical	FORECAST				PERCENT AVERAGE ANNUAL GROWTH			
		2011	2012	2017	2022	2032	11-12	11-17	12-22	11-32
Economic Assumptions										
Real Gross Domestic Product	Pessimistic	13,246	13,385	14,857	16,281	19,993	1.0%	1.9%	2.0%	2.0%
(BIL 05$)	Baseline	13,256	13,474	15,511	17,542	22,614	1.6%	2.7%	2.7%	2.6%
	Optimistic	13,262	13,642	16,081	18,582	24,801	2.9%	3.3%	3.1%	3.0%
Refiners Acquisition Cost -	Pessimistic	95.3	102.7	122.9	132.3	191.4	7.8%	4.3%	2.6%	3.4%
Average - $ Per Barrel	Baseline	94.7	100.4	115.9	115.4	138.2	6.0%	3.4%	1.4%	1.8%
	Optimistic	89.3	75.3	101.5	106.2	114.1	-15.7%	2.1%	3.5%	1.2%
Consumer Price Index	Pessimistic	2.23	2.28	2.63	3.10	4.46	2.2%	2.8%	3.1%	3.4%
All Urban, 1982-84 = 1.0	Baseline	2.23	2.27	2.51	2.76	3.35	1.9%	2.0%	2.0%	2.0%
	Optimistic	2.22	2.24	2.44	2.64	3.09	0.8%	1.6%	1.7%	1.6%
Civilian Unemployment Rate	Pessimistic	9.3	9.8	7.0	6.0	5.6	0.5	-0.4	-0.4	-0.2
(%)	Baseline	9.2	9.2	6.5	5.7	5.4	0.0	-0.5	-0.4	-0.2
	Optimistic	9.2	8.8	6.2	5.3	4.9	-0.4	-0.5	-0.4	-0.2

Source: IHS Global Insight, 30-Year Focus, Third Quarter 2011

TABLE A-2

FAA FORECAST OF AVIATION ACTIVITY

FISCAL YEARS 2011-2032

Variable	Scenario	Historical	FORECAST				PERCENT AVERAGE ANNUAL GROWTH			
		2011	2012	2017	2022	2032	11-12	11-17	12-22	11-32
System										
Aviation Activity										
Available Seat Miles	Pessimistic	993.9	988.6	1,110.1	1,251.1	1,612.6	-0.5%	1.9%	2.4%	2.3%
(BIL)	Baseline	993.9	994.3	1,155.6	1,356.2	1,885.5	0.0%	2.5%	3.2%	3.1%
	Optimistic	993.9	1,046.8	1,222.9	1,445.7	2,080.1	5.3%	3.5%	3.3%	3.6%
Revenue Passenger Miles	Pessimistic	814.6	812.8	919.9	1,040.1	1,343.9	-0.2%	2.0%	2.5%	2.4%
(BIL)	Baseline	814.6	818.6	960.4	1,130.2	1,573.4	0.5%	2.8%	3.3%	3.2%
	Optimistic	814.6	861.1	1,013.4	1,201.7	1,733.0	5.7%	3.7%	3.4%	3.7%
Enplanements	Pessimistic	730.7	726.8	811.2	894.0	1,085.7	-0.5%	1.8%	2.1%	1.9%
(MIL)	Baseline	730.7	731.8	841.6	956.3	1,233.0	0.2%	2.4%	2.7%	2.5%
	Optimistic	730.7	765.5	881.5	1,010.7	1,345.0	4.8%	3.2%	2.8%	2.9%
Psgr Carrier Miles Flown	Pessimistic	7,047.5	6,966.1	7,720.3	8,581.5	10,758.8	-1.2%	1.5%	2.1%	2.0%
(MIL)	Baseline	7,047.5	7,014.3	8,013.0	9,246.5	12,469.3	-0.5%	2.2%	2.8%	2.8%
	Optimistic	7,047.5	7,400.5	8,477.8	9,854.0	13,758.0	5.0%	3.1%	2.9%	3.2%
Psgr Carrier Departures	Pessimistic	9,505.5	9,367.8	10,221.0	10,910.0	12,505.9	-1.4%	1.2%	1.5%	1.3%
(000s)	Baseline	9,505.5	9,425.6	10,491.4	11,496.3	13,867.8	-0.8%	1.7%	2.0%	1.8%
	Optimistic	9,505.5	9,725.6	11,001.4	12,199.1	15,089.4	2.3%	2.5%	2.3%	2.2%
Nominal Passenger Yield	Pessimistic	13.95	14.58	17.15	19.02	25.25	4.5%	3.5%	2.7%	2.9%
(cents)	Baseline	13.95	14.50	15.96	16.62	18.08	3.9%	2.3%	1.4%	1.2%
	Optimistic	13.95	14.58	16.21	16.83	17.37	4.5%	2.5%	1.4%	1.0%

TABLE A-3

FAA FORECAST OF DOMESTIC AVIATION ACTIVITY

FISCAL YEARS 2011-2032

Variable	Scenario	Historical	FORECAST				PERCENT AVERAGE ANNUAL GROWTH			
		2011	2012	2017	2022	2032	11-12	11-17	12-22	11-32
Domestic										
Aviation Activity										
Available Seat Miles	Pessimistic	693.9	686.9	755.0	834.8	1,028.2	-1.0%	1.4%	2.0%	1.9%
(BIL)	Baseline	693.9	688.4	778.2	887.8	1,171.4	-0.8%	1.9%	2.6%	2.5%
	Optimistic	693.9	737.9	825.7	946.8	1,294.5	6.3%	2.9%	2.5%	3.0%
Revenue Passenger Miles	Pessimistic	572.5	568.9	631.8	701.6	866.6	-0.6%	1.7%	2.1%	2.0%
(BIL)	Baseline	572.5	571.3	654.9	750.6	993.6	-0.2%	2.3%	2.8%	2.7%
	Optimistic	572.5	611.3	691.2	796.1	1,092.0	6.8%	3.2%	2.7%	3.1%
Enplanements	Pessimistic	649.9	646.2	717.8	785.3	933.1	-0.6%	1.7%	2.0%	1.7%
(MIL)	Baseline	649.9	649.4	741.4	832.6	1,044.1	-0.1%	2.2%	2.5%	2.3%
	Optimistic	649.9	682.4	775.9	878.3	1,134.7	5.0%	3.0%	2.6%	2.7%
Psgr Carrier Miles Flown	Pessimistic	5,661.8	5,582.7	6,119.1	6,727.4	8,205.0	-1.4%	1.3%	1.9%	1.8%
(MIL)	Baseline	5,661.8	5,604.0	6,293.8	7,133.9	9,297.2	-1.0%	1.8%	2.4%	2.4%
	Optimistic	5,661.8	5,978.8	6,678.4	7,612.6	10,270.3	5.6%	2.8%	2.4%	2.9%
Psgr Carrier Departures	Pessimistic	8,915.3	8,799.7	9,584.2	10,190.7	11,541.9	-1.3%	1.2%	1.5%	1.2%
(000s)	Baseline	8,915.3	8,828.4	9,785.1	10,648.1	12,623.9	-1.0%	1.6%	1.9%	1.7%
	Optimistic	8,915.3	9,136.5	10,280.4	11,319.7	13,747.0	2.5%	2.4%	2.2%	2.1%
Nominal Passenger Yield	Pessimistic	13.88	14.42	16.79	19.15	25.70	3.9%	3.2%	2.9%	3.0%
(cents)	Baseline	13.88	14.31	15.90	16.53	17.83	3.1%	2.3%	1.5%	1.2%
	Optimistic	13.88	14.43	16.39	17.10	17.41	4.0%	2.8%	1.7%	1.1%

TABLE A-4

FAA FORECAST OF INTERNATIONAL AVIATION ACTIVITY*

FISCAL YEARS 2011-2032

Variable	Scenario	Historical	FORECAST				PERCENT AVERAGE ANNUAL GROWTH			
		2011	2012	2017	2022	2032	11-12	11-17	12-22	11-32
International Aviation Activity										
Available Seat Miles	Pessimistic	300.0	301.7	355.0	416.3	584.4	0.6%	2.8%	3.3%	3.2%
(BIL)	Baseline	300.0	305.9	377.4	468.4	714.1	2.0%	3.9%	4.4%	4.2%
	Optimistic	300.0	308.9	397.2	498.9	785.6	3.0%	4.8%	4.9%	4.7%
Revenue Passenger Miles	Pessimistic	242.1	244.0	288.0	338.6	477.3	0.8%	2.9%	3.3%	3.3%
(BIL)	Baseline	242.1	247.4	305.5	379.6	579.8	2.2%	4.0%	4.4%	4.2%
	Optimistic	242.1	249.8	322.2	405.5	641.0	3.2%	4.9%	5.0%	4.7%
Enplanements	Pessimistic	80.8	80.6	93.4	108.7	152.6	-0.3%	2.5%	3.0%	3.1%
(MIL)	Baseline	80.8	82.3	100.2	123.7	188.8	1.9%	3.7%	4.2%	4.1%
	Optimistic	80.8	83.1	105.6	132.4	210.3	2.9%	4.6%	4.8%	4.7%
Psgr Carrier Miles Flown	Pessimistic	1,385.7	1,383.4	1,601.2	1,854.1	2,553.8	-0.2%	2.4%	3.0%	3.0%
(MIL)	Baseline	1,385.7	1,410.2	1,719.1	2,112.6	3,172.1	1.8%	3.7%	4.1%	4.0%
	Optimistic	1,385.7	1,421.7	1,799.4	2,241.4	3,487.7	2.6%	4.5%	4.7%	4.5%
Psgr Carrier Departures	Pessimistic	590.2	568.1	636.8	719.3	964.0	-3.7%	1.3%	2.4%	2.4%
(000s)	Baseline	590.2	597.2	706.3	848.2	1,243.9	1.2%	3.0%	3.6%	3.6%
	Optimistic	590.2	589.1	721.0	879.4	1,342.4	-0.2%	3.4%	4.1%	4.0%
Nominal Passenger Yield	Pessimistic	14.12	14.94	16.68	18.75	24.43	5.8%	2.8%	2.3%	2.6%
(cents)	Baseline	14.12	14.95	16.09	16.80	18.50	5.9%	2.2%	1.2%	1.3%
	Optimistic	14.12	14.95	15.83	16.31	17.32	5.9%	1.9%	0.9%	1.0%

*Includes mainline and regional carriers.