▷▷▷ APPENDIX A
ALTERNATIVE FORECAST SCENARIOS

Uncertainty abounds in all industries, but especially in the commercial air travel industry. Increasingly, the FAA has been requested to provide alternative scenarios to their baseline forecasts. These requests come from policy makers, private industry, associations, and consultants. This year, the FAA has responded to its customers, fully understanding that more information, not less, will help stakeholders to better prepare for the future.

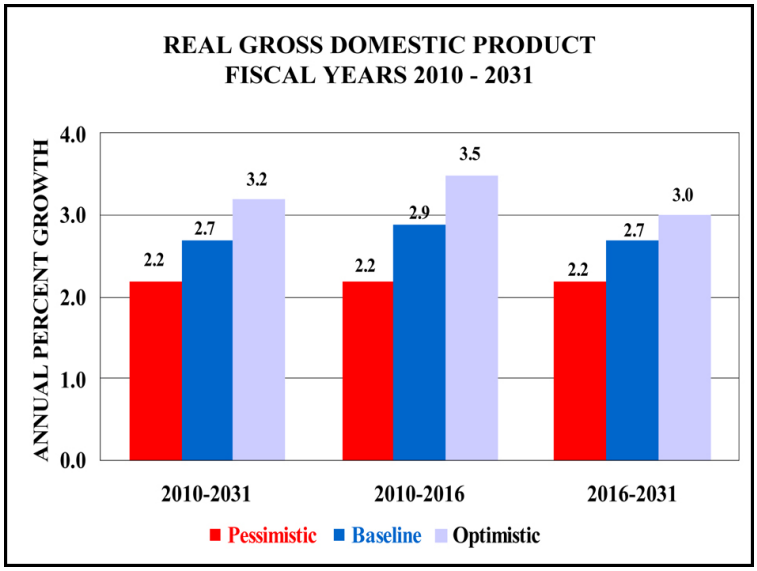
To create the baseline forecast, economic assumptions for both U.S. and international regions from Global Insight's 30-Year Focus (released third quarter 2010) were used to generate enplanements, mainline real yield and nominal yield. The baseline forecast of passenger trip length (an input variable 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 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

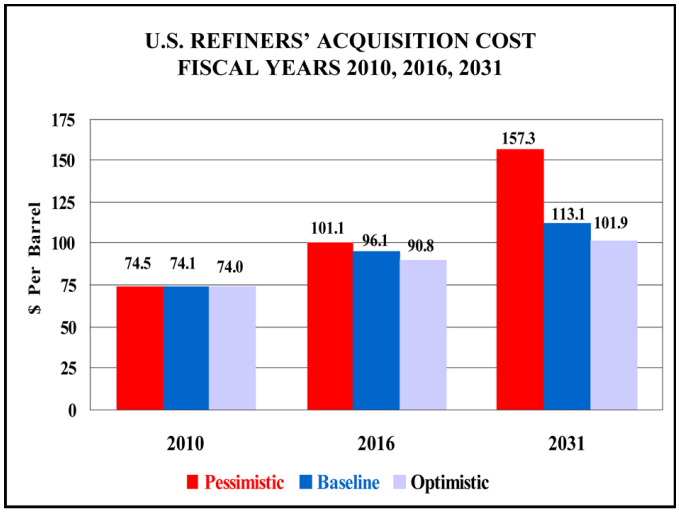
SCENARIO ASSUMPTIONS

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 postulated to proceed smoothly as well, however at a different pace than projected under the baseline forecast. Projections for economic growth in Global Insight's alternative scenarios are rooted in demographics. In 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.

FAA's high case forecast uses 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 0.5 percentage points quicker 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 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 0.5 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.

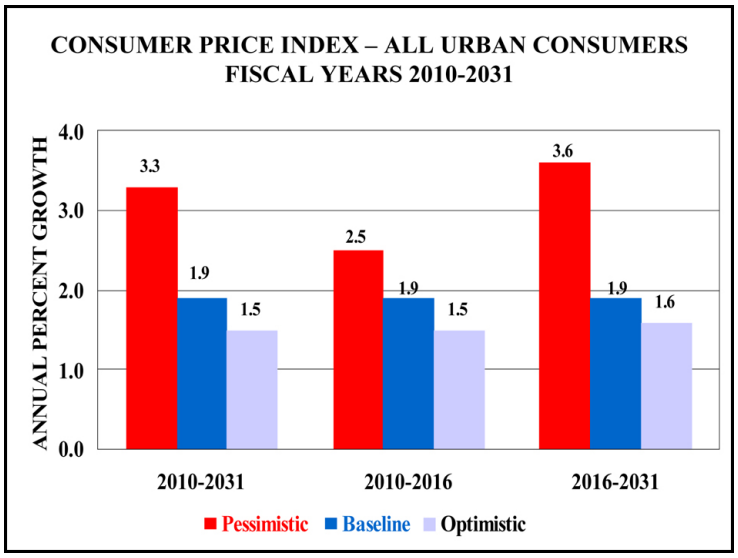


The level of oil prices are determinants in the supply of and demand for air travel and have a direct impact on the profitability of the industry. In all three forecast scenarios prices remain high by historical standards. In the baseline forecast, oil prices rise as the world economy recovers from the 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 52.6 percent between 2010 and 2031, rising from $74 to $113 per barrel. In the high case, RAC increases at a slower pace landing at $102 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, RAC more doubles, rising to $157 by 2031.



The price of energy is one of the critical drivers in the growth of consumer prices over the forecast period. In the high case forecast the consumer price index (CPI) grows at an average rate of 1.5 percent per year (compared to growth of 1.9 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. In the low case, CPI grows an average of 3.3 percent annually over the forecast period.

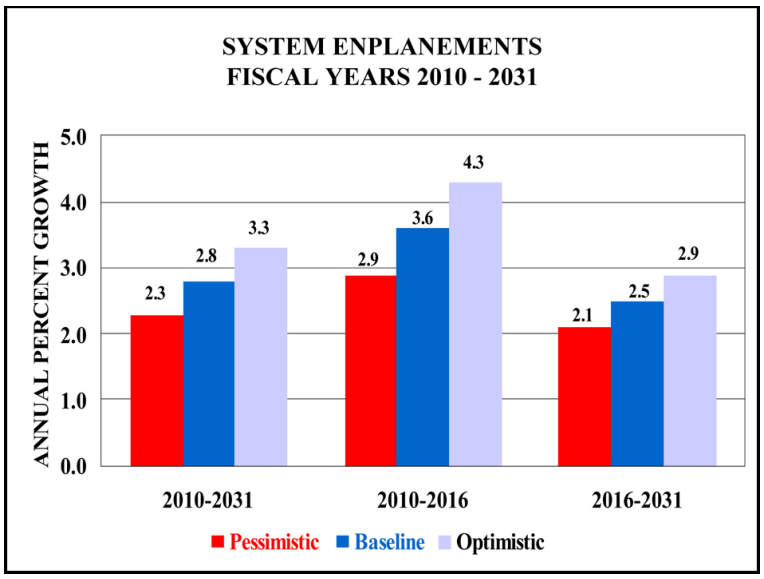


The baseline passenger trip length forecast is predicated upon analyst judgment and recent trip length trends. Carrier behavior as a result of volatile fuel prices during 2008 was the basis for adjusting trip length in the alternative forecasts. During 2008, high fuel costs made flying of some longer haul routes cost prohibitive (thus unprofitable), resulting in lower trip length compared to prior years. Since the FAA's low case forecast is depicted 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

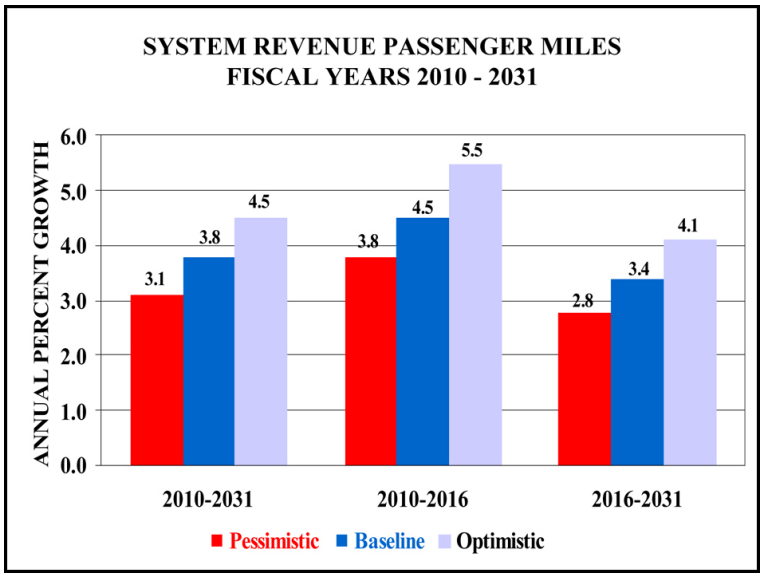
Passengers

In the baseline forecast, system passengers are forecast to grow at an average annual rate of 2.8 percent per year over the forecast horizon (with domestic and international passengers up 2.6 and 4.5 percent, respectively), reaching one billion passengers in the year 2021. In the high case, passengers grow at a quicker pace, averaging 3.3 percent per year (up 3.0 percent domestically and 5.2 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 2019, 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 2.3 percent per year (domestic up 2.0 percent and international up 4.0 percent). In the low case, one billion passengers are reached in 2024, three years behind the baseline forecast.



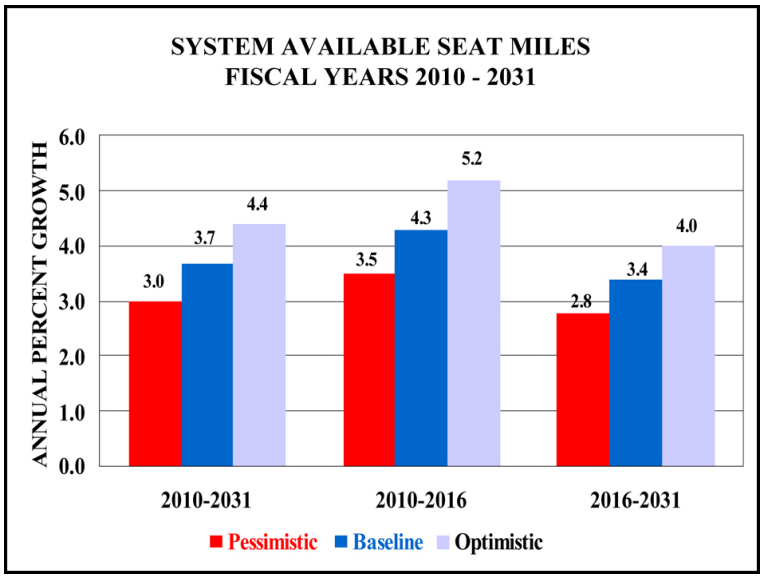
Revenue Passenger Miles

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 3.8 percent per year, with domestic RPMs up 3.1 percent annually and international RPMs up 5.0 percent annually. In the high case, a more optimistic economic environment drives RPMs higher than the baseline, with growth averaging 4.5 percent per year (domestic and international RPMs up 3.8 and 5.8 percent, respectively). In the low case, a more pessimistic economic environment slows RPM growth to an average of 3.1 percent annually (up 2.4 percent domestically and up 4.5 percent internationally).



Available Seat Miles

In the base case, system capacity is forecast to increase an average of 3.7 percent annually over the 21-year forecast horizon (with average growth of 3.0 percent domestically and 4.9 percent internationally). In the high case, capacity grows at a faster clip than in the baseline forecast, averaging growth of 4.4 percent annually (up 3.7 percent domestically and up 5.7 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 3.0 percent annually (domestic up 2.3 percent annually and international up 4.4 percent annually).



Load Factor

System load factors over the 21-year forecast period are relatively the same for all three forecast scenarios, rising from 81.8 percent in 2010 to 83.7 percent in 2031. 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 slowly grows from 81.7 percent to 84.0 percent over the forecast horizon, while the international load factor grows from 82.1 to just over 83.2 percent during the same period.

Yield

In the baseline forecast, nominal system yield increases 1.3 percent annually, going from 13.0 cents in 2010 to 16.9 cents in 2031. On a domestic basis, yield in the baseline forecast rises from 13.0 cents in 2010 to 17.1 cents in 2031, while international yield rises from 12.9 cents to 16.8 cents. System yield rises more slowly in the high case, up 0.7 percent annually to be 15.1 cents at the end of the forecast period (domestic and international yield increase to 14.8 cents and 15.6 cents, respectively). 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 23.5 cents by 2031 (24.4 cents domestically and 22.1 cents internationally). This scenario reflects higher inflation 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 10.5 miles per year. In the high case, passenger trip length grows 1.0 mile faster per year than in the base case at 11.5 miles per year. 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 3.0 miles per year, growing an average of 7.5 miles per year.

TABLE A-1

FAA FORECAST ECONOMIC ASSUMPTIONS*

FISCAL YEARS 2010-2031

VARIABLE	SCENARIO	HISTORICAL	FORECAST				PERCENT AVERAGE ANNUAL GROWTH			
		2001	2011	2016	2021	2031	10-11	10-16	11-21	10-31
Economic Assumptions										
Real Gross Domestic Product (BIL 05$)	Pessimistic	13,150	13,317	14,972	16,681	20,875	1.3%	2.2%	2.3%	2.2%
	Baseline	13,162	13,467	15,601	17,818	23,147	2.3%	2.9%	2.8%	2.7%
	Optimistic	13,164	13,610	16,215	19,009	25,417	3.4%	3.5%	3.4%	3.2%
Refiners Acquisition Cost - Average - $ Per Barrel	Pessimistic	74.5	77.5	101.1	108.6	157.3	4.0%	5.2%	3.4%	3.6%
	Baseline	74.1	74.4	96.1	96.8	113.1	0.4%	4.4%	2.7%	2.0%
	Optimistic	74.0	71.9	90.8	89.6	101.9	-2.8%	3.5%	2.2%	1.5%
Real Personal Consumption Expenditures - (BIL 05$)	Pessimistic	9,241	9,370	10,205	11,288	14,040	1.4%	1.7%	1.9%	2.0%
	Baseline	9,247	9,462	10,584	11,973	15,404	2.3%	2.3%	2.4%	2.5%
	Optimistic	9,249	9,516	10,966	12,794	16,965	2.9%	2.9%	3.0%	2.9%
Consumer Price Index All Urban, 1982-84 = 1.0	Pessimistic	2.18	2.21	2.53	2.99	4.29	1.4%	2.5%	3.1%	3.3%
	Baseline	2.17	2.20	2.43	2.68	3.24	1.4%	1.9%	2.0%	1.9%
	Optimistic	2.17	2.19	2.37	2.57	3.00	0.9%	1.5%	1.6%	1.6%
Real Disposable Income (BIL 05$)	Pessimistic	10,170	10,277	11,499	13,184	16,817	1.1%	2.1%	2.5%	2.4%
	Baseline	10,177	10,366	11,758	13,560	17,501	1.9%	2.4%	2.7%	2.6%
	Optimistic	10,179	10,427	12,068	14,251	18,663	2.4%	2.9%	3.2%	2.9%
Civilian Unemployment Rate (%)	Pessimistic	9.9	10.2	7.0	5.3	5.2	0.3	-0.5	-0.5	-0.2
	Baseline	9.7	9.6	6.6	5.0	5.0	-0.1	-0.5	-0.5	-0.2
	Optimistic	9.7	9.2	6.2	4.7	4.6	-0.5	-0.6	-0.5	-0.2

* Source: *Global Insight*, 30-Year Focus, Third Quarter 2010

TABLE A-2

FAA FORECAST OF DOMESTIC AVIATION ACTIVITY

FISCAL YEARS 2010-2031

VARIABLE	SCENARIO	HISTORICAL	FORECAST				PERCENT AVERAGE ANNUAL GROWTH			
		2010	2011	2016	2021	2031	10-11	10-16	11-21	10-31
Domestic Aviation Activity										
Available Seat Miles (BIL)	Pessimistic	680.1	682.3	799.4	908.5	1,092.6	0.3%	2.7%	2.9%	2.3%
	Baseline	680.1	700.0	847.8	992.2	1,265.0	2.9%	3.7%	3.6%	3.0%
	Optimistic	680.1	712.9	892.3	1,079.3	1,451.3	4.8%	4.6%	4.2%	3.7%
Revenue Passenger Miles (BIL)	Pessimistic	555.8	560.3	665.0	759.7	917.2	0.8%	3.0%	3.1%	2.4%
	Baseline	555.8	575.2	705.7	830.3	1,062.9	3.5%	4.1%	3.7%	3.1%
	Optimistic	555.8	585.8	742.6	903.0	1,219.2	5.4%	4.9%	4.4%	3.8%
Enplanements (MIL)	Pessimistic	635.3	637.3	740.7	830.5	970.9	0.3%	2.6%	2.7%	2.0%
	Baseline	635.3	654.0	777.3	887.9	1,076.9	3.0%	3.4%	3.1%	2.5%
	Optimistic	635.3	664.4	809.0	946.8	1,190.6	4.6%	4.1%	3.6%	3.0%
Miles Flown (MIL)	Pessimistic	5,582.2	5,606.7	6,567.8	7,439.4	8,833.6	0.4%	2.7%	2.9%	2.2%
	Baseline	5,582.2	5,739.3	6,950.2	8,109.2	10,213.0	2.8%	3.7%	3.5%	2.9%
	Optimistic	5,582.2	5,850.7	7,322.2	8,829.2	11,727.9	4.8%	4.6%	4.2%	3.6%
Departures (000s)	Pessimistic	8,911.7	8,879.9	10,036.5	11,009.3	12,402.0	-0.4%	2.0%	2.2%	1.6%
	Baseline	8,911.7	9,094.5	10,500.9	11,724.1	13,679.1	2.1%	2.8%	2.6%	2.1%
	Optimistic	8,911.7	9,237.4	10,918.5	12,480.1	15,073.0	3.7%	3.4%	3.1%	2.5%
Nominal Passenger Yield (cents)	Pessimistic	13.02	13.49	15.39	17.82	24.37	3.6%	2.8%	2.8%	3.0%
	Baseline	13.02	13.43	14.52	15.35	17.05	3.1%	1.8%	1.3%	1.3%
	Optimistic	13.02	13.37	13.95	14.25	14.83	2.7%	1.2%	0.6%	0.6%

TABLE A-3

FAA FORECAST OF INTERNATIONAL AVIATION ACTIVITY

FISCAL YEARS 2010-2031

VARIABLE	SCENARIO	HISTORICAL	FORECAST				PERCENT AVERAGE ANNUAL GROWTH			
		2010	2011	2016	2021	2031	10-11	10-16	11-21	10-31
International Aviation Activity										
Available Seat Miles (BIL)	Pessimistic	281.2	303.1	382.3	468.3	690.4	7.8%	5.3%	4.4%	4.4%
	Baseline	281.2	304.9	388.3	491.5	774.0	8.4%	5.5%	4.9%	4.9%
	Optimistic	281.2	307.0	410.4	540.5	898.3	9.2%	6.5%	5.8%	5.7%
Revenue Passenger Miles (BIL)	Pessimistic	230.9	248.6	316.4	388.4	574.6	7.7%	5.4%	4.6%	4.4%
	Baseline	230.9	250.3	321.3	407.6	644.2	8.4%	5.7%	5.0%	5.0%
	Optimistic	230.9	252.1	339.5	447.9	746.4	9.2%	6.6%	5.9%	5.7%
Enplanements (MIL)	Pessimistic	77.4	82.9	103.0	123.7	175.4	7.1%	4.9%	4.1%	4.0%
	Baseline	77.4	83.4	104.5	129.5	195.2	7.8%	5.1%	4.5%	4.5%
	Optimistic	77.4	84.0	110.8	142.9	226.3	8.5%	6.2%	5.5%	5.2%
Miles Flown (MIL)	Pessimistic	1,299.7	1,392.6	1,737.2	2,108.2	3,054.4	7.1%	5.0%	4.2%	4.2%
	Baseline	1,299.7	1,401.6	1,765.2	2,213.2	3,423.3	7.8%	5.2%	4.7%	4.7%
	Optimistic	1,299.7	1,411.5	1,865.2	2,432.9	3,971.0	8.6%	6.2%	5.6%	5.5%
Departures (000s)	Pessimistic	568.0	582.3	698.5	816.3	1,104.8	2.5%	3.5%	3.4%	3.2%
	Baseline	568.0	586.7	710.4	855.4	1,228.8	3.3%	3.8%	3.8%	3.7%
	Optimistic	568.0	591.6	752.5	942.5	1,423.2	4.2%	4.8%	4.8%	4.5%
Nominal Passenger Yield (cents)	Pessimistic	12.90	13.69	15.11	17.03	22.06	6.1%	2.7%	2.2%	2.6%
	Baseline	12.90	13.69	14.61	15.32	16.76	6.1%	2.1%	1.1%	1.3%
	Optimistic	12.90	13.69	14.36	14.78	15.63	6.1%	1.8%	0.8%	0.9%