

Appendix B: Forecast Tables

TABLE 1

U.S. SHORT-TERM ECONOMIC FORECASTS

ECONOMIC VARIABLE	FISCAL YEAR 2022				FISCAL YEAR 2023				FISCAL YEAR 2024			
	1ST. QTR.	2ND. QTR.	3RD QTR.	4TH. QTR.	1ST. QTR.	2ND. QTR.	3RD QTR.	4TH. QTR.	1ST. QTR.	2ND. QTR.	3RD QTR.	4TH. QTR.
Real Personal Consumption												
Expenditure per Capita												
(2012 \$)	42,056	42,168	42,348	42,492	42,792	42,824	42,809	42,832	42,882	42,946	43,038	43,150
Year over year change	-2.6%	1.9%	16.1%	6.9%	7.1%	4.9%	2.5%	2.7%	2.0%	1.8%	1.8%	1.8%
Refiners' Acquisition Cost - Average												
(Dollars per barrel)	76.43	92.42	109.78	95.07	87.42	86.93	79.98	82.82	86.10	84.46	81.33	83.29
Year over year change	-27.5%	21.1%	148.6%	74.2%	91.2%	30.4%	9.0%	3.6%	-10.6%	-10.3%	-5.2%	-10.6%
Consumer Price Index												
(1982-84 = 1)	2.78	2.85	2.92	2.96	2.99	3.02	3.03	3.06	3.08	3.09	3.10	3.12
Year over year change	1.2%	1.9%	4.8%	5.3%	5.8%	5.2%	3.7%	2.6%	1.9%	2.1%	2.1%	2.1%
Source: IHS Markit												

TABLE 2

U.S. LONG-TERM ECONOMIC FORECASTS

FISCAL YEAR	REAL GROSS DOMESTIC PRODUCT (Billions 2012 \$)	REAL PERSONAL CONSUMPTION EXPENDITURE PER CAPITA (2012 \$)	CONSUMER PRICE INDEX (1982-84=1.00)	REFINERS' ACQUISITION COST AVERAGE (Dollars per barrel)
<u>Historical</u>				
2010	15,542	34,403	2.17	74.61
2015	17,310	36,721	2.37	56.69
2019	18,916	39,426	2.54	59.77
2020	18,582	38,441	2.58	43.15
2021	19,339	40,712	2.67	58.91
2022E	19,966	42,266	2.88	93.42
<u>Forecast</u>				
2023	20,024	42,814	3.02	84.29
2028	21,805	45,584	3.38	89.68
2033	23,740	49,978	3.75	98.57
2038	26,083	55,230	4.17	104.30
2043	28,822	61,329	4.64	112.70
<u>Avg Annual Growth</u>				
2010-22	2.1%	1.7%	2.4%	1.9%
2022-23	0.3%	1.3%	5.1%	-9.8%
2023-33	1.7%	1.6%	2.2%	1.6%
2023-43	1.8%	1.8%	2.2%	1.5%
Source: IHS Markit				

TABLE 3

INTERNATIONAL GDP FORECASTS BY TRAVEL REGION

CALENDAR YEAR	GROSS DOMESTIC PRODUCT (In Billions of 2015 U.S. Dollars)					WORLD
	CANADA	EUROPE / AFRICA / MIDDLE EAST	LATIN AMERICA / CARIBBEAN / MEXICO	JAPAN / PACIFIC BASIN / CHINA / OTHER ASIA / AUSTRALIA / NEW ZEALAND		
<u>Historical</u>						
2010	1,400	21,233	4,624	18,977	64,628	
2015	1,557	23,305	5,187	24,465	74,635	
2019	1,696	25,464	5,399	29,468	84,090	
2020	1,610	24,063	5,042	29,215	81,448	
2021	1,691	25,421	5,386	31,056	86,310	
2022E	1,751	26,402	5,575	32,033	88,826	
<u>Forecast</u>						
2023	1,764	26,560	5,655	33,226	90,283	
2028	1,923	29,329	6,509	40,863	104,061	
2033	2,093	32,060	7,551	48,965	118,540	
2038	2,282	34,930	8,720	57,906	134,593	
2043	2,488	37,955	10,022	67,550	152,024	
<u>Avg Annual Growth</u>						
2010-22	1.9%	1.8%	1.6%	4.5%	2.7%	
2022-23	0.7%	0.6%	1.4%	3.7%	1.6%	
2023-33	1.7%	1.9%	2.9%	4.0%	2.8%	
2023-43	1.7%	1.8%	2.9%	3.6%	2.6%	
Source: IHS Markit website, GDP Components Tables (Interim Forecast, Monthly)						

TABLE 4

INTERNATIONAL GDP FORECASTS – SELECTED AREAS/COUNTRIES

CALENDAR YEAR	GROSS DOMESTIC PRODUCT (In Billions of 2015 U.S. Dollars)				
	NORTH AMERICA (USMCA)	EUROZONE	UNITED KINGDOM	JAPAN	CHINA
<u>Historical</u>					
2010	18,794	11,195	2,662	4,220	7,490
2015	20,934	11,668	2,936	4,446	10,961
2019	22,877	12,626	3,176	4,565	14,166
2020	22,137	11,832	2,825	4,367	14,480
2021	23,426	12,459	3,038	4,464	15,654
2022E	23,914	12,871	3,172	4,518	16,096
<u>Forecast</u>					
2023	24,004	12,851	3,148	4,571	16,831
2028	26,259	13,884	3,355	4,798	21,468
2033	28,648	14,769	3,600	4,993	26,300
2038	31,547	15,646	3,865	5,172	31,629
2043	34,645	16,545	4,160	5,332	37,079
<u>Avg Annual Growth</u>					
2010-22	2.0%	1.2%	1.5%	0.6%	6.6%
2022-23	0.4%	-0.2%	-0.8%	1.2%	4.6%
2023-33	1.8%	1.4%	1.3%	0.9%	4.6%
2023-43	1.9%	1.3%	1.4%	0.8%	4.0%
Source: IHS Markit website, GDP Components Tables (Interim Forecast, Monthly)					

TABLE 5

U.S. COMMERCIAL AIR CARRIERS¹
TOTAL SCHEDULED U.S. PASSENGER TRAFFIC

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS (Millions)			REVENUE PASSENGER MILES (Billions)		
	DOMESTIC	INTERNATIONAL	TOTAL	DOMESTIC	INTERNATIONAL	TOTAL
<u>Historical</u>						
2010	631	77	709	553	231	784
2015	692	90	782	625	261	886
2019	806	104	910	748	292	1,040
2020	461	49	509	420	129	548
2021	507	49	556	476	92	567
2022E	738	91	828	695	213	908
<u>Forecast</u>						
2023	800	102	902	750	267	1,017
2028	867	125	992	824	361	1,184
2033	997	147	1,144	960	417	1,377
2038	1,159	173	1,332	1,130	481	1,611
2043	1,364	202	1,566	1,348	550	1,898
<u>Avg Annual Growth</u>						
2010-22	1.3%	1.3%	1.3%	1.9%	-0.7%	1.2%
2022-23	8.5%	12.4%	8.9%	7.9%	25.7%	12.1%
2023-33	2.2%	3.7%	2.4%	2.5%	4.5%	3.1%
2023-43	2.7%	3.5%	2.8%	3.0%	3.7%	3.2%
Source: Forms 41 and 298-C, U.S. Department of Transportation.						

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 6

U.S. COMMERCIAL AIR CARRIERS¹

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS

FISCAL YEAR	DOMESTIC			INTERNATIONAL			SYSTEM		
	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR
<u>Historical</u>									
2010	677	553	81.7	281	231	82.1	958	784	81.8
2015	740	625	84.6	323	261	80.7	1,063	886	83.4
2019	879	748	85.2	352	292	82.9	1,231	1,040	84.5
2020	612	420	68.6	178	129	72.3	789	548	69.5
2021	657	476	72.4	171	92	53.5	828	567	68.5
2022E	833	695	83.5	278	213	76.6	1,110	908	81.8
<u>Forecast</u>									
2023	888	750	84.4	343	267	78.0	1,231	1,017	82.7
2028	962	824	85.7	440	361	82.0	1,401	1,184	84.5
2033	1,106	960	86.8	507	417	82.2	1,613	1,377	85.3
2038	1,304	1,130	86.7	584	481	82.3	1,888	1,611	85.3
2043	1,554	1,348	86.7	669	550	82.3	2,223	1,898	85.4
<u>Avg Annual Growth</u>									
2010-22	1.7%	1.9%		-0.1%	-0.7%		1.2%	1.2%	
2022-23	6.7%	7.9%		23.4%	25.7%		10.8%	12.1%	
2023-33	2.2%	2.5%		4.0%	4.5%		2.7%	3.1%	
2023-43	2.8%	3.0%		3.4%	3.7%		3.0%	3.2%	
Source: Forms 41 and 298-C, U.S. Department of Transportation.									

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 7

U.S. COMMERCIAL AIR CARRIERS¹

TOTAL SCHEDULED U.S. INTERNATIONAL PASSENGER TRAFFIC

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS				REVENUE PASSENGER MILES			
	LATIN		TOTAL		LATIN		TOTAL	
	ATLANTIC (Mil)	AMERICA (Mil)	PACIFIC (Mil)	INTERNATIONAL (Mil)	ATLANTIC (Bil)	AMERICA (Bil)	PACIFIC (Bil)	INTERNATIONAL (Bil)
<u>Historical</u>								
2010	25	40	13	77	109	63	59	231
2015	25	52	14	90	107	83	71	261
2019	28	63	13	104	121	96	75	292
2020	11	32	6	49	48	49	31	129
2021	6	43	1	49	27	60	4	92
2022E	23	66	3	91	100	98	15	213
<u>Forecast</u>								
2023	29	66	7	102	128	98	41	267
2028	34	77	13	125	158	121	82	361
2033	37	95	15	147	173	150	94	417
2038	41	115	17	173	191	184	106	481
2043	45	139	18	202	209	223	118	550
<u>Avg Annual Growth</u>								
2010-22	-0.7%	4.2%	-12.6%	1.3%	-0.7%	3.7%	-10.8%	-0.7%
2022-23	29.1%	0.5%	167.6%	12.4%	27.8%	0.8%	173.8%	25.7%
2023-33	2.5%	3.7%	7.9%	3.7%	3.1%	4.3%	8.6%	4.5%
2023-43	2.2%	3.8%	5.1%	3.5%	2.5%	4.2%	5.4%	3.7%
Source: Forms 41 and 298-C, U.S. Department of Transportation.								

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 8

U.S. AND FOREIGN FLAG CARRIERS

TOTAL PASSENGER TRAFFIC TO/FROM THE UNITED STATES

CALENDAR YEAR	TOTAL PASSENGERS BY WORLD TRAVEL AREA (Millions)				
	ATLANTIC	LATIN AMERICA	PACIFIC	U.S./CANADA TRANSBORDER	TOTAL
<u>Historical</u>					
2010	56	53	27	22	158
2015	70	75	36	27	207
2019	89	89	44	32	253
2020	17	33	9	7	67
2021	24	66	4	5	99
2022E	71	88	15	21	195
<u>Forecast</u>					
2023	92	95	23	31	242
2028	111	111	44	40	305
2033	128	132	50	45	355
2038	146	159	58	52	415
2043	166	191	66	59	482
<u>Avg Annual Growth</u>					
2010-22	2.1%	4.3%	-4.6%	-0.4%	1.8%
2022-23	29.5%	8.0%	49.1%	50.5%	23.6%
2023-33	3.3%	3.4%	8.2%	3.8%	3.9%
2023-43	3.0%	3.6%	5.5%	3.2%	3.5%
Source: US Customs & Border Protection data processed and released by Department of Commerce; data also received from Transport Canada.					

TABLE 9

U.S. COMMERCIAL AIR CARRIERS' FORECAST ASSUMPTIONS¹

SEATS PER AIRCRAFT MILE AND PASSENGER TRIP LENGTH

FISCAL YEAR	AVERAGE SEATS PER AIRCRAFT MILE			AVERAGE PASSENGER TRIP LENGTH		
	DOMESTIC (Seats/Mile)	INTERNATIONAL (Seats/Mile)	SYSTEM (Seats/Mile)	DOMESTIC (Miles)	INTERNATIONAL (Miles)	SYSTEM (Miles)
<u>Historical</u>						
2010	122.2	216.4	140.1	875.7	2,988.0	1,106.1
2015	132.1	215.1	149.7	904.1	2,892.6	1,133.5
2019	141.9	221.4	158.2	928.5	2,813.9	1,143.5
2020	141.6	217.2	153.6	911.5	2,648.0	1,077.1
2021	145.2	198.6	153.7	938.0	1,859.6	1,019.6
2022E	149.4	215.4	161.8	942.3	2,347.4	1,096.0
<u>Forecast</u>						
2023	155.6	221.7	169.6	937.0	2,625.5	1,127.6
2028	158.5	227.3	175.1	949.6	2,895.4	1,194.0
2033	161.2	227.9	177.5	962.2	2,840.1	1,203.2
2038	163.8	228.7	179.6	975.0	2,777.4	1,209.1
2043	166.5	229.7	181.5	988.0	2,725.1	1,212.0
<u>Avg Annual Growth</u>						
2010-22	1.7%	0.0%	1.2%	0.6%	-2.0%	-0.1%
2022-23	4.1%	2.9%	4.8%	-0.6%	11.8%	2.9%
2023-33	0.4%	0.3%	0.5%	0.3%	0.8%	0.7%
2023-43	0.3%	0.2%	0.3%	0.3%	0.2%	0.4%

Source: Forms 41 and 298-C, U.S. Department of Transportation.

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 10

U. S. MAINLINE AIR CARRIERS
SCHEDULED PASSENGER TRAFFIC

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS (Millions)			REVENUE PASSENGER MILES (Billions)		
	DOMESTIC	INTERNATIONAL	SYSTEM	DOMESTIC	INTERNATIONAL	SYSTEM
<u>Historical</u>						
2010	473	75	548	480	230	710
2015	543	87	630	556	259	815
2019	654	100	754	674	290	963
2020	368	47	415	374	127	502
2021	402	47	449	422	90	512
2022E	612	89	700	633	211	845
<u>Forecast</u>						
2023	649	99	748	675	266	941
2028	703	122	825	741	359	1,100
2033	809	144	953	864	415	1,279
2038	940	169	1,110	1,017	478	1,495
2043	1,106	198	1,304	1,213	547	1,760
<u>Avg Annual Growth</u>						
2010-22	2.2%	1.4%	2.1%	2.3%	-0.7%	1.5%
2022-23	6.1%	12.2%	6.9%	6.6%	25.7%	11.4%
2023-33	2.2%	3.8%	2.4%	2.5%	4.6%	3.1%
2023-43	2.7%	3.5%	2.8%	3.0%	3.7%	3.2%

Source: Form 41, U.S. Department of Transportation.

TABLE 11

U.S. MAINLINE AIR CARRIERS

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS

FISCAL YEAR	DOMESTIC			INTERNATIONAL			SYSTEM		
	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR
<u>Historical</u>									
2010	581	480	82.7	279	230	82.2	860	710	82.5
2015	653	556	85.1	321	259	80.8	973	815	83.7
2019	785	674	85.8	349	290	83.0	1,134	963	85.0
2020	542	374	69.0	176	127	72.4	718	502	69.8
2021	581	422	72.6	169	90	53.4	751	512	68.2
2022E	755	633	83.9	276	211	76.6	1,031	845	82.0
<u>Forecast</u>									
2023	794	675	85.1	340	266	78.1	1,134	941	83.0
2028	859	741	86.3	437	359	82.1	1,296	1,100	84.9
2033	988	864	87.4	504	415	82.3	1,492	1,279	85.7
2038	1,165	1,017	87.3	581	478	82.3	1,746	1,495	85.6
2043	1,389	1,213	87.3	665	547	82.3	2,054	1,760	85.7
<u>Avg Annual Growth</u>									
2010-22	2.2%	2.3%		-0.1%	-0.7%		1.5%	1.5%	
2022-23	5.1%	6.6%		23.4%	25.7%		10.0%	11.4%	
2023-33	2.2%	2.5%		4.0%	4.6%		2.8%	3.1%	
2023-43	2.8%	3.0%		3.4%	3.7%		3.0%	3.2%	
Source: Form 41, U.S. Department of Transportation.									

TABLE 12

U.S. MAINLINE AIR CARRIERS

SCHEDULED INTERNATIONAL PASSENGER ENPLANEMENTS

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS (MIL)			
	ATLANTIC	LATIN AMERICA	PACIFIC	TOTAL
<u>Historical</u>				
2010	24.5	37.2	12.9	74.6
2015	24.6	48.6	14.0	87.2
2019	27.9	59.2	13.2	100.2
2020	10.8	30.3	5.6	46.7
2021	5.7	40.9	0.8	47.4
2022E	22.6	63.4	2.6	88.5
<u>Forecast</u>				
2023	29.1	63.3	6.9	99.3
2028	34.5	74.3	13.1	121.9
2033	37.4	91.6	14.7	143.7
2038	41.0	111.9	16.5	169.4
2043	44.9	134.3	18.5	197.7
<u>Avg Annual Growth</u>				
2010-22	-0.7%	4.5%	-12.6%	1.4%
2022-23	29.1%	-0.1%	167.6%	12.2%
2023-33	2.5%	3.8%	7.9%	3.8%
2023-43	2.2%	3.8%	5.1%	3.5%
Source: Form 41, U.S. Department of Transportation.				

TABLE 13

U.S. MAINLINE AIR CARRIERS

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS

BY INTERNATIONAL TRAVEL REGIONS

FISCAL YEAR	ATLANTIC			LATIN AMERICA			PACIFIC			INTERNATIONAL		
	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR
<u>Historical</u>												
2010	131	109	82.9	78	62	79.2	70	59	84.1	279	230	82.2
2015	133	107	80.0	101	81	80.3	86	71	82.5	321	259	80.8
2019	146	121	82.9	112	94	83.5	91	75	82.6	349	290	83.0
2020	69	48	69.3	63	48	76.2	44	31	71.8	176	127	72.4
2021	57	27	47.8	92	59	63.5	20	4	22.4	169	90	53.4
2022E	128	100	78.1	121	96	79.6	27	15	56.3	276	211	76.6
<u>Forecast</u>												
2023	160	128	80.0	121	97	80.0	59	41	69.0	340	266	78.1
2028	193	158	81.8	144	119	82.8	101	82	81.6	437	359	82.1
2033	211	173	81.8	179	148	82.8	114	94	82.4	504	415	82.3
2038	233	191	81.8	220	182	82.8	128	106	82.4	581	478	82.3
2043	256	209	81.8	265	220	82.8	143	118	82.4	665	547	82.3
<u>Avg Annual Growth</u>												
2010-22	-0.2%	-0.7%		3.7%	3.8%		-7.8%	-10.8%		-0.1%	-0.7%	
2022-23	24.8%	27.8%		-0.1%	0.5%		123.2%	173.8%		23.4%	25.7%	
2023-33	2.8%	3.1%		4.0%	4.4%		6.7%	8.6%		4.0%	4.6%	
2023-43	2.4%	2.5%		4.0%	4.2%		4.5%	5.4%		3.4%	3.7%	
Source: Form 41, U.S. Department of Transportation.												

TABLE 14

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

SEATS PER AIRCRAFT MILE

		INTERNATIONAL				
	DOMESTIC	ATLANTIC	LATIN AMERICA	PACIFIC	TOTAL	SYSTEM
FISCAL YEAR	(Seats/Mile)	(Seats/Mile)	(Seats/Mile)	(Seats/Mile)	(Seats/Mile)	(Seats/Mile)
<u>Historical</u>						
2010	152.0	231.7	171.7	287.2	220.9	169.2
2015	157.7	237.0	173.9	272.1	219.5	173.8
2019	166.0	251.6	177.9	269.9	225.6	180.7
2020	166.7	256.2	178.5	256.5	221.8	177.5
2021	171.7	255.4	178.8	205.8	202.4	177.8
2022E	171.1	260.5	180.3	265.8	218.3	181.6
<u>Forecast</u>						
2023	182.0	257.9	181.4	261.3	224.7	193.0
2028	185.4	260.4	183.9	265.4	230.0	198.3
2033	188.5	262.8	186.4	269.0	230.5	200.9
2038	191.6	265.3	188.9	272.7	231.3	203.2
2043	194.8	267.8	191.4	276.4	232.4	205.5
<u>Avg Annual Growth</u>						
2010-22	1.0%	1.0%	0.4%	-0.6%	-0.1%	0.6%
2022-23	6.3%	-1.0%	0.6%	-1.7%	2.9%	6.2%
2023-33	0.4%	0.2%	0.3%	0.3%	0.3%	0.4%
2023-43	0.3%	0.2%	0.3%	0.3%	0.2%	0.3%
Source: Form 41, U.S. Department of Transportation.						

TABLE 15

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

AVERAGE PASSENGER TRIP LENGTH

		INTERNATIONAL				
FISCAL YEAR	DOMESTIC (Miles)	ATLANTIC (Miles)	LATIN AMERICA (Miles)	PACIFIC (Miles)	TOTAL (Miles)	SYSTEM (Miles)
<u>Historical</u>						
2010	1,015	4,433	1,660	4,587	3,077	1,296
2015	1,023	4,336	1,669	5,080	2,969	1,292
2019	1,030	4,330	1,582	5,709	2,890	1,278
2020	1,016	4,442	1,577	5,634	2,725	1,209
2021	1,050	4,756	1,434	5,809	1,906	1,141
2022E	1,036	4,438	1,519	5,835	2,388	1,207
<u>Forecast</u>						
2023	1,040	4,396	1,528	5,970	2,675	1,257
2028	1,054	4,571	1,601	6,276	2,945	1,333
2033	1,068	4,622	1,619	6,373	2,887	1,342
2038	1,082	4,645	1,627	6,392	2,822	1,348
2043	1,097	4,668	1,635	6,399	2,769	1,350
<u>Avg Annual Growth</u>						
2010-22	0.2%	0.0%	-0.7%	2.0%	-2.1%	-0.6%
2022-23	0.4%	-1.0%	0.6%	2.3%	12.1%	4.2%
2023-33	0.3%	0.5%	0.6%	0.7%	0.8%	0.7%
2023-43	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%
Source: Form 41, U.S. Department of Transportation.						

TABLE 16

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

PASSENGER YIELDS

FISCAL YEAR	REVENUE PER PASSENGER MILE					
	DOMESTIC		INTERNATIONAL		SYSTEM	
	CURRENT \$ (Cents)	FY 2022 \$ (Cents)	CURRENT \$ (Cents)	FY 2022 \$ (Cents)	CURRENT \$ (Cents)	FY 2022 \$ (Cents)
<u>Historical</u>						
2010	12.62	16.70	12.84	16.98	12.69	16.79
2015	14.79	17.97	14.16	17.21	14.59	17.73
2019	14.12	15.97	13.47	15.23	13.92	15.75
2020	13.46	15.00	13.48	15.02	13.46	15.01
2021	11.73	12.66	12.84	13.86	11.93	12.87
2022E	15.58	15.58	15.33	15.33	15.52	15.52
<u>Forecast</u>						
2023	15.66	14.89	15.63	14.87	15.65	14.89
2028	16.73	14.26	16.56	14.11	16.68	14.21
2033	17.63	13.53	17.80	13.68	17.68	13.57
2038	18.54	12.80	19.12	13.24	18.73	12.93
2043	19.57	12.13	20.57	12.81	19.88	12.32
<u>Avg Annual Growth</u>						
2010-22	1.8%	-0.6%	1.5%	-0.9%	1.7%	-0.7%
2022-23	0.5%	-4.4%	2.0%	-3.0%	0.8%	-4.1%
2023-33	1.2%	-1.0%	1.3%	-0.8%	1.2%	-0.9%
2023-43	1.1%	-1.0%	1.4%	-0.7%	1.2%	-0.9%
Source: Form 41, U.S. Department of Transportation.						

TABLE 17

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

INTERNATIONAL PASSENGER YIELDS BY REGION

FISCAL YEAR	REVENUE PER PASSENGER MILE							
	ATLANTIC		LATIN AMERICA		PACIFIC		TOTAL INTERNATIONAL	
	CURRENT \$ (Cents)	FY 2022 \$ (Cents)	CURRENT \$ (Cents)	FY 2022 \$ (Cents)	CURRENT \$ (Cents)	FY 2022 \$ (Cents)	CURRENT \$ (Cents)	FY 2022 \$ (Cents)
<u>Historical</u>								
2010	12.73	16.85	13.33	17.64	12.50	16.54	12.84	16.98
2015	14.64	17.78	14.38	17.47	13.20	16.04	14.16	17.21
2019	14.04	15.88	14.20	16.06	11.63	13.16	13.47	15.23
2020	13.49	15.04	14.60	16.27	11.75	13.10	13.48	15.02
2021	11.82	12.76	12.59	13.58	22.48	24.25	12.84	13.86
2022E	15.66	15.66	14.60	14.60	17.79	17.79	15.33	15.33
<u>Forecast</u>								
2023	16.39	15.58	15.22	14.48	14.24	13.54	15.63	14.87
2028	17.84	15.20	16.33	13.91	14.44	12.30	16.56	14.11
2033	19.30	14.82	17.43	13.39	15.65	12.02	17.80	13.68
2038	20.88	14.46	18.53	12.83	16.97	11.75	19.12	13.24
2043	22.64	14.10	19.74	12.29	18.44	11.48	20.57	12.81
<u>Avg Annual Growth</u>								
2010-22	1.7%	-0.6%	0.8%	-1.6%	3.0%	0.6%	1.5%	-0.9%
2022-23	4.6%	-0.5%	4.3%	-0.8%	-20.0%	-23.9%	2.0%	-3.0%
2023-33	1.6%	-0.5%	1.4%	-0.8%	1.0%	-1.2%	1.3%	-0.8%
2023-43	1.6%	-0.5%	1.3%	-0.8%	1.3%	-0.8%	1.4%	-0.7%
Source: Form 41, U.S. Department of Transportation.								

TABLE 18

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

JET FUEL PRICES

FISCAL YEAR	DOMESTIC		INTERNATIONAL		SYSTEM	
	CURRENT \$ (Cents)	FY 2021 \$ (Cents)	CURRENT \$ (Cents)	FY 2021 \$ (Cents)	CURRENT \$ (Cents)	FY 2021 \$ (Cents)
<u>Historical</u>						
2010	219.16	289.99	220.12	291.27	219.49	290.43
2015	207.29	251.87	211.77	257.31	208.96	253.90
2019	205.67	232.60	207.82	235.03	206.42	233.45
2020	166.65	185.78	167.21	186.40	166.84	185.99
2021	177.23	191.26	171.82	185.42	175.49	189.37
2022E	309.28	309.28	315.20	315.20	311.24	311.24
<u>Forecast</u>						
2023	283.31	269.47	288.73	274.63	285.11	271.18
2028	291.70	248.52	297.29	253.28	293.56	250.10
2033	320.75	246.15	326.89	250.87	322.79	247.72
2038	340.37	235.05	346.89	239.55	342.53	236.55
2043	366.59	227.23	373.61	231.58	368.92	228.68
<u>Avg Annual Growth</u>						
2010-22	2.9%	0.5%	3.0%	0.7%	3.0%	0.6%
2022-23	-8.4%	-12.9%	-8.4%	-12.9%	-8.4%	-12.9%
2023-33	1.2%	-0.9%	1.2%	-0.9%	1.2%	-0.9%
2023-43	1.3%	-0.8%	1.3%	-0.8%	1.3%	-0.8%
Source: Form 41, U.S. Department of Transportation						

TABLE 19

U.S. COMMERCIAL AIR CARRIERS
AIR CARGO REVENUE TON MILES^{1, 2, 3}

FISCAL YEAR	ALL-CARGO CARRIER RTMS (Millions)			PASSENGER CARRIER RTMS (Millions)			TOTAL RTMS (Millions)		
	DOMESTIC	INT'L.	TOTAL	DOMESTIC	INT'L.	TOTAL	DOMESTIC	INT'L.	TOTAL
<u>Historical</u>									
2010	11,306	15,971	27,276	1,495	6,246	7,742	12,801	22,217	35,018
2015	11,636	16,359	27,995	1,455	6,277	7,733	13,091	22,636	35,727
2019	14,737	19,668	34,405	1,468	6,984	8,452	16,205	26,652	42,856
2020	16,663	21,964	38,627	1,124	4,130	5,255	17,787	26,094	43,882
2021	18,555	26,580	45,135	1,318	4,836	6,154	19,873	31,416	51,289
2022E	18,376	26,090	44,466	1,442	5,625	7,067	19,818	31,715	51,533
<u>Forecast</u>									
2023	18,345	25,253	43,598	1,547	6,407	7,953	19,892	31,660	51,551
2028	20,404	29,147	49,550	1,648	8,700	10,348	22,052	37,846	59,898
2033	22,582	35,036	57,619	1,746	9,731	11,476	24,328	44,767	69,095
2038	25,285	42,089	67,374	1,867	10,844	12,711	27,152	52,933	80,085
2043	28,223	50,233	78,456	1,986	11,965	13,951	30,210	62,198	92,407
<u>Avg Annual Growth</u>									
2010-22	4.1%	4.2%	4.2%	-0.3%	-0.9%	-0.8%	3.7%	3.0%	3.3%
2022-23	-0.2%	-3.2%	-2.0%	7.3%	13.9%	12.5%	0.4%	-0.2%	0.0%
2023-33	2.1%	3.3%	2.8%	1.2%	4.3%	3.7%	2.0%	3.5%	3.0%
2023-43	2.2%	3.5%	3.0%	1.3%	3.2%	2.8%	2.1%	3.4%	3.0%

Source: Form 41, U.S. Department of Transportation

¹Includes freight/express and mail revenue ton miles on mainline air carriers and regionals/commuters.

²Domestic figures from 2000 through 2002 exclude Airborne Express, Inc.; international figures for 2003 and beyond include new reporting of contract service by U.S. carriers for foreign flag carriers.

³Domestic figures from 2003 and beyond include Airborne Express, Inc.

TABLE 20

U.S. COMMERCIAL AIR CARRIERS

INTERNATIONAL AIR CARGO REVENUE TON MILES BY REGION^{1, 2}

	ATLANTIC	LATIN AMERICA	PACIFIC	OTHER INTERNATIONAL	TOTAL
FISCAL YEAR	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)
<u>Historical</u>					
2010	6,786	1,990	7,897	5,545	22,217
2015	6,627	1,639	9,018	5,352	22,636
2019	7,426	1,661	10,429	7,135	26,652
2020	6,669	1,296	10,198	7,931	26,094
2021	7,603	1,608	11,555	10,650	31,416
2022E	8,763	1,666	10,905	10,382	31,715
<u>Forecast</u>					
2023	8,914	1,699	11,346	9,700	31,660
2028	9,981	1,863	14,154	11,848	37,846
2033	11,281	2,031	16,702	14,753	44,767
2038	12,804	2,237	19,623	18,269	52,933
2043	14,528	2,413	22,832	22,425	62,198
<u>Avg Annual Growth</u>					
2010-22	2.2%	-1.5%	2.7%	5.4%	3.0%
2022-23	1.7%	2.0%	4.0%	-6.6%	-0.2%
2023-33	2.4%	1.8%	3.9%	4.3%	3.5%
2023-43	2.5%	1.8%	3.6%	4.3%	3.4%
Source: Form 41, U.S. Department of Transportation					

¹Includes freight/express and mail revenue ton miles on mainline air carriers and regionals/commuters.

²Figures for 2003 and beyond include new reporting of contract service by U.S. carriers for foreign flag carriers.

TABLE 21

U.S. MAINLINE AIR CARRIERS

PASSENGER JET AIRCRAFT

Passenger	LARGE NARROWBODY				LARGE WIDEBODY				LARGE		
CALENDAR YEAR	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL	JETS	REGIONAL JETS	TOTAL JETS
<u>Historical</u>											
2010	3,120	8	1	3,129	470	9	43	522	3,651	71	3,722
2015	3,319	2	0	3,321	492	0	31	523	3,844	99	3,943
2019	3,775	0	0	3,775	553	0	0	553	4,328	60	4,388
2020	2,860	0	0	2,860	298	0	0	298	3,158	23	3,181
2021	2,828	0	0	2,828	281	0	0	281	3,109	23	3,132
2022	3,429	0	0	3,429	426	0	0	426	3,855	60	3,915
<u>Forecast</u>											
2023	3,745	0	0	3,745	475	0	0	475	4,220	48	4,268
2028	3,568	0	0	3,568	549	0	0	549	4,117	0	4,117
2033	3,827	0	0	3,827	603	0	0	603	4,430	0	4,430
2038	4,367	0	0	4,367	702	0	0	702	5,069	0	5,069
2043	5,099	0	0	5,099	826	0	0	826	5,925	0	5,925
<u>Avg Annual Growth</u>											
2010-22	0.8%	N.A.	N.A.	0.8%	-0.8%	N.A.	N.A.	-1.7%	0.5%	-1.4%	0.4%
2022-23	9.2%	N.A.	N.A.	9.2%	11.5%	N.A.	N.A.	11.5%	9.5%	N.A.	9.0%
2023-33	0.2%	N.A.	N.A.	0.2%	2.4%	N.A.	N.A.	2.4%	0.5%	N.A.	0.4%
2023-43	1.6%	N.A.	N.A.	1.6%	2.8%	N.A.	N.A.	2.8%	1.7%	N.A.	1.7%
Note: N.A. - Not Applicable											

TABLE 22

U.S. MAINLINE AIR CARRIERS
CARGO JET AIRCRAFT

	LARGE NARROWBODY				LARGE WIDEBODY				
CALENDAR YEAR	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL	TOTAL
<u>Historical</u>									
2010	153	104	31	288	265	200	97	562	850
2015	228	22	2	252	309	156	72	537	789
2019	216	10	2	228	419	120	112	651	879
2020	200	10	0	210	414	115	109	638	848
2021	213	8	0	221	434	111	110	655	876
2022	219	7	0	226	469	118	122	709	935
<u>Forecast</u>									
2023	239	7	0	246	503	110	125	738	984
2028	332	2	0	334	611	110	130	851	1,185
2033	449	0	0	449	742	110	130	982	1,431
2038	508	0	0	508	996	41	108	1,145	1,653
2043	642	0	0	642	1,233	7	92	1,332	1,974
<u>Avg Annual Growth</u>									
2010-22	3.0%	-20.1%	N.A.	-2.0%	4.9%	-4.3%	1.9%	2.0%	0.8%
2022-23	9.1%	0.0%	N.A.	8.8%	7.2%	-6.8%	2.5%	4.1%	5.2%
2023-33	6.5%	N.A.	N.A.	6.2%	4.0%	0.0%	0.4%	2.9%	3.8%
2023-43	5.1%	N.A.	N.A.	4.9%	4.6%	-12.9%	-1.5%	3.0%	3.5%
Note: N.A. - Not Applicable									

TABLE 23
TOTAL JET FUEL AND AVIATION GASOLINE FUEL CONSUMPTION
U.S. CIVIL AVIATION AIRCRAFT
(Millions of Gallons)

	JET FUEL					AVIATION GASOLINE			
	U.S. AIR CARRIERS ^{1, 2}								
				GENERAL		AIR	GENERAL		TOTAL FUEL
FISCAL YEAR	DOMESTIC	INT'L.	TOTAL	AVIATION	TOTAL	CARRIER	AVIATION	TOTAL	CONSUMED
<u>Historical</u>									
2010	12,036	6,315	18,351	1,435	19,786	2	221	223	20,009
2015	12,834	6,541	19,374	1,383	20,757	2	196	198	20,955
2019	14,648	7,043	21,691	1,510	23,202	2	200	202	23,404
2020	10,538	4,732	15,270	1,342	16,612	2	204	206	16,818
2021	11,578	4,823	16,402	1,909	18,311	2	229	231	18,542
2022E	14,008	6,077	20,086	1,936	22,022	2	224	226	22,248
<u>Forecast</u>									
2023	14,794	6,873	21,668	1,964	23,632	2	222	224	23,856
2028	15,239	8,262	23,502	2,167	25,669	2	211	213	25,882
2033	16,679	8,998	25,677	2,392	28,070	2	206	208	28,278
2038	18,710	9,791	28,501	2,608	31,109	2	201	203	31,312
2043	21,218	10,587	31,804	2,810	34,614	2	198	200	34,815
<u>Avg Annual Growth</u>									
2010-22	1.3%	-0.3%	0.8%	2.5%	0.9%	0.0%	0.1%	0.1%	0.9%
2022-23	5.6%	13.1%	7.9%	1.4%	7.3%	0.0%	-1.1%	-1.1%	7.2%
2023-33	1.2%	2.7%	1.7%	2.0%	1.7%	0.0%	-0.7%	-0.7%	1.7%
2023-43	1.8%	2.2%	1.9%	1.8%	1.9%	0.0%	-0.6%	-0.6%	1.9%
Source: Air carrier jet fuel, Form 41, U.S. Department of Transportation; all others, FAA APO estimates.									

Source: Air carrier jet fuel, Form 41, U.S. Department of Transportation; all others, FAA APO estimates.

¹Includes both passenger (mainline and regional air carrier) and cargo carriers.

²Forecast assumes 1.0% annual improvement in available seat miles per gallon for U.S. Commercial Air Carrier

TABLE 24

U.S. REGIONAL CARRIER FORECAST ASSUMPTIONS

FISCAL YEAR	AVERAGE SEATS PER AIRCRAFT MILE			AVERAGE PASSENGER TRIP LENGTH			REVENUE PER PASSENGER MILE**	
	DOMESTIC (Seats/Mile)	INT'L (Seats/Mile)	TOTAL (Seats/Mile)	DOMESTIC (Miles)	INT'L. (Miles)	TOTAL (Miles)	CURRENT \$ (Cents)	2022 \$ (Cents)
<u>Historical</u>								
2010	55.7	53.2	55.7	459	503	460	16.23	21.48
2015	59.5	64.9	59.7	469	695	473	11.41	13.86
2019	64.1	72.5	64.3	491	670	495	12.15	13.74
2020	65.0	71.9	65.1	494	675	497	11.65	12.99
2021	66.5	72.9	66.6	509	662	512	10.20	11.01
2022E	66.9	72.5	67.0	490	640	492	13.53	13.53
<u>Forecast</u>								
2023	70.2	72.8	70.3	495	648	498	13.60	12.93
2028	71.5	74.3	71.6	502	656	505	14.52	12.37
2033	72.7	75.8	72.8	509	665	511	15.29	11.74
2038	73.9	77.3	74.0	515	674	518	16.09	11.11
2043	75.1	78.8	75.2	522	683	525	16.98	10.52
<u>Avg Annual Growth</u>								
2010-22	1.5%	2.6%	1.6%	0.5%	2.0%	0.6%	-1.5%	-3.8%
2022-23	4.9%	0.4%	4.8%	1.2%	1.2%	1.2%	0.5%	-4.4%
2023-33	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%	1.2%	-1.0%
2023-43	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	1.1%	-1.0%

Source: Form 41 and 298C, U.S. Department of Transportation.

** Reporting carriers.

TABLE 25

U.S. REGIONAL CARRIERS
SCHEDULED PASSENGER TRAFFIC
(In Millions)

FISCAL YEAR	REVENUE PASSENGERS			REVENUE PASSENGER MILES		
	DOMESTIC	INTERNATIONAL	TOTAL	DOMESTIC	INTERNATIONAL	TOTAL
<u>Historical</u>						
2010	158	3	161	72,709	1,347	74,055
2015	149	3	152	69,619	2,116	71,735
2019	152	4	156	74,791	2,376	77,168
2020	92	2	94	45,538	1,229	46,767
2021	105	2	107	53,650	1,221	54,871
2022E	126	2	128	61,725	1,335	63,060
<u>Forecast</u>						
2023	151	3	154	74,949	1,621	76,570
2028	164	3	167	82,307	1,780	84,088
2033	189	3	192	95,902	2,074	97,977
2038	219	4	223	112,940	2,443	115,383
2043	258	4	262	134,656	2,913	137,568
<u>Avg Annual Growth</u>						
2010-22	-1.9%	-2.1%	-1.9%	-1.4%	-0.1%	-1.3%
2022-23	20.0%	20.0%	20.0%	21.4%	21.4%	21.4%
2023-33	2.2%	2.2%	2.2%	2.5%	2.5%	2.5%
2023-43	2.7%	2.7%	2.7%	3.0%	3.0%	3.0%
Source: Form 41 and 298C, U.S. Department of Transportation.						

TABLE 26

U.S. REGIONAL CARRIERS

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS

YEAR	DOMESTIC			INTERNATIONAL			TOTAL		
	ASMs (MIL)	RPMs (MIL)	% LOAD FACTOR	ASMs (MIL)	RPMs (MIL)	% LOAD FACTOR	ASMs (MIL)	RPMs (MIL)	% LOAD FACTOR
<u>Historical</u>									
2010	95,508	72,709	76.1	1,857	1,347	72.5	97,365	74,055	76.1
2015	86,778	69,619	80.2	2,819	2,116	75.0	89,597	71,735	80.1
2019	93,720	74,791	79.8	3,116	2,376	76.3	96,836	77,168	79.7
2020	69,317	45,538	65.7	1,812	1,229	67.9	71,129	46,767	65.8
2021	75,837	53,650	70.7	1,836	1,221	66.5	77,673	54,871	70.6
2022E	77,700	61,725	79.4	1,833	1,335	72.8	79,533	63,060	79.3
<u>Forecast</u>									
2023	94,741	74,949	79.1	2,235	1,621	72.5	96,975	76,570	79.0
2028	102,567	82,307	80.2	2,419	1,780	73.6	104,986	84,088	80.1
2033	117,984	95,902	81.3	2,783	2,074	74.5	120,767	97,977	81.1
2038	139,104	112,940	81.2	3,281	2,443	74.5	142,385	115,383	81.0
2043	165,792	134,656	81.2	3,911	2,913	74.5	169,703	137,568	81.1
<u>Avg Annual Growth</u>									
2010-22	-1.7%	-1.4%		-0.1%	-0.1%		-1.7%	-1.3%	
2022-23	21.9%	21.4%		21.9%	21.4%		21.9%	21.4%	
2023-33	2.2%	2.5%		2.2%	2.5%		2.2%	2.5%	
2023-43	2.8%	3.0%		2.8%	3.0%		2.8%	3.0%	
Source: Form 41 and 298C, U.S. Department of Transportation.									

TABLE 27

U.S. REGIONAL CARRIERS

PASSENGER AIRCRAFT

AS OF JANUARY 1	REGIONAL AIRCRAFT											
	LESS THAN 9 SEATS	10 TO 19 SEATS	20 TO 30 SEATS	31 TO 40 SEATS			OVER 40 SEATS			TOTAL FLEET		
				PROP	JET	TOTAL	PROP	JET	TOTAL	NON JET	JET	TOTAL
<u>Historical</u>												
2010	440	92	82	144	28	172	99	1,728	1,827	857	1,756	2,613
2015	346	68	13	32	0	32	57	1,628	1,685	516	1,628	2,144
2019	374	72	19	11	0	11	39	1,846	1,885	515	1,846	2,361
2020	276	74	20	11	0	11	40	1,434	1,474	421	1,434	1,855
2021	268	69	16	10	0	10	38	1,406	1,444	401	1,406	1,807
2022	247	59	18	3	3	6	49	1,623	1,672	376	1,626	2,002
<u>Forecast</u>												
2023	211	54	13	0	1	1	56	1,635	1,691	334	1,636	1,970
2028	183	47	11	0	0	0	58	1,499	1,557	299	1,499	1,798
2033	158	41	9	0	0	0	64	1,566	1,630	272	1,566	1,838
2038	135	35	8	0	0	0	70	1,849	1,919	248	1,849	2,097
2043	113	29	7	0	0	0	80	2,158	2,238	229	2,158	2,387
<u>Avg Annual Growth</u>												
2010-22	-4.7%	-3.6%	-11.9%	-27.6%	-17.0%	-24.4%	-5.7%	-0.5%	-0.7%	-6.6%	-0.6%	-2.2%
2022-23	-14.6%	-8.5%	-27.8%	N.A.	-66.7%	-83.3%	14.3%	0.7%	1.1%	-11.2%	0.6%	-1.6%
2023-33	-2.9%	-2.7%	-3.6%	N.A.	N.A.	N.A.	1.3%	-0.4%	-0.4%	-2.0%	-0.4%	-0.7%
2023-43	-3.1%	-3.1%	-3.0%	N.A.	N.A.	N.A.	1.8%	1.4%	1.4%	-1.9%	1.4%	1.0%
Note: N.A. - Not Applicable												

TABLE 28

ACTIVE GENERAL AVIATION AND AIR TAXI AIRCRAFT

AS OF DEC. 31	FIXED WING						ROTORCRAFT						TOTAL		
	PISTON			TURBINE						GENERAL					
	SINGLE ENGINE	MULTI- ENGINE	TOTAL	TURBO PROP	TURBO JET	TOTAL	PISTON	TURBINE	TOTAL	MENTAL* *	LIGHT SPORT AIRCRAFT**	OTHER	AVIATION FLEET	TOTAL PISTONS	TOTAL TURBINES
Historical*															
2010	139,519	15,900	155,419	9,369	11,484	20,853	3,588	6,514	10,102	24,784	6,528	5,684	223,370	159,007	27,367
2015	127,887	13,254	141,141	9,712	13,440	23,152	3,286	7,220	10,506	27,922	2,369	4,941	210,031	144,427	30,372
2019	128,926	12,470	141,396	10,242	14,888	25,130	3,089	7,109	10,198	27,449	2,675	4,133	210,981	144,485	32,239
2020	124,059	11,947	136,006	10,317	15,316	25,633	2,930	6,816	9,746	26,367	2,570	3,818	204,140	138,936	32,449
2021	126,735	11,885	138,620	10,391	15,270	25,661	3,012	7,020	10,032	27,960	2,650	4,271	209,194	141,632	32,681
2022E	125,655	11,810	137,465	10,415	15,730	26,145	3,020	7,155	10,175	28,245	2,760	4,350	209,140	140,485	33,300
Forecast															
2023	124,545	11,745	136,290	10,430	16,215	26,645	3,030	7,290	10,320	28,580	2,870	4,390	209,095	139,320	33,935
2028	119,185	11,485	130,670	10,560	18,930	29,490	3,090	8,030	11,120	30,190	3,450	4,590	209,510	133,760	37,520
2033	114,360	11,315	125,675	10,885	21,775	32,660	3,175	8,830	12,005	31,410	4,050	4,655	210,455	128,850	41,490
2038	110,405	11,205	121,610	11,410	24,655	36,065	3,275	9,655	12,930	32,600	4,610	4,695	212,510	124,885	45,720
2043	107,800	11,175	118,975	12,170	27,570	39,740	3,375	10,495	13,870	33,835	5,245	4,730	216,395	122,350	50,235
Avg Annual Growth															
2010-22	-0.9%	-2.4%	-1.0%	0.9%	2.7%	1.9%	-1.4%	0.8%	0.1%	1.1%	-6.9%	-2.2%	-0.5%	-1.0%	1.6%
2022-23	-0.9%	-0.6%	-0.9%	0.1%	3.1%	1.9%	0.3%	1.9%	1.4%	1.2%	4.0%	0.9%	0.0%	-0.8%	1.9%
2023-33	-0.8%	-0.4%	-0.8%	0.4%	3.0%	2.1%	0.5%	1.9%	1.5%	0.9%	3.5%	0.6%	0.1%	-0.8%	2.0%
2023-43	-0.7%	-0.2%	-0.7%	0.8%	2.7%	2.0%	0.5%	1.8%	1.5%	0.8%	3.1%	0.4%	0.2%	-0.6%	2.0%
* Source: 2001-2010, 2012-2021, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.															

* Source: 2001-2010, 2012-2021, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.

**Experimental Light-sport category that was previously shown under Sport Aircraft is moved under Experimental Aircraft category, starting in 2012.

Note: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

TABLE 29

ACTIVE GENERAL AVIATION AND AIR TAXI HOURS FLOWN

(In Thousands)

AS OF DEC. 31	FIXED WING						ROTORCRAFT			GENERAL AVIATION			TOTAL	TOTAL TURBINE S	
	PISTON		TURBINE		AVIATION HOURS										
	SINGLE ENGINE	MULTI-ENGINE	TOTAL	TURBO PROP	TURBO JET	TOTAL	PISTON	TURBINE	TOTAL	EXPERI- MENTAL**	LIGHT SPORT AIRCRAFT**	OTHER			
<u>Historical*</u>															
2010	12,161	1,818	13,979	2,325	3,375	5,700	794	2,611	3,405	1,226	311	181	24,802	14,773	8,311
2015	11,217	1,608	12,825	2,538	3,837	6,375	798	2,496	3,294	1,295	191	162	24,142	13,623	8,871
2019	12,700	1,731	14,431	2,619	3,926	6,546	628	2,369	2,997	1,269	189	135	25,566	15,059	8,914
2020	11,603	1,336	12,939	2,344	3,336	5,681	537	1,871	2,408	1,176	202	86	22,492	13,477	7,552
2021	12,808	1,494	14,302	2,720	4,868	7,587	578	2,178	2,756	1,394	245	156	26,441	14,880	9,765
2022E	12,505	1,532	14,036	2,793	4,968	7,760	592	2,242	2,833	1,304	228	137	26,299	14,628	10,002
<u>Forecast</u>															
2023	12,240	1,549	13,789	2,847	5,087	7,934	605	2,307	2,912	1,349	240	142	26,366	14,394	10,241
2028	11,336	1,544	12,880	2,967	5,965	8,933	660	2,623	3,284	1,511	300	155	27,062	13,540	11,556
2033	10,910	1,549	12,458	3,063	6,911	9,974	708	2,922	3,630	1,611	362	159	28,195	13,166	12,896
2038	10,553	1,564	12,118	3,212	7,845	11,057	749	3,220	3,968	1,693	421	161	29,419	12,867	14,277
2043	10,306	1,597	11,903	3,427	8,769	12,195	786	3,526	4,312	1,777	487	163	30,838	12,690	15,721
<u>Avg Annual Growth</u>															
2010-22	0.2%	-1.4%	0.0%	1.5%	3.3%	2.6%	-2.4%	-1.3%	-1.5%	0.5%	-2.6%	-2.3%	0.5%	-0.1%	1.6%
2022-23	-2.1%	1.1%	-1.8%	1.9%	2.4%	2.2%	2.3%	2.9%	2.8%	3.4%	5.6%	3.4%	0.3%	-1.6%	2.4%
2023-33	-1.1%	0.0%	-1.0%	0.7%	3.1%	2.3%	1.6%	2.4%	2.2%	1.8%	4.2%	1.1%	0.7%	-0.9%	2.3%
2023-43	-0.9%	0.2%	-0.7%	0.9%	2.8%	2.2%	1.3%	2.1%	2.0%	1.4%	3.6%	0.7%	0.8%	-0.6%	2.2%
* Source: 2001-2010, 2012-2021, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.															

* Source: 2001-2010, 2012-2021, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.

**Experimental Light-sport category that was previously shown under Sport Aircraft is moved under Experimental Aircraft category, starting in 2012.

Note: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

TABLE 30
ACTIVE PILOTS BY TYPE OF CERTIFICATE, EXCLUDING STUDENT PILOTS*

AS OF DEC. 31	RECREA- TIONAL	SPORT PILOT	PRIVATE	COMMERCIAL	AIRLINE TRANSPORT	ROTOR- CRAFT ONLY	GLIDER ONLY	TOTAL LESS STUDENT PILOTS	INSTRUMENT RATED PILOTS ¹
<u>Historical**</u>									
2010	212	3,682	202,020	123,705	142,198	15,377	21,275	508,469	318,001
2015	190	5,482	170,718	101,164	154,730	15,566	19,460	467,310	304,329
2019	127	6,467	161,105	100,863	164,947	14,248	19,143	466,900	314,168
2020	105	6,643	160,860	103,879	164,193	13,629	19,753	469,062	316,651
2021	85	6,801	161,459	104,610	163,934	13,191	20,328	470,408	317,169
2022	79	6,957	164,090	104,498	166,738	13,180	20,804	476,346	321,217
<u>Forecast</u>									
2023	75	7,150	166,000	104,700	169,900	13,100	21,100	482,025	324,700
2028	70	8,385	168,700	105,050	178,800	13,100	22,050	496,155	332,800
2033	55	9,575	166,750	104,950	183,400	13,950	22,550	501,230	342,200
2038	40	10,685	163,350	104,700	189,200	14,950	22,750	505,675	351,700
2043	15	11,705	159,650	104,450	196,100	15,900	22,850	510,670	361,250
<u>Avg Annual Growth</u>									
2010-22	-7.9%	5.4%	-1.7%	-1.4%	1.3%	-1.3%	-0.2%	-0.5%	0.1%
2022-23	-5.1%	2.8%	1.2%	0.2%	1.9%	-0.6%	1.4%	1.2%	1.1%
2023-33	-3.1%	3.0%	0.0%	0.0%	0.8%	0.6%	0.7%	0.4%	0.5%
2023-43	-7.7%	2.5%	-0.2%	0.0%	0.7%	1.0%	0.4%	0.3%	0.5%

** Source: FAA U.S. Civil Airmen Statistics.

* Starting with April 2016, there is no expiration date on the new student pilot certificates. This generates a cumulative increase in the student pilot numbers and breaks the link between student pilot and private pilot or higher level certificates. Since there is no sufficient data yet to forecast the student certificates under the new rule, student pilot forecast is suspended and excluded from this table.

¹Instrument rated pilots should not be added to other categories in deriving total.

Note: An active pilot is a person with a pilot certificate and a valid medical certificate.

TABLE 31

GENERAL AVIATION AIRCRAFT FUEL CONSUMPTION

(In Millions of Gallons)

CALENDAR YEAR	FIXED WING				ROTORCRAFT		EXPERI- MENTAL* * / OTHER		TOTAL FUEL CONSUMED		
	PISTON		TURBINE		PISTON	TURBINE	SPORT**	AVGAS	JET FUEL	TOTAL	
	SINGLE ENGINE	MULTI- ENGINE	TURBO PROP	TURBO JET							
<u>Historical*</u>											
2010	133	54	187	1,123	11	125	22	1	221	1,435	1,656
2015	128	40	191	1,063	10	128	15	1	196	1,383	1,578
2019	131	45	213	1,170	8	127	16	1	200	1,510	1,711
2020	146	35	201	1,036	8	105	14	1	204	1,342	1,546
2021	155	47	230	1,557	8	123	18	1	229	1,909	2,138
2022E	151	48	235	1,576	8	125	16	1	224	1,936	2,160
<u>Forecast</u>											
2023	147	48	238	1,598	8	128	17	1	222	1,964	2,186
2028	135	47	244	1,781	9	142	19	2	211	2,167	2,379
2033	129	46	247	1,992	10	154	20	2	206	2,392	2,599
2038	122	46	253	2,192	10	163	20	2	201	2,608	2,809
2043	118	46	264	2,375	11	171	21	3	198	2,810	3,008
<u>Avg Annual Growth</u>											
2010-22	1.0%	-0.9%	1.9%	2.9%	-2.3%	0.0%	-2.4%	-0.8%	0.1%	2.5%	2.2%
2022-23	-2.3%	0.7%	1.5%	1.4%	2.2%	2.1%	3.0%	5.6%	-1.1%	1.4%	1.2%
2023-33	-1.3%	-0.5%	0.3%	2.2%	1.5%	1.9%	1.7%	3.6%	-0.7%	2.0%	1.7%
2023-43	-1.1%	-0.3%	0.5%	2.0%	1.2%	1.5%	1.3%	3.1%	-0.6%	1.8%	1.6%
*Source: FAA APO Estimates.											

*Source: FAA APO Estimates.

**Experimental Light-sport category that was previously shown under Sport Aircraft is moved under Experimental Aircraft category, starting in 2012.

Note: Detail may not add to total because of independent rounding.

TABLE 32

**TOTAL COMBINED AIRCRAFT OPERATIONS AT AIRPORTS
WITH FAA AND CONTRACT TRAFFIC CONTROL SERVICE
(In Thousands)**

FISCAL YEAR	GENERAL AVIATION		MILITARY			NUMBER OF TOWERS					
	AIR CARRIER	AIR TAXI/ COMMUTER	ITINERANT	LOCAL	TOTAL	ITINERANT	LOCAL	TOTAL	TOTAL	FAA	CONTRACT
Historical											
2010	12,658	9,410	14,864	11,716	26,580	1,309	1,298	2,607	51,255	264	244
2015	13,755	7,895	13,887	11,691	25,579	1,292	1,203	2,495	49,724	264	252
2019	16,192	7,234	14,245	13,109	27,354	1,349	1,134	2,483	53,264	264	256
2020	11,737	5,472	12,608	12,333	24,941	1,192	1,020	2,212	44,362	264	256
2021	12,214	5,885	13,775	13,479	27,254	1,290	1,077	2,366	47,720	264	258
2022	15,150	6,522	14,635	14,029	28,664	1,288	986	2,254	52,591	264	260
Forecast											
2023	16,626	6,040	15,078	14,802	29,880	1,269	986	2,255	54,800	264	260
2028	20,164	6,073	16,068	15,768	31,835	1,269	986	2,255	60,327	264	260
2033	22,248	6,401	16,274	16,043	32,318	1,269	986	2,255	63,222	264	260
2038	24,408	6,742	16,486	16,328	32,814	1,269	986	2,255	66,219	264	260
2043	26,748	7,105	16,704	16,622	33,326	1,269	986	2,255	69,435	264	260
Avg Annual Growth											
2010-22	1.5%	-3.0%	-0.1%	1.5%	0.6%	-0.1%	-2.3%	-1.2%	0.2%		
2022-23	9.7%	-7.4%	3.0%	5.5%	4.2%	-1.5%	0.0%	0.0%	4.2%		
2023-33	3.0%	0.6%	0.8%	0.8%	0.8%	0.0%	0.0%	0.0%	1.4%		
2023-43	2.4%	0.8%	0.5%	0.6%	0.5%	0.0%	0.0%	0.0%	1.2%		
Source: FAA Air Traffic Activity.											

TABLE 33

TOTAL TRACON OPERATIONS
(In Thousands)

FISCAL YEAR	AIR CARRIER	AIR TAXI/ COMMUTER	GENERAL AVIATION	MILITARY	OVERFLIGHT	TOTAL
<u>Historical</u>						
2010	12,575	8,512	10,761	2,050	4,840	38,738
2015	13,610	6,999	10,350	1,961	4,116	37,036
2019	16,014	6,600	10,960	1,946	3,706	39,227
2020	11,617	5,153	9,691	1,763	3,050	31,274
2021	12,045	5,462	10,742	1,894	3,393	33,536
2022	14,967	5,925	11,376	1,825	3,601	37,694
<u>Forecast</u>						
2023	16,423	5,271	11,682	1,827	3,719	38,922
2028	19,920	4,937	12,299	1,827	4,117	43,101
2033	21,987	5,221	12,441	1,827	4,380	45,856
2038	24,130	5,514	12,586	1,827	4,653	48,710
2043	26,452	5,827	12,734	1,827	4,946	51,786
<u>Avg Annual Growth</u>						
2010-22	1.5%	-3.0%	0.5%	-1.0%	-2.4%	-0.2%
2022-23	9.7%	-11.0%	2.7%	0.1%	3.3%	3.3%
2023-33	3.0%	-0.1%	0.6%	0.0%	1.7%	1.7%
2023-43	2.4%	0.5%	0.4%	0.0%	1.4%	1.4%
Source: FAA Air Traffic Activity.						

TABLE 34

IFR AIRCRAFT HANDLED

AT FAA EN ROUTE TRAFFIC CONTROL CENTERS

(In Thousands)

FISCAL YEAR	IFR AIRCRAFT HANDLED			
	COMMERCIAL	GENERAL AVIATION	MILITARY	TOTAL
<u>Historical</u>				
2010	30,965	6,550	2,982	40,498
2015	33,116	7,007	1,795	41,918
2019	35,783	6,309	1,645	43,737
2020	25,608	5,096	1,404	32,108
2021	26,449	6,124	1,525	34,098
2022	32,891	7,034	1,511	41,437
<u>Forecast</u>				
2023	35,961	7,198	1,511	44,670
2028	41,942	7,523	1,511	50,976
2033	46,540	7,725	1,511	55,776
2038	51,294	7,938	1,511	60,742
2043	56,428	8,161	1,511	66,100
<u>Avg Annual Growth</u>				
2010-22	0.5%	0.6%	-5.5%	0.2%
2022-23	9.3%	2.3%	0.0%	7.8%
2023-33	2.6%	0.7%	0.0%	2.2%
2023-43	2.3%	0.6%	0.0%	2.0%
Source: FAA Air Traffic Activity				