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Airline Quality Rating Report

National Institute for Aviation Research

The Airline Quality Report 1995

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NIAR Report 95-11

The Airline Quality Report 1995

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*NIAR
National Institute for Aviation Research*

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ABOUT THE AUTHORS

Brent Bowen is Director and Associate Professor, Aviation Institute, University of Nebraska at Omaha. He holds a Doctorate in Higher Education and Aviation from Oklahoma State University and a Master of Business Administration degree from Oklahoma City University. His Federal Aviation Administration certifications include Airline Transport Pilot, Certified Flight Instructor, Advanced-Instrument Ground Instructor, and Aerospace Education Counselor. Dr. Bowen's research interests focus on aviation applications of marketing in the areas of service quality evaluation, forecasting, and student recruitment in college programs. His professional affiliations include the Aerospace Education Association, Society for Case Research, University Aviation Association, the Nebraska Academy of Science, and the Nebraska Aviation Education Association.

Dean Headley is Associate Professor of Marketing and Barton Fellow, W. Frank Barton School of Business, and Faculty Associate of the National Institute for Aviation Research at Wichita State University. He holds a Doctorate in Marketing from Oklahoma State University, a Master of Business Administration Degree from Wichita State University, and a Master of Public Health Degree from the University of Oklahoma. Dr. Headley's research interests include methodology development for the measurement of service quality, the connection between service quality and consumer behavior, consumer choice processes in service settings, and the effects of marketing activities on consumers and providers of services. Dr. Headley's memberships include the American Marketing Association, Academy for Health Services Marketing, Midwest Business Administration Association, and the Society for Case Research.

Collectively, Dr. Bowen's and Dr. Headley's research on the Airline Quality Rating (AQR) has met with widespread acceptance and acknowledgement. The Airline Quality Rating has been featured on *ABC's Good Morning America*, *The Cable News Network*, *The Today Show*, on network news, in *USA Today*, by the Associated Press, and in numerous other national and international media. Bowen and Headley have served as invited expert witnesses before the U.S. House of Representatives Committee on Government Operations and have served on multiple occasions as invited speakers and panelists for such groups as the National Academy of Sciences/Transportation Research Board. Resulting from work with the Airline Quality Rating, Bowen and Headley have been recognized with awards from the American Marketing Association, the American Institute of Aeronautics and Astronautics, Embry-Riddle Aeronautical University, the Travel and Transportation Research Association, W. Frank Barton School of Business, and others. The AQR research has been published in the *Journal of Aviation/ Aerospace Education and Research*, *Advances in Marketing*, *Business Research Methods*, as well as other journals, proceedings, text books, and research monographs.

AIRLINE QUALITY RATING 1995

Brent D. Bowen, University of Nebraska at Omaha
Dean E. Headley, Wichita State University

Abstract

The Airline Quality Rating (AQR) was developed and first announced in early 1991 as an objective method of comparing airline performance on combined multiple factors important to consumers. Development history and calculation details for the AQR rating system are detailed in The Airline Quality Rating (NIAR Report 91-11) issued in April, 1991, by the National Institute for Aviation Research at Wichita State University. This current report, Airline Quality Rating 1995 (NIAR Report 95-11), contains monthly Airline Quality Rating scores for 1994. Additional copies are available by contacting Wichita State University or University of Nebraska at Omaha.

The Airline Quality Rating 1995 (NIAR Report 95-11) is a summary of month-by-month quality ratings for the nine major domestic U.S. airlines operating during 1994. Using the Airline Quality Rating system and monthly performance data for each airline for the calendar year of 1994, individual and comparative ratings are reported. This research monograph, NIAR Report 95-11, contains a brief summary of the AQR methodology, detailed data and charts that track comparative quality for major domestic airlines across the 12 month period of 1994, and industry average results. Also, comparative Airline Quality Rating data for 1991 through 1994 is included to provide a longer term view of quality in the industry.

The Airline Quality Rating (AQR)

The majority of quality ratings available rely on subjective surveys of consumer opinion that are infrequently done. This subjective approach yields a quality rating that is essentially noncomparable from survey to survey for any specific airline. Timeliness of survey based results can be a problem as well in the fast changing airline industry. Before the Airline Quality Rating, there was effectively no consistent method for monitoring the quality of airlines on a timely, objective and comparable basis. With the introduction of the AQR, a multi-factor, weighted average approach became available. This approach had not been used before in the airline industry. The method relies on taking published, publicly available data that characterizes airline performance on critical quality factors important to consumers and combines them into a rating system. The final result is a rating for individual airlines with ratio scale properties that is comparable across airlines and across time.

The Airline Quality Rating (AQR) is a weighted average of 19 factors (see TABLE 1) that have importance to consumers when judging the quality of airline services. Factors included in the rating scale are taken from an initial list of over 80 factors. Factors were screened to meet two basic criteria; 1) a factor must be

obtainable from published data sources for each airline; and 2) a factor must have relevance to consumer concerns regarding airline quality. Data used in calculating ratings represent performance aspects (i.e. safety, on-time performance, financial stability, lost baggage, denied boardings) of airlines that are important to consumers. Many of the factors used are part of the Air Travel Consumer Report maintained by the Department of Transportation.

Final factors and weights were established by surveying 65 airline industry experts regarding their opinion as to what consumers would rate as important (on a scale of 0 to 10) in judging airline quality. Also, each weight and factor was assigned a plus or minus sign to reflect the nature of impact for that factor on a consumer's perception of quality. For instance, the factor that includes on-time performance is included as a positive factor because it is reported in terms of on-time successes, suggesting that a higher number is favorable to consumers. The weight for this factor is high due to the importance most consumers place on this aspect of airline service. Conversely, the factor that includes accidents is included as a negative factor because it is reported in terms of accidents per hours flown, suggesting that a higher number is unfavorable to consumers. Because safety is important to most consumers the weight for this factor is also high. Weights and positive/negative signs are independent of each other. Weights reflect importance of the factor in consumer decision making, while signs reflect the direction of impact that the factor should have on the consumer's rating of airline quality. When all factors, weights and impacts are combined for an airline and averaged, a single continuously scaled value is obtained. This value is comparable across airlines and across time periods.

The Airline Quality Rating methodology allows comparison of major domestic airlines on a regular basis (as often as monthly) using a standard set of quality factors. Unlike other consumer opinion approaches which rely on consumer surveys and subjective opinion, the AQR uses a mathematical formula that takes multiple weighted objective factors into account in arriving at a single rating for an airline. The rating scale is useful because it provides consumers and industry watchers a means for looking at comparative quality for each airline on a timely basis using objective, performance-based data.

TABLE 1

AIRLINE QUALITY RATING FACTORS, WEIGHTS AND IMPACT

	FACTOR	WEIGHT	IMPACT (+/-)
1	Average Age of Fleet	5.85	-
2	Number of Aircraft	4.54	+
3	On-Time	8.63	+
4	Load Factor	6.98	-
5	Pilot Deviations	8.03	-
6	Number of Accidents	8.38	-
7	Frequent Flier Awards	7.35	-
8	Flight Problems ^a	8.05	-
9	Denied Boardings ^a	8.03	-
10	Mishandled Baggage ^a	7.92	-
11	Fares ^a	7.60	-
12	Customer Service ^a	7.20	-
13	Refunds ^a	7.32	-
14	Ticketing/Boarding ^a	7.08	-
15	Advertising ^a	6.82	-
16	Credit ^a	5.94	-
17	Other ^a	7.34	-
18	Financial Stability	6.52	+
19	Average Seat-Mile Cost	4.49	-

^aData for these factors is drawn from consumer complaints as registered with the Department of Transportation and published monthly in the Air Travel Consumer Report.

The basic formula for calculating the AQR is:

$$AQR = \frac{-w_1F1 + w_2F2 + w_3F3 +/- \dots w_{19}F_{19}}{w_1 + w_2 + w_3 + \dots w_{19}}$$

What the Airline Quality Rating Tells Us for 1994

Since the Airline Quality Rating is comparable across airlines and across time, monthly rating results can be examined both individually and collectively. The pages following these summary comments outline the AQR scores by airline, by month for 1994. For comparison purposes, results for each airline are also displayed for 1991, 1992, 1993 and 1994 where possible. A composite industry average chart that combines the nine airlines tracked is shown. The AQR results for 1994 indicate that:

- American Airlines stabilized their AQR scores in 1994. Compared to 1993 their 1994 performance was relatively unchanged. This lack of movement allowed American to regain the top rated position from Southwest Airlines. American finished the year as the most consistent performer of all those rated.
- Southwest Airlines slipped from the top rated position with generally declining AQR scores across the 12 month period. While there was some increase in Southwest's scores from July through September, they did not continue this trend and posted an overall decline for the year.
- United Airlines maintained its third position in the 1994 ratings, with a year of steady performance. The average 1994 AQR score for United showed the third largest decrease over 1993 scores of any airline. For the year, United was a relatively consistent quality performer, just at lower levels than for 1993.
- Delta Airlines shows a downward trend in AQR scores from May, 1994 through the end of the year. Overall, the difference in Delta's average 1994 AQR score compared to their 1993 average score is the second largest decline of the airlines rated.
- US Air continued a downward trend in AQR scores from late 1993. Some improvement was noted in April, July and August, but it was not enough to overcome the downward slide for the year. US Air posted the largest decline of all airlines rated for 1994.
- Northwest Airlines made noticeable, steady improvement in 1994. They posted the highest gain in AQR scores of the two airlines to show a net improvement in AQR scores for the year. This improvement did not affect their position, but definitely closed the gap on other airlines.
- America West had consistent AQR scores for the majority of 1994. An upward turn in late 1994 helped them post the only other overall increase in AQR score for the year among the major airlines. America West has been improving and posting a consistent level of quality performance since mid-1993.

- Trans World Airlines had its ups and downs for 1994, but generally finished the year better than it started when looked at on a monthly basis. The combination of TWA slipping to a lower average AQR score and America West improving, allowed America West to jump over TWA in the rating hierarchy.
- Continental Airlines shows improvement across the year, but on average posted a decline in their AQR score. Early poor performance in denied boardings and a variety of consumer complaint areas was too much to overcome. The net effect was that Continental remained in the lowest rated position among the major carriers.
- For 1994 the overall industry average AQR score remained relatively steady across the 12 month tracking period. Although the AQR industry average score for 1994 is lower than for 1993, the performance of monthly average scores is improving.

Observations About the Industry and a Look at the Future

Continued turbulence was encountered throughout the year by the U.S. major airline industry, but less than in previous years. As measured by the Airline Quality Rating, quality decreased during 1994 across the industry. Overall quality has diminished annually as measured by the AQR for the past four consecutive years. This finding, however, is not surprising to most industry experts, and is not completely discouraging. Even though the decline continues, we can note that improved stability is evident across the industry. By looking closely at AQR scores, we see evidence that individual air carrier performance is more stable in a majority of cases. Comparative performance among the major carriers is certainly a key finding of the AQR research methodology, and the documented overall decline must be addressed by the carriers.

Most observers would agree that it was the best year financially for the industry in recent memory. A limited and sporadic return to profitability by many carriers is noted, which leads us to believe the downward financial spiral is beginning to level off. Competition from new industry players is hindering the major airlines' efforts to return to a level of financial performance expected by management and investors. If this increased competition is not addressed creatively, a reversal of financial gains will be seen and further deterioration will be inevitable.

Of paramount concern in 1994 was the focus on safety issues resulting from several deadly disasters which struck the industry. This was especially difficult following a year which had very few fatalities. A result of this year of dramatic accidents and lost lives was the Aviation Safety Summit of January, 1995, which produced sweeping changes that are rapidly being implemented.

Looking to a broader perspective, there are numerous other significant issues which faced the industry in 1994. Global expansion in passenger and cargo services has become more apparent in our domestic market and our airlines are seeking further

global alliances. This is evidenced by new code sharing arrangements and our air carriers' support of liberalized bilateral agreements. Airline management has shown more aggressive response to competition from niche carriers. For example, the retreat from head-to-head competition with Southwest Airlines has now been challenged with success by United Airlines. However, American Airlines is still retreating from Southwest in some markets and has not moved to meet the challenge as aggressively as United. Southwest has been bruised by strategies of competitors and it will be interesting to see if they can retain leadership in financial performance.

A trend toward reduced concern for consumers can be seen across the industry. 1994 was a year when many airlines seemed to lose their necessary focus on the customer. In multiple instances it appears that airlines made moves intended to diminish consumer loyalty. Consumers became less enchanted with frequent flyer programs due in part to their anger with the airlines' rule changes announced in 1994 (increasing minimum award levels and decreasing minimum miles earned per flight). Fundamental to any consumer affinity program is the need to continually build loyalty. The major carriers had been very successful in building loyalty to frequent flyer programs for more than a decade. Without much apparent consideration for this fact, they destroyed years of work with announcements increasing the cost (in miles) for an award ticket. This created an acceleration of emerging consumer dissatisfaction with these programs. In another effort, which can easily be viewed by consumers as an intentional move to speed this alienation, many carriers also moved to limit access to valued upgrades in service. To business travelers, this was met with more consternation than the move to increase the number of miles for an award ticket. The net effect seems to be a reawakening of basic consumer buying motives (schedule and price) that were the specific aspects frequent flyer programs were designed to overcome. Frequent flyers are using competitive airlines that offer schedule and price advantages since the benefits of loyalty have been devalued. With access to more low-cost alternatives for air transportation and increasing costs for related travel areas (hotels, rental cars, meals) the most sought-after consumer, the business traveller, is becoming more driven by convenience and price. With the devaluation of the frequent flyer benefit, the price of loyalty has risen too high for many to continue with frequent exclusive use of an airline. The '90s focus of placing more emphasis on the value of time, has led the consumer to seek shorter travel times. Niche carriers have quickly moved to fill this need. Industry leader Southwest has continued to expand point-to-point air service in addition to many other carriers. This approach could be one of the indications that projects, such as the recently opened Denver International Airport, designed as mega-hubs will not be met with passenger volume and consumer favor. A future trend toward a dual system with more point-to-point routes and a reduced importance for hubs could be in the offing.

Looking Ahead....

- Financial turnaround for the industry should continue. With moderate projected growth in passenger volume in both the near and long term future, carriers must position themselves to reap the profits of this growth cycle.

- Continued focus on safety (121 and 135 will come together as a common standard) must be maintained. Efforts are very evident that this will happen at a rapid pace.
- Point-to-point service availability will probably be one of the more sweeping system changes of the second half of the '90s. Consumers are demanding this service. Increased competition from startups and more niche marketing will produce routing changes to meet consumer demand. This will certainly result in hub reductions.
- Stage 3 readiness (noise abatement) is fast approaching a deadline. A third of the domestic jet fleet still does not meet the 1999 guidelines. This should affect the demand for new aircraft and related industries outputs.
- Demand has influenced pricing increases and brought some stability to ticket prices. Less discounting will be seen, but continued cost cutting by the airlines will be attempted (i.e. travel agent commission capping) that could affect consumers total costs to fly.
- Air traffic control must be modernized with safety and air traffic access issues at the forefront. The DOT and FAA must proceed with or without resolution of the corporatization/ privatization issue. This is a critical element in keeping the sky safe.
- Quality must become more consistent. The airline that addresses how to consistently define and meet changing customer expectations will have a definite advantage and reap benefits.
- Potential for a stable period seems possible. Long term labor agreements have been reached, the economy appears healthy, demand for air travel is strong, and supply is readily available in a variety of combinations.
- The Airline Quality Rating will reexamine and update the methodology where necessary to reflect industry changes by reassessing factors and weights. After this fifth year, we will be looking toward tuning the AQR to a changing industry.

Previous Airline Quality Reports

Bowen, Brent D., Dean E. Headley and Jacqueline R. Luedtke (1991), Airline Quality Rating, National Institute for Aviation Research Report 91-11, Wichita, Kansas.

Bowen, Brent D., and Dean E. Headley (1992), Airline Quality Rating Report 1992, National Institute for Aviation Research Report 92-11, Wichita, Kansas.

Bowen, Brent D., and Dean E. Headley (1993), Airline Quality Rating Report 1993, National Institute for Aviation Research Report 93-11, Wichita, Kansas.

Bowen, Brent D., and Dean E. Headley (1994), Airline Quality Rating Report 1994, National Institute for Aviation Research Report 94-11, Wichita, Kansas.

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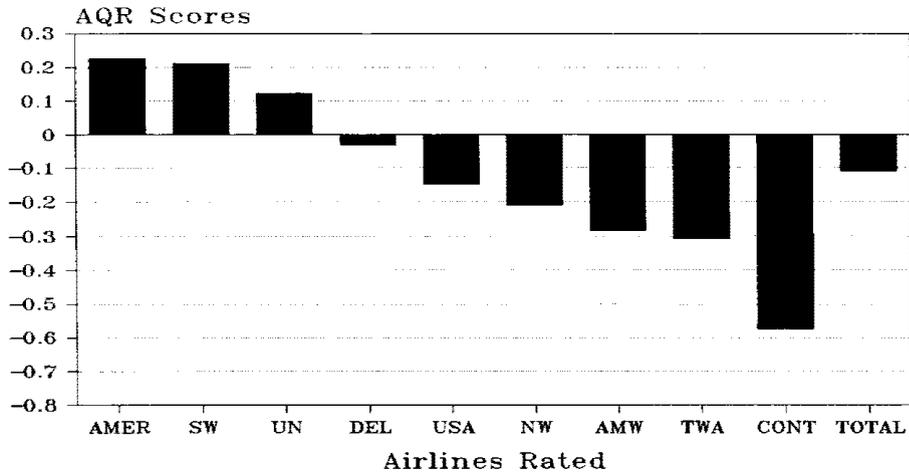
For copies of AQR reports contact:

National Institute for Aviation Research
Wichita State University
Wichita, KS 67260-0093

Office: 1-800-642-7978
(316) 689-3678
FAX: 316-689-3175

AIRLINE QUALITY RATING

MEAN AQR SCORES - 1994

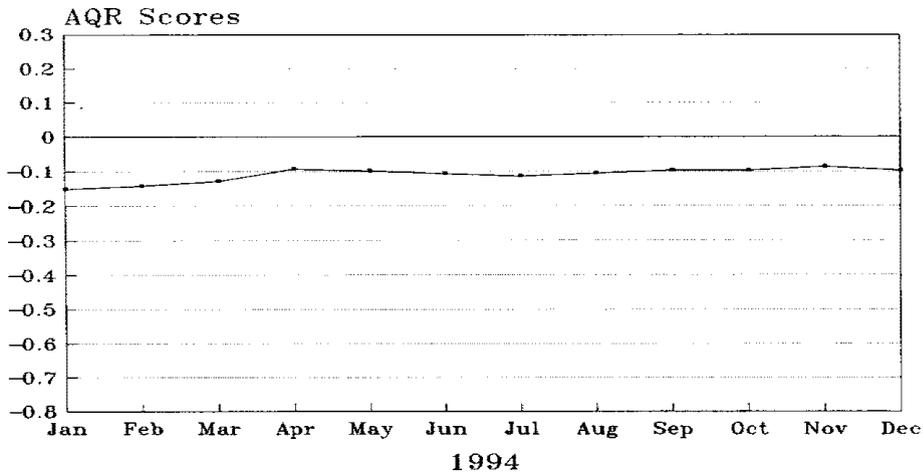


Industry Average AQR Scores for Major U.S. Airlines

	1994 Mean AQR Score	1993 Mean AQR Score	1992 Mean AQR Score	1991 Mean AQR Score
American	0.225	0.231	0.290	0.323
Southwest	0.211	0.252	0.251	0.220
United	0.123	0.176	0.214	0.168
Delta	-0.031	0.076	0.123	0.193
US Air	-0.148	-0.003	-0.024	0.115
Northwest	-0.210	-0.247	-0.193	-0.143
America West	-0.282	-0.294	-0.267	-0.325
Trans World	-0.307	-0.286	-0.398	-0.435
Continental	-0.574	-0.540	-0.274	-0.266
Total Average	-0.110	-0.070	-0.031	-0.017

AIRLINE QUALITY RATING

ALL AIRLINES



Average Monthly AQR Scores for U.S. Major Airlines

	1994	1993	1992	1991
January	-0.151	-0.072	-0.011	-0.040
February	-0.142	-0.075	-0.003	-0.028
March	-0.130	-0.077	-0.034	-0.032
April	-0.094	-0.058	-0.027	-0.006
May	-0.099	-0.054	-0.024	-0.027
June	-0.108	-0.060	-0.042	-0.021
July	-0.114	-0.068	-0.029	-0.006
August	-0.106	-0.072	-0.031	-0.008
September	-0.097	-0.078	-0.024	0.002
October	-0.098	-0.069	-0.016	-0.009
November	-0.087	-0.077	-0.060	-0.007
December	-0.098	-0.083	-0.076	-0.019
Average	-0.110	-0.070	-0.031	-0.017

APPENDIX

Detail of Frequently Cited Airline Performance Factors

Consumer interest remains high regarding such issues as lost baggage and on-time performance. Since these factors are part of the AQR calculations, it seemed useful to again provide more complete data on these consumer interest areas. The following data tables and charts provide a detailed look at the performance of each major U.S. airline for the 12 months of 1994 regarding lost baggage and on-time performance. Data was drawn from the Department of Transportation monthly Air Travel Consumer Report.

Noise around airports has been and continues to be a source of consumer unrest. To that end, the 1990 Noise Act was passed that sets standards for noise levels of aircraft operation that must be met by 1999. This has immediate financial implications for airlines and ultimately for passengers. Over the next few years, all U.S. jet airplanes must meet the noise level guidelines. This has become known as "stage 3 readiness". Essentially this means that aircraft operating in the U.S. must have quieter engines. For many older aircraft this means either refitting the engines with "hush kits" or replacement of the aircraft with newer, quieter aircraft. Either way this is an expensive proposition and the public will certainly benefit, but at some cost. According to The National Commission to Ensure a Strong Competitive Airline Industry report of August, 1993 (pg. 10), the average cost could be approximately \$2.5 million per airplane for conversion to noise compliance standards. With 34% of the 3,414 planes in the domestic fleet (1161 planes) needing attention, this could amount to a \$2.9 billion investment (1161 x \$2.5 million) over the next several years for the industry. This will certainly put additional pressures on an already financially troubled industry. The following table gives a picture of the age of the domestic passenger jet fleet for each major U.S. airline, the size, and the 1994 and 1993 stage 3 readiness of that airlines fleet.

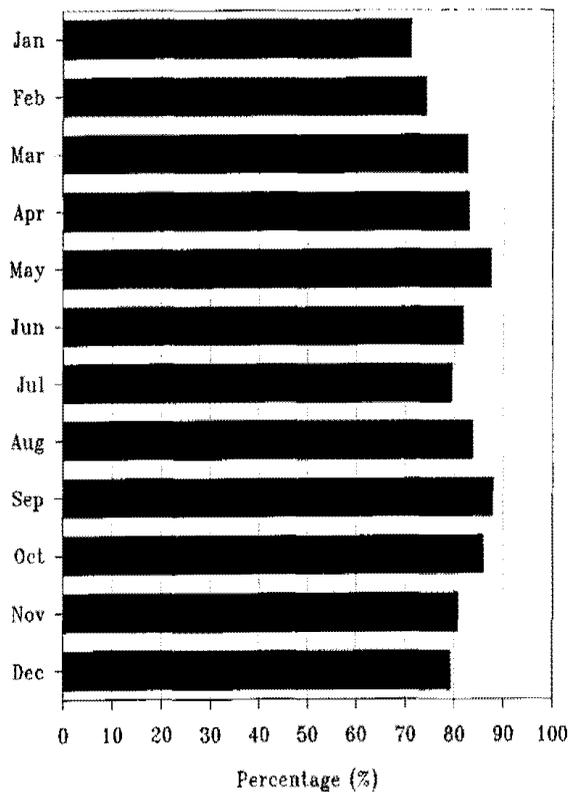
Finally, we offer some interesting facts in areas of concern to most consumers (on-time, lost bags, denied boardings, safety, and frequent flyer programs). This information is drawn from a variety of sources and can be useful in helping the less familiar consumer grasp a memorable perspective on the issues.

1994 On Time Percentage by Month for Major U.S. Airlines

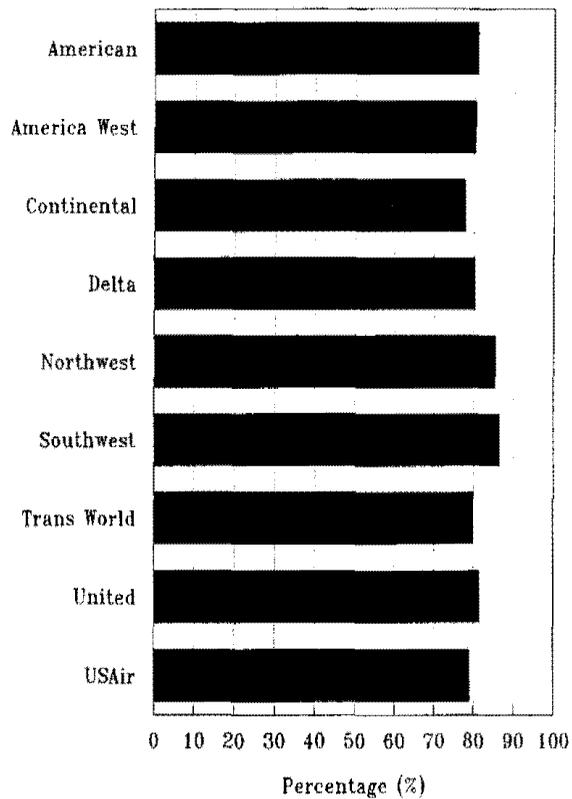
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1994 Airline Average	1993 Airline Average
American	.699	.737	.853	.820	.873	.825	.800	.852	.873	.820	.803	.768	.810	.808
America West	.787	.776	.820	.827	.859	.825	.719	.792	.860	.856	.797	.730	.804	.855
Continental	.651	.652	.725	.785	.862	.799	.779	.801	.879	.866	.796	.779	.777	.790
Delta	.723	.758	.813	.820	.858	.792	.754	.819	.866	.827	.810	.809	.804	.767
Northwest	.742	.778	.876	.883	.913	.849	.848	.880	.894	.911	.851	.847	.856	.859
Southwest	.850	.840	.896	.895	.923	.877	.887	.897	.930	.855	.812	.747	.867	.895
Trans World	.638	.751	.831	.806	.907	.810	.830	.844	.898	.812	.738	.731	.800	.825
United	.673	.692	.846	.801	.859	.800	.805	.845	.883	.900	.835	.838	.815	.784
USAir	.627	.692	.779	.834	.863	.798	.735	.801	.853	.881	.802	.809	.790	.829
Monthly Avg.	.710	.742	.827	.830	.876	.818	.795	.838	.880	.859	.808	.793	.815	
1993 Averages	.785	.774	.749	.839	.878	.840	.868	.849	.850	.839	.817	.792		.824

Source: *Air Travel Consumer Report*, U.S. Department of Transportation, Office of Consumer Affairs.

1994 On Time Percentage
Monthly Averages for Major Airlines



On Time Percentage
1994 Averages for Major Airlines



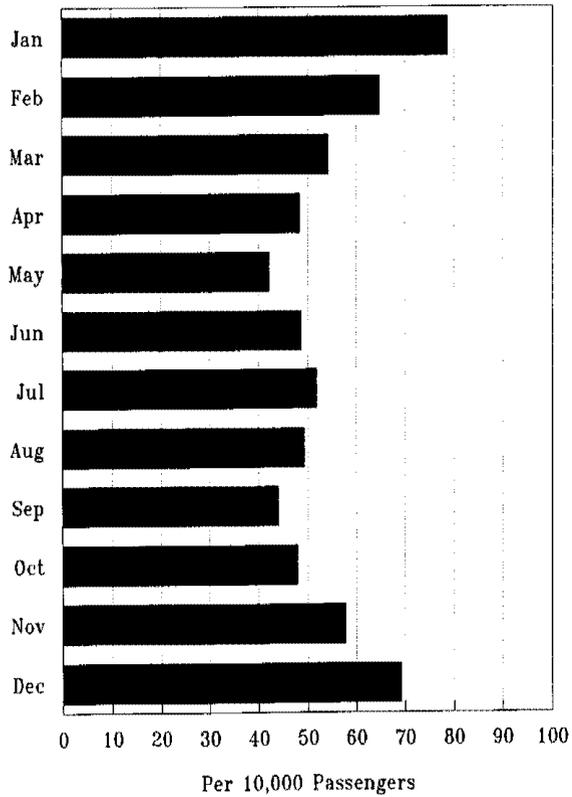
**1994 Mishandled Baggage* by Month
for Major U.S. Airlines**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1994 Airline Average	1993 Airline Average
American	70.2	56.6	44.4	44.1	40.4	44.8	45.2	41.8	38.7	46.5	46.4	59.4	48.2	56.9
America West	58.7	44.4	44.3	39.1	37.1	41.8	46.0	47.2	36.1	42.3	46.0	60.9	45.3	44.1
Continental	91.6	81.9	80.6	62.5	49.0	57.6	62.2	56.2	51.7	61.9	67.0	77.8	66.7	61.1
Delta	60.0	52.2	44.3	42.7	37.9	43.3	46.5	46.5	49.1	52.0	53.1	70.1	49.8	57.3
Northwest	89.2	75.7	57.3	52.4	47.1	57.1	58.1	54.7	49.0	49.1	61.1	80.2	60.9	58.9
Southwest	41.7	37.9	37.3	39.0	36.8	41.6	42.2	42.9	43.0	40.6	43.5	59.1	42.1	38.1
Trans World	84.7	58.8	48.1	49.6	39.5	51.4	51.1	52.7	43.8	56.2	77.4	91.4	58.7	50.5
United	105.2	85.0	63.3	51.4	42.2	43.0	49.9	44.5	38.3	42.2	49.4	66.5	56.7	64.8
USAir	106.6	90.9	67.9	53.5	50.2	56.8	64.8	56.7	45.1	39.4	48.8	56.8	61.5	59.0
Monthly Avg.	78.7	64.8	54.2	48.3	42.2	48.6	51.8	49.2	43.9	47.8	57.7	69.1	54.4	
1993 Averages	72.7	63.2	65.0	49.2	44.5	50.8	49.5	50.3	45.8	46.3	52.4	64.6		54.5

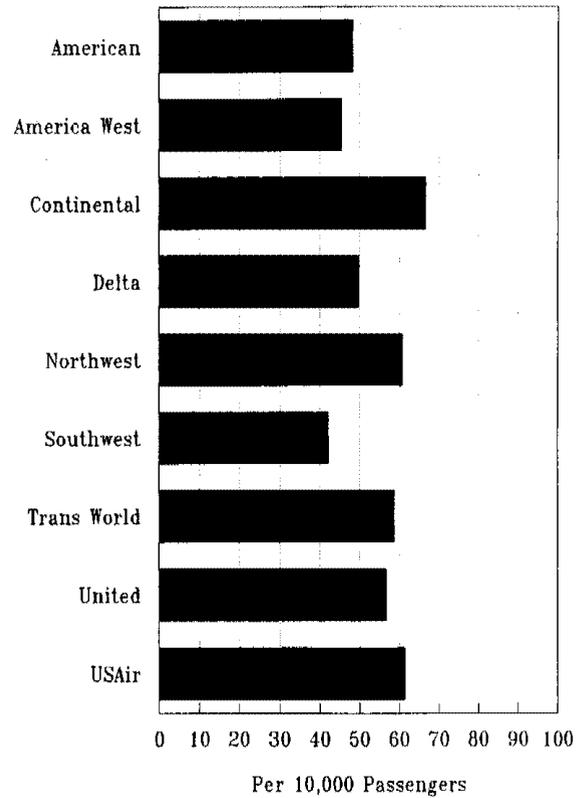
* Figures shown are per 10,000 passengers.

Source: *Air Travel Consumer Report*, U.S. Department of Transportation, Office of Consumer Affairs.

1994 Mishandled Baggage Monthly Averages for Major Airlines



Mishandled Baggage 1994 Averages for Major Airlines



**Size, Age and Stage 3 Readiness
of the U.S. Major Carrier Jet Fleet***

	Number of Aircraft	Average Age of Fleet (yrs)	Percent of Fleet @ Stage 3	
			1994	1993
American	684	8.77	86%	79%
America West	84	9.42	74%	74%
Continental	303	14.47	60%	51%
Delta	543	10.41	77%	64%
Northwest	382	17.56	34%	43%
Southwest	180	8.02	72%	66%
Trans World	201	19.38	45%	42%
United	566	11.18	68%	69%
USAir	471	11.58	59%	53%
Industry	3414	12.31	66%	62%

* Source: *AVTAS, Inc.*. All figures are for aircraft operated during October, 1994.

Note: Stage 3 readiness is described in Federal Regulation 14 CFR Part 36. Known as the 1990 Noise Act, it requires that all commercial jet aircraft meet strict noise level standards by the end of 1999. Acceptable noise levels are established using a complicated formula. Essentially, a maximum decibel level for take-off, approach, and side line points are established. An airplane is considered Stage 3 ready if it does not exceed the combined limits of these noise standards.

Some Interesting Facts About U.S. Airlines

Approximately 450 million people fly each year using the U.S. domestic fleet to fly within the country. On average, the U.S. domestic fleet has about 15,000 flights per month. This translates to about 1.2 million people flying on any given day. On average then, about 50,000 people are in the air over the U.S. at any given hour of the day or night.

The average round trip domestic air fare in the U.S. for 1994 was \$558.

Lost Baggage:

Your chance of having a bag lost depends to some extent on how you use the baggage system, but about 1 out of every 200 bags that are checked are reported lost.

The months when most baggage is reported lost - January, February, and December.
The months when the fewest bags are reported lost - May through September.

Airlines that lose bags most often - Continental and USAir. Airlines that lose the fewest bags - Southwest, American, and America West.

On-Time Performance:

Leaving and arriving on-time are affected by many uncontrollable factors. When just the more controllable elements are considered, the U.S. airline industry maintains an 82% on-time record.

Worst offenders in on-time performance - Continental (78%) and USAir (79%). The best on-time performers - Southwest (87%) and Northwest (86%).

The most troublesome months to fly (ie. lowest on-time performance for the industry) - January (71%), February (74%), and December (79%). The most successful on-time months for the industry - May (88%) and October (86%).

Being Bumped From a Flight (Denied Boardings):

Across the industry, about one or two passengers per 10,000 boardings are bumped from their flight involuntarily.

Airlines most likely to bump people - Southwest, America West, and Continental.
Airlines least likely to bump a passenger - American and United.

Airline Safety:

In 1994, we saw a total of 30 commercial airplanes crash, with the loss of 264 lives. As troublesome as this is, it represented the opposite experience of 1993. During 1993, there were 32 commercial airplane crashes with 25 deaths.

In 1994, major airlines experienced 20 accidents (4 with fatalities) and 239 deaths. For 1993, major airlines experienced 22 accidents (1 with fatalities) and 1 death.

In 1994, commuter airlines experienced 10 accidents (3 with fatalities) and 25 deaths. For 1993, commuter airlines experienced 10 accidents (4 with fatalities) and 24 deaths.

In 1994, only 1 in about 1.7 million passengers died in a commercial airliner accident and this was a bad year. Over the past ten years, the chance of being killed while flying was approximately 1 in 3.0 million.

In 1994, it was 2.5 times more likely that you would be struck by lightning than die in an airplane crash (1 in approximately 650,000 Americans are struck each year, with an average of 93 deaths per year).

Considering a 15 year average of miles driven and miles flown, driving in a car is 35 times more deadly than flying in a commercial jet. In a typical three month period, more people die on our highways than have died in all the accidents in the history of U.S. commercial aviation.

Since 1980, an average of 110 people have died each year from airline accidents. Compare this to an average for the same period of 12,000 annual deaths from falling (ie. stairways, bathtubs, icy sidewalks, etc.); 5,400 deaths annually from drowning; 4,500 deaths annually from poisoning; and more than 4,800 deaths annually from fire.

Frequent Flyer Programs

In the later months of 1994, many of the major airlines announced changes to their frequent flyer award levels to take effect in 1995. In addition to modifying the number of miles required for a free round-trip coach ticket, minimum mileage awarded per segment was also lowered by several airlines. On the positive side, the addition of partner agreements made mileage easier to accumulate for many travelers. The effect this mixed bag of changes will have on the traveling public's attitude and behavior is as yet unclear, but early reaction indicates that many consumers certainly perceive a reduction in the airlines' commitment to acknowledge customer loyalty. The months ahead should be interesting.

Frequent Flyer Program Changes for 1995

	Mileage required for one round trip coach ticket:		
	1994	1995	
American	20,000	25,000	Effective 2/1/95
America West	20,000	20,000	No change
Continental	35,000	25,000	Effective 2/1/95
Delta	30,000	25,000	Effective 5/1/95
Northwest	20,000	25,000	Effective 2/1/95
Southwest	16 segments (apprx. 9,000)	16 segments (approx. 9,000)	No change
Trans World	20,000	20,000	No change
United	20,000	25,000	Effective 2/1/95
US Air	20,000	25,000	Effective 1/1/95