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FEDERAL AVIATION ADMINISTRATION
21st ANNUAL FAA AVIATION FORECAST CONFERENCE
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Good Morning . . .

(CHART 1. FAA AVIATION FORECASTS: FISCAL YEARS 1996-2007)

As we approach the end of the century, the U.S. and world economies are very healthy. They are poised to sustain long-term economic growth with price stability. The air carrier industry has made dramatic improvements in its financial position during the past two years. It has been revitalized by gains in productivity, reductions in excess capacity, shrinking unit costs, and a strong economy. We expect these trends to continue well into the third millennium.

I'd like to summarize important events of the past year, discuss some of the underlying trends, and then present our forecasts.

(CHART 2. HEALTHY AND VIBRANT U.S. ECONOMY CONTINUES IN 1995)

The country's economic position is very strong. Over the last three years, as the result of fiscal and monetary policy, the budget deficit has been reduced to about 2.5 percent of GDP. Interest rates have significantly declined, and the stock market is at record levels. In addition, our trade deficit is coming down, and the dollar has stabilized. In 1995, the fourth year of the current expansion,

GDP, the broadest measure of output, increased 3.7 percent, unemployment fell, and inflation remained under control.

(CHART 3. WORLD GDP GROWTH ACCELERATES IN 1995)

The world economies also continued to expand, growing by 2.7 percent in 1995. In 1994 the growth rate was only 2.1 percent. The Pacific region experienced the highest growth, increasing 3.7 percent. Latin America grew 1.5 percent. However, if we exclude Mexico, the rate is close to 4.0 percent. Both Western and Eastern Europe had growth rates exceeding the world average.

(CHART 4. ENPLANEMENTS UP AGAIN IN 1995)

Domestic and international traffic was stimulated by both strong economic expansion and declining fares. In 1995, domestic enplanements increased 5.1 percent. During the past two years, domestic enplanements have increased over 14.0 percent. In 1995 international enplanements increased 4.5 percent, with the strongest growth coming in the Latin American and Pacific markets.

(CHART 5. FAA WORKLOAD CONTINUES TO EXPAND)

During 1995, 50 FAA towered airports were converted to contract towers and in 1996 another 25 will be converted. To make the present and forecast series consistent with the historical series, we will be reporting air traffic activity for combined FAA and contract towers, as well as for the individual series. The tower conversions do not impact activity at the Air Route Traffic Control Centers.

Commercial operations at FAA and contract control tower airports and centers increased in 1995, reflecting expanded activity by both air carriers and commuters. In addition, sophisticated general aviation operations increased.

(CHART 6. FINANCIAL SUCCESS IN 1995)

Financial performance of the commercial airline industry was exceptional. Operating revenues were up 5.2 percent while operating expenses increased only 2.2 percent. The slow growth of operating expenses shows that the industry is achieving its cost control objectives.

The jump in operating profit between 1995 and 1994 was over $2.7 billion. In 1995 the industry saw operating profits expand to over $5.3 billion, more than double the 1994 level.

(CHART 7. ECONOMIC ACTIVITY AND INDUSTRY TRENDS)

What are the key factors that influence the growth of air travel and that have shaped our analysis and thinking about the industry? The first is expected economic activity. Second is trends in consumer purchasing power and possible impacts on pleasure travel. Third is the demand for business travel. Last is the continuing industry restructuring.

History has amply demonstrated that the growth and vitality of the aviation industry is closely tied to the health of the domestic and world economies. As Dr. Laura Tyson, assistant to the President for Economic Policy, stated in the Administration's Initiative to Promote a Strong Competitive Aviation Industry, "We cannot have healthy aerospace industries without a strong economy. A strong economy will be the best medicine for what ails the aerospace complex." If the U.S. and international economies can sustain economic expansion with price stability and full employment, the aviation industry will grow and prosper.

Recent worldwide events such as the continuing reduction in trade barriers, the move of many countries to free market economies, reduced restrictions on international capital flows, the emergence of new vibrant economies in Asia and Latin America, and the explosion of technology, have convinced a large number of economists that the U.S. and world economies are well positioned to sustain long-term balanced economic growth.

(CHART 8. ECONOMIC GROWTH WITH STABLE PRICES)

The Office of Management and Budget projects real GDP to increase 2.7 percent in 1996 and then expand by 2.8 percent in 1997 and 1998. Growth over the entire 12-year forecast period, which incorporates the forecast of three major forecasting services, is expected to average 2.6 percent annually.

Worldwide economic growth should exceed that of the U.S., averaging 3.6 percent a year over the 12-year forecast period. Over the long-term, growth is expected to approach 5 percent a year in the Far East, 4.9 percent annually in Latin America, and over 3.1 percent a year in Europe, Africa, and the Middle East.

Inflation and oil prices are projected to remain relatively low for the foreseeable future. General prices are expected to increase only 3.0 percent a year with oil prices slightly higher at 3.6 percent. These inflation forecasts assume no major disruptions in the price or availability of oil.

Important to the analysis of aviation demand are changes in composition of passengers characterized by purpose of trip. We normally categorize air travel as either business or pleasure.

(CHART 9. DEMAND FOR PLEASURE TRAVEL)

Pleasure travel decisions are similar to other consumer decisions concerning the purchase of luxury goods and services. Determining factors include the price of the product or service, the price of close substitutes, tastes and preferences, demographics, and disposable income or other measures of consumer purchasing power, such as household or family income, and wages and salaries.

Economic theory also suggests that the small changes in both fares and income could significantly impact pleasure travel. Airline fares, adjusted for inflation, have been declining. This has stimulated traffic growth in many markets. What's been happening to Americans' incomes? Recent trends are discouraging. Whether we look at broad or narrow aggregate measures of income, or evaluate the data by experience, age, or education, the results point in the same direction—erosion of middle-class purchasing power.

(CHART 10. DECLINING GROWTH IN WAGES, SALARIES AND BENEFITS)

The Employment Cost Index, which measures worker's earnings, has been steadily declining since the early 1980s. For FY 1995, earnings increased 2.7 percent, down from 3.2 percent for 1994. This is the smallest yearly increase since the series began in 1981.

The real median income of households in 1994 was virtually unchanged from 1993 levels. Although the most recent recessionary period ended in March 1991, household income in 1994 has not yet recovered to its 1989 pre-recession peak.

(CHART 11. GROWING DISPARITY IN THE DISTRIBUTION OF INCOME)

Bureau of the Census data also showed that the income distribution is becoming more skewed. Middle-income families are losing ground. The top fifth of the nation's households received 44 percent of total aggregate income in 1980. In 1994 the percentage increased to 49. During the same period, for the middle-income range, the third and fourth quintile percentages dropped from 17 to 15 and from 25 to 23, respectively.

Another measure of income inequality is the Gini index. The index measures how the actual distribution of U.S. income deviates from a uniform distribution. We define a uniform income distribution as one where the percentage of the population within a particular grouping equals the percentage of total income received. For example, this distribution implies that the lower and upper 5 percent of the population each receive 5 percent of aggregate income. Today, the richest 5 percent receive 21 percent of total income, up from 16 percent in 1980. The Gini index, which can range from 0 indicating perfect equality to 1 indicating perfect inequality, increased rapidly during the 1980s, and is now 14.3 percent above its 1967 level.

The shift in the income distribution is forcing the middle-class to spend an increasing share of their earnings on necessities. It has been estimated that this share has increased from 33 percent a decade ago to almost 50 percent today. Clearly, continued declining discretionary income—if not offset by falling real yields—reduces the ability of families to buy airline tickets. Let's now take a look at the business travel market.

The information revolution along with advances in telecommunications have greatly increased the alternatives available to businesses for conducting national and worldwide activities. As the number of alternatives increase, the demand for business travel can expect to become more responsive to changes in fares. We have been following and reporting on the impact of telecommunications on travel for the past 3 years.

There are many who think that telecommunications will have a large negative effect on business travel. Others believe that the impact will be small. Still others feel that the net effect may be positive. The direction, degree, and period of the telecommunications impact is uncertain. Because changes in the business travel market can significantly impact the current and expected level and distribution of aviation activity at FAA facilities, it is important to follow developments closely.

(CHART 12. UNCERTAIN IMPACT OF TELECOMMUNICATIONS ON AIR TRAVEL)

As I previously reported, two surveys, one by the ATA and the other by the Travel Industry Association of American showed that business travel as a percent of total trips increased in 1994 over 1993, reversing a steady downward trend. Studies sponsored by the FAA in 1993 and 1994 suggested that the extent of impact of telecommunications on air travel may not be as extensive as projected, and is very difficult to estimate. These findings are now further substantiated by an MIT study published in 1995, which attempted to measure the influence of videoconferencing on the demand for air travel.

The MIT study, prepared by Matthia Mette, carefully reviewed past research on the subject, and presented the results of an industry survey. Based on a small sample of only 9 aircraft manufacturers and airlines, and 41 users of videoconferncing, the study found that the rate of substitution of videoconferencing for business travel may be in the range of 10.0 percent to 20.0 percent.

The study also concluded the following: "Since the percentage of businesses using videoconferencing as a regular and elementary part of their business activities is still very low, it is widely suggested that the current impact on overall U.S. business air travel is marginal and probably not measurable."

Since the jury is still out on this issue, we must continue to expand our data bases, information, and research efforts in these areas.

To attempt to predict the dynamics of an industry over time, it is important to analyze both the demand and supply sides of the market. How are consumers adjusting to changes in prices and income? How do suppliers adjust to changes in demand, consumer tastes and preferences, variable and fixed costs, and competition? I've already highlighted what we think are some of the major factors influencing the demand for business and pleasure travel. I'd like to now talk about the significant changes that are occurring in the air carrier industry.

Two interrelated elements are creating pressure to lower costs in the domestic airline industry. First, there has been a significant increase in the number of new entrants into the market with relatively low cost structures. Since 1989, 23 scheduled passenger carriers have started up domestic U.S. operations, and the Department of Transportation has authorized operations for 7 carriers who have not yet commenced service. At the end of December, there were 10 more new entrant applications pending in the Department.

These new entrants generally serve markets under 600 miles and provide point-to-point service. It has been predicted that new-entrant carriers—excluding the new low-cost operations of the major carriers—could capture close to 7.0 percent of the market this year. The new entrants ensure that competitive forces remain strong, putting downward pressure on unit costs and fares.

(CHART 13. RESTRUCTURING TO REDUCE UNIT COSTS)

Second, competition is forcing many larger carriers to reduce their unit costs to the levels achieved by the more efficient carriers. Their actions include route realignments, reducing service at or withdrawing from unprofitable hubs, and seeking work rule changes and wage concessions from employees. To improve their financial positions, airlines have also entered into domestic and international code-sharing agreements and joint-marketing arrangements with other carriers.

Another significant transformation we have seen in the industry has been the development of "two-tier airlines." For example, we have USAir's low cost service, and United's new low-cost, short-haul service on the West Coast. If these new operations are successful, other carriers may attempt to lower their costs and increase their product differentiation by moving in this direction.

In 1994 United Airlines employees acquired ownership of a majority of the parent firm, UAL Inc. Employees also own large shares of many other airlines, including America West, Continental, Northwest, Southwest, and TWA. While the long-term impact of these change in ownership are not clear, the immediate impact of lowering unit costs are being achieved. Wide extension of employee ownership programs will continue to have a major impact on the operations and cost structure of the industry.

(CHART 14. INDUSTRY UNIT COSTS CONTINUE TO FALL (FY 1995 DOLLARS))

These restructuring efforts are paying off. The industry is controlling and reducing its unit costs. Looking at the chart (Chart 14) we see that real operating costs per available seat mile (1995 dollars) increased from a low of 10.05 cents in 1987 to a peak of 11.41 cents in 1991. From 1991 through 1995 units costs fell from 11.41 cents to 8.99 cents, a decline of about 6.0 percent a year.

(CHART 15. MAJOR AIR CARRIERS SHOW A WIDE VARIANCE IN UNIT COSTS (FY 1995))

The unit costs among the major passenger carriers show a wide variance, ranging from a low of 7.01 cents for Southwest, which is about 22.0 percent below the industry average to 11.49 cents for USAir, which is about 28.0 percent above the mean.

(CHART 16. MAJOR AIR CARRIER UNIT COSTS ARE TRENDING DOWN (FY 95 COMPARED TO FY 94))

However, 6 out of 9 of the major carriers were able to reduce their unit costs in 1995. The largest reduction of 9.5 percent was achieved by Delta, followed by TWA with a reduction of 3.7 percent

Since deregulation, we've observed that yields, adjusted for inflation, are highly correlated with unit costs. In fact, our analyses has shown that, on average, a 1.0 percent reduction in industry unit costs reduce yields by about the same rate. Our models have also consistently shown that there is a strong inverse relationship between real yields and traffic.

(CHART 17. RPMS AND YIELD MOVE IN OPPOSITE DIRECTIONS (MAJORS--50 STATES))

Looking at some recent history (Chart 17), the inverse relationship is clear. As you can see, rising RPMs were associated with declining yields from October 1994 through March 1995, while falling traffic July through December was associated with increasing yields.

If industry productivity continues to increase, we can expect real yields to continue downward. In fact, if the industry can achieve U.S. long-term productivity increases of only 1.2 percent a year beyond 2000, which is a conservative estimate for the industry, unit costs could fall to about 8.0 cents. As unit costs decline, yields should drop by about 1.2 percent a year, which is what we are forecasting. If the industry can push unit costs down to 7.5 cents, which appears to be the goal of many airlines, yields could fall at a much faster rate.

(CHART 18. KEY FORECAST ASSUMPTIONS)

Our FAA workload forecasts assume that the growth of new-entrant low-cost carriers will continue for the next several years, and that the major carriers will persist and, in fact, achieve lower unit costs. The impact of increased competition and improved air carrier efficiency should push real yields down to new lows. Lower fares should stimulate both the growth of business and pleasure travel.

Short-haul, point-to-point service is expected to grow somewhat faster than hub service over the next several years. Individual airports may change rapidly if new service is instituted by one or more low-cost carriers, just as some airports expanded rapidly when they were selected to be a new hub. In the short-term, FAA commercial air carrier workload is forecast to increase at a relatively fast pace due to the expanded short-haul service. The long-run outlook is for more modest growth.

Our current forecasts incorporate the changing structure of the industry and expected trends in domestic and world economies. We will continue to watch these forces. I will now briefly review the FAA forecasts.

(CHART 19. DOMESTIC ENPLANEMENTS CONTINUE TO GROW)

In 1995 GDP grew by a robust 3.7 percent, and enplanements increased 5.1 percent. We are forecasting enplanements to increase 3.2 percent in 1996,

5.6 percent in 1997 and 5.5 percent in 1998. For the period 1995 through 2007, we expect enplanements to continue to expand along its long-term growth path, and increase 3.7 percent a year.

(CHART 20. INTERNATIONAL ENPLANEMENTS ON A HIGH GROWTH PATH)

International growth has remained high over the past 10 years, reflecting growth in international tourism, the expansion of the world economies, and the globalization of economic activity. Over the long-term, the international markets are projected to continue to increase at rates significantly above the domestic market.

Immediate growth is projected at 5 percent in 1996 and 6 percent in 1997. The average growth for the entire forecast period is expected to climb over 5.0 percent per year. The Pacific and Latin American markets are forecast to increase about 6.0 percent a year, while the North Atlantic market is expected to increase at about the same rate as the domestic market.

(CHART 21. COMMUTER ENPLANEMENTS EXPECTED TO INCREASE 5.0 PERCENT PER YEAR)

In 1995, enplanements increased only 0.9 percent. In 1994 the growth was close to 14.0 percent. In 1995 commuter traffic was impacted by the temporary

grounding of the ATR aircraft, changes in hubbing operations by several major carriers, and increased competition on the West Coast.

The regional airline industry is expected to continue to benefit from the integration of service with the large commercial air carriers, but at a much diminished rate compared to past years. A recent analysis has shown that the major carriers are about 80 percent complete in shifting jet routes to their regional affiliates. Therefore, the future rate of growth in enplanements will be lower than that experienced in the past. Commuter enplanements are forecast to increase an average of 5.0 percent annually from 1995 to 2007.

(CHART 22. AIR CARRIER HOURS FLOWN GROW STEADILY)

Air carrier hours, up 3.5 percent in 1995, increase an average of 3.6 percent per year over the forecast period. Much of the growth in hours is attributable to the expected expansion of the two engine wide and narrow body fleets.

(CHART 23. GENERAL AVIATION HOURS FLOWN GROW SLOWLY)

General aviation and air taxi hours, which decreased 1.6 percent in 1994 and 2.5 percent in 1995, are projected to grow slowly over the forecast period, with an average annual growth of 0.8 percent. Although the active fleet declines moderately until 1997, growth in hours is expected due to increased aircraft utilization.

(CHART 24. THE AIR CARRIER FLEET CHANGES MODERATELY)

The air carrier fleet increased 3.5 percent to 4,582 aircraft in 1995. Over the forecast period we expect the fleet to increase about 3.0 percent a year, reaching 6,564 aircraft in 2007.

(CHART 25. GROWTH OF THE COMMUTER FLEET SLOWS)

Recent growth of the commuter fleet has been robust, but is tapering off. the fleet increased 0.6 percent increase in 1995, and is expected to increase only 1.8 percent in 1996 and 3.1 percent in 1997. Growth for the 12-year forecast period is projected to average about 2.6 percent per year. While commuter traffic increases at a high rate, the fleet will not increase as fast, because carriers are adding larger aircraft.

(CHART 26. WORKLOAD MEASURES UP MODERATELY)

Most FAA workload measures—operations at combined FAA and contract towers, combined instrument operations, and IFR aircraft handled—are forecast to increase between 1.5 and 2.0 percent a year over the forecast period. These projections reflect continued strong growth in commercial activity, declining military operations, and a slowing of general aviation activity. The forecasts are more completely discussed in the forecast document you have received.

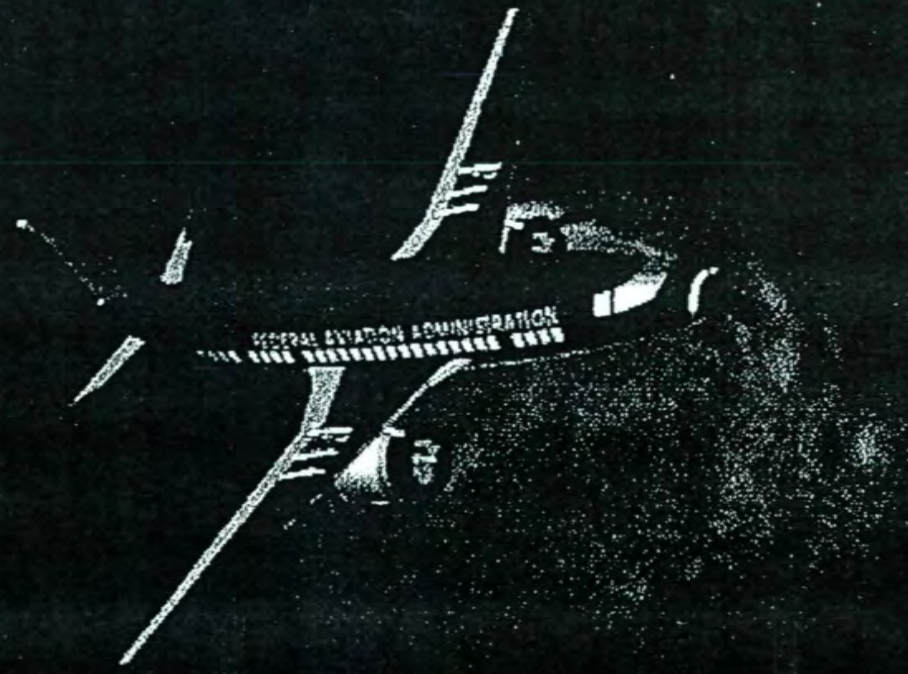
(CHART 27. FORECAST SUMMARY)

During the next several years, competition will be strong from new-entrant low-cost carriers. Air carrier unit costs will continue to decline, and real yields will fall. Over the long-term, unit costs for the industry may approach the costs of the more efficient carriers. Business travel may not experience any significant decline due to substitution of telecommunications in the near term. However, as I pointed out earlier, the erosion of consumer purchasing power could slow the growth of pleasure travel.

Overall, air carrier activity should continue to expand with profit margins moving in the right direction. While the hand-off of short haul routes by the major air carriers to the regionals is expected to continue, it will be at a diminished rate. These industry changes translate into strong growth in activity at FAA facilities in the short-term, and moderate but steady growth over the entire forecast period.

If you have any general questions on the forecast, I would be pleased to respond. THANK YOU.

FAA AVIATION FORECASTS



FISCAL YEARS 1996 – 2007

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HEALTHY AND VIBRANT U.S. ECONOMY IN 1995

- U.S. GDP Up 3.7%
- Inflation Rate Up 2.8%
- Unemployment Rate Down
- Budget Deficit Reduced
- Trade Deficit Down

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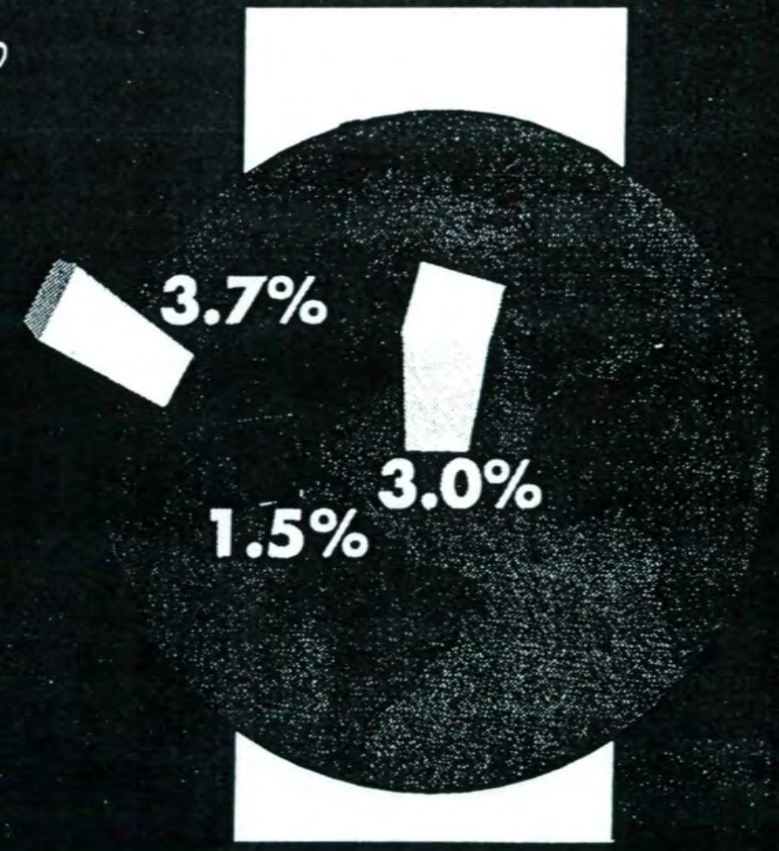
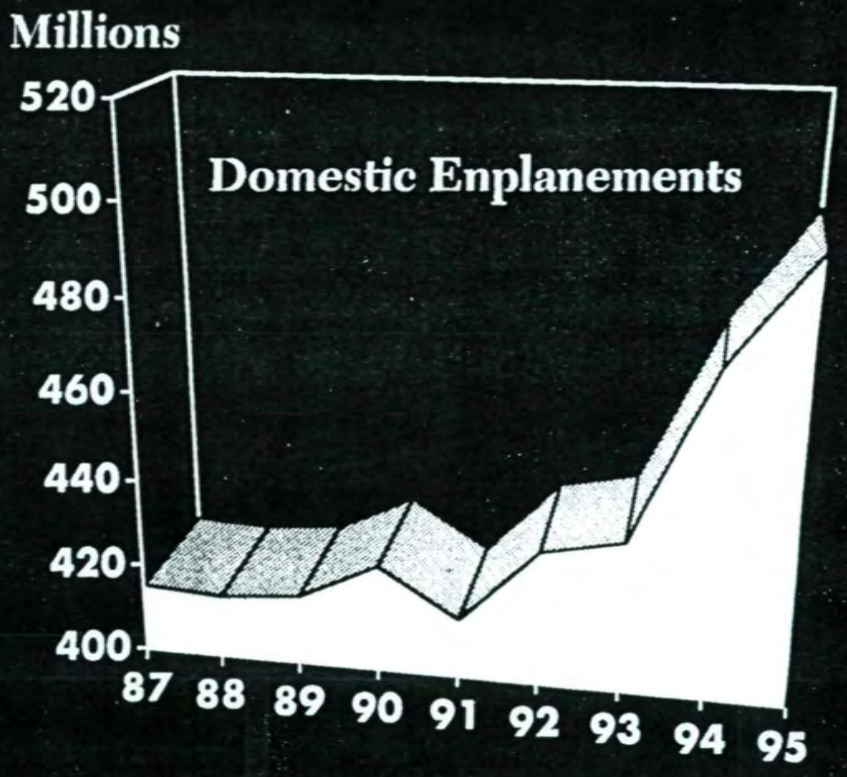
WORLD GDP GROWTH ACCELERATES IN 1995

- World Growth Up 2.7%
- Pacific Up 3.7%
- Latin America Up 1.5%
- Atlantic Up 3.0%



ENPLANEMENTS UP AGAIN IN 1995

- Domestic Up 5.1%
- International Up 4.5%
- Commuters Up 0.9%



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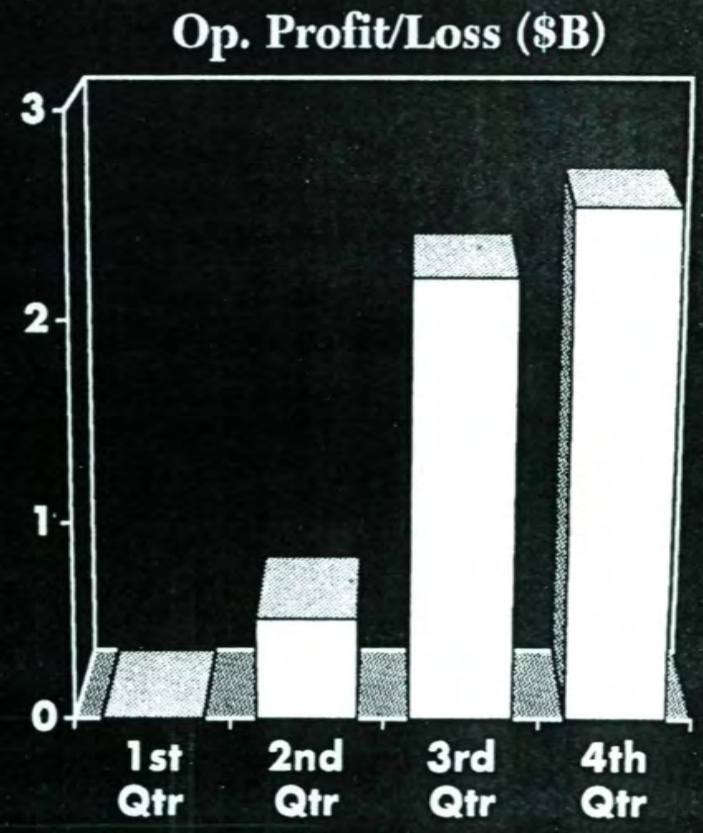
FAA WORKLOAD CONTINUES TO EXPAND

- **Commercial Operations**
  - *Up 2.1% at FAA and Contract Towers*
  - *Up 5.3% at Centers*
- **GA Activity At Centers Up 1.3%**

FINANCIAL SUCCESS IN 1995

- Operating Revenues
  Up 5.2%
- Operating Expenses
  Up 2.2%
- Operating Profits $5.3B
- Net Profits $1.2B

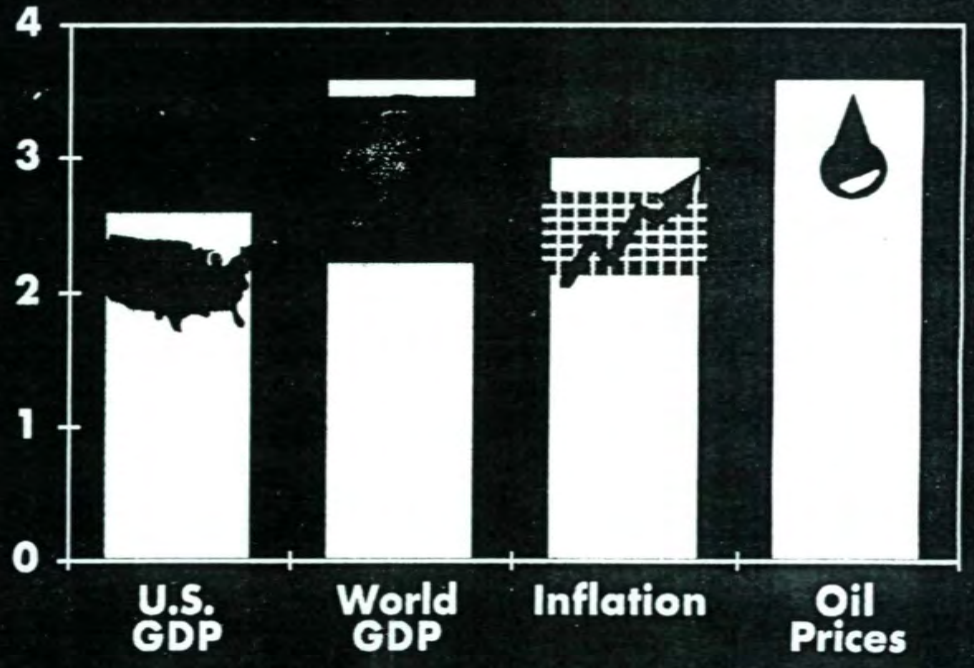


ECONOMIC ACTIVITY AND INDUSTRY TRENDS

- Economic Environment
- Consumer Purchasing Power
- Business Travel
- Industry Restructuring

ECONOMIC GROWTH WITH STABLE PRICES

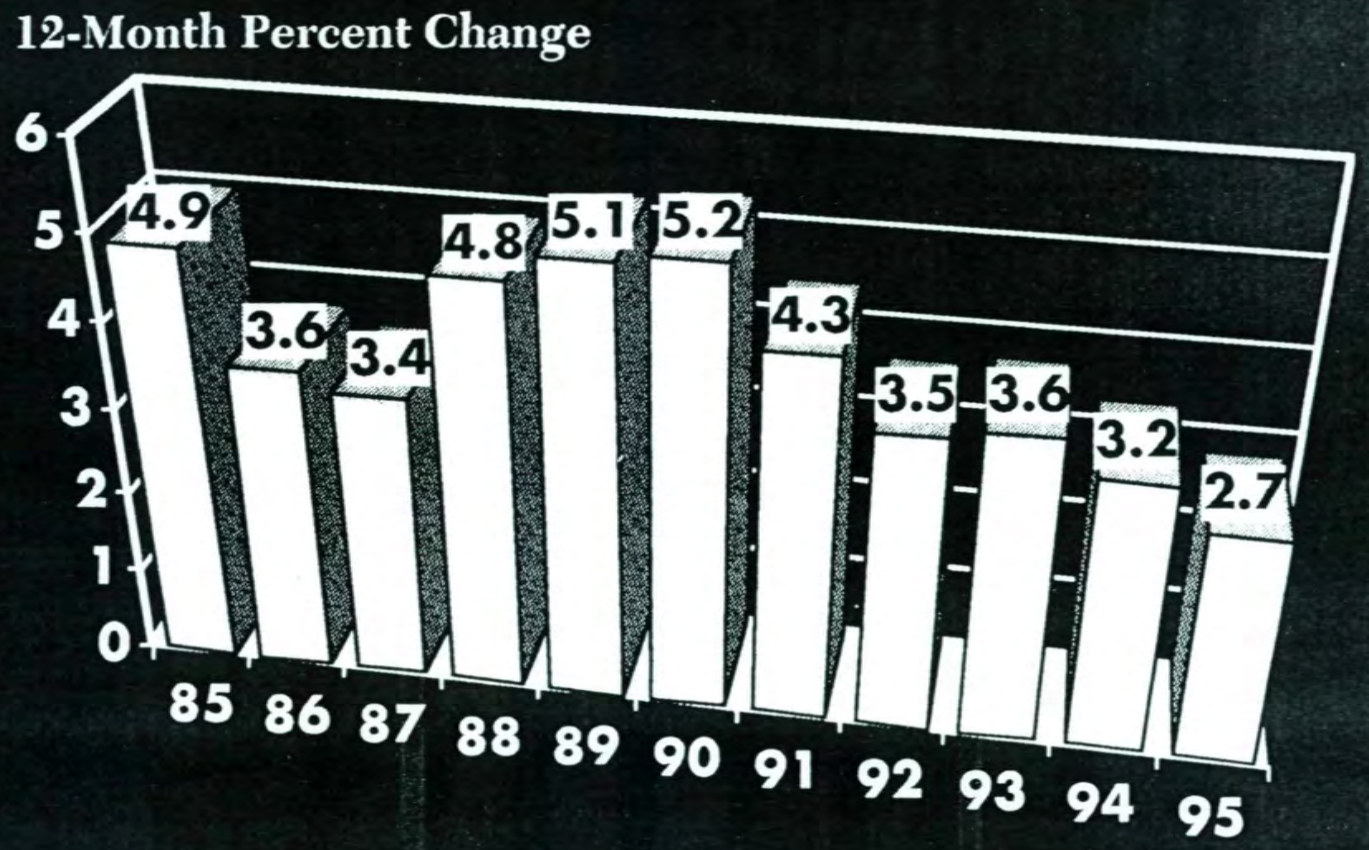
- **Annual Growth Rates**
  - *U.S. GDP up 2.6%*
  - *World GDP up 3.6%*
  - *Inflation up 3.0%*
  - *Oil prices up 3.6%*



DEMAND FOR PLEASURE TRAVEL

- Fares
- Prices Of Close Substitutes
- Consumer Tastes
- Demographics
- Consumer Income

DECLINING GROWTH IN WAGES, SALARIES AND BENEFITS



Source: Department of Labor

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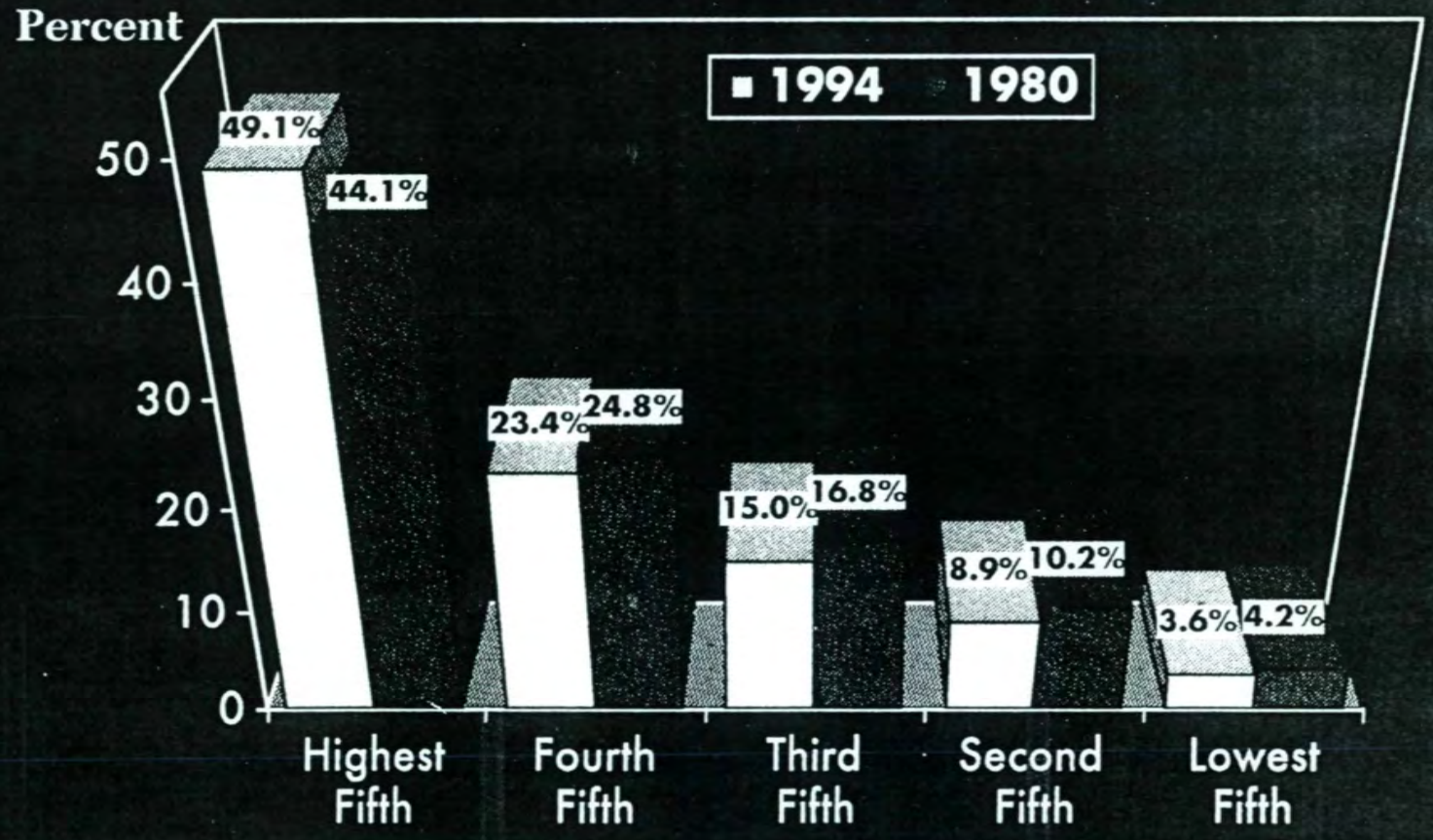
GROWING DISPARITY IN THE DISTRIBUTION OF INCOME



Source: Bureau of the Census

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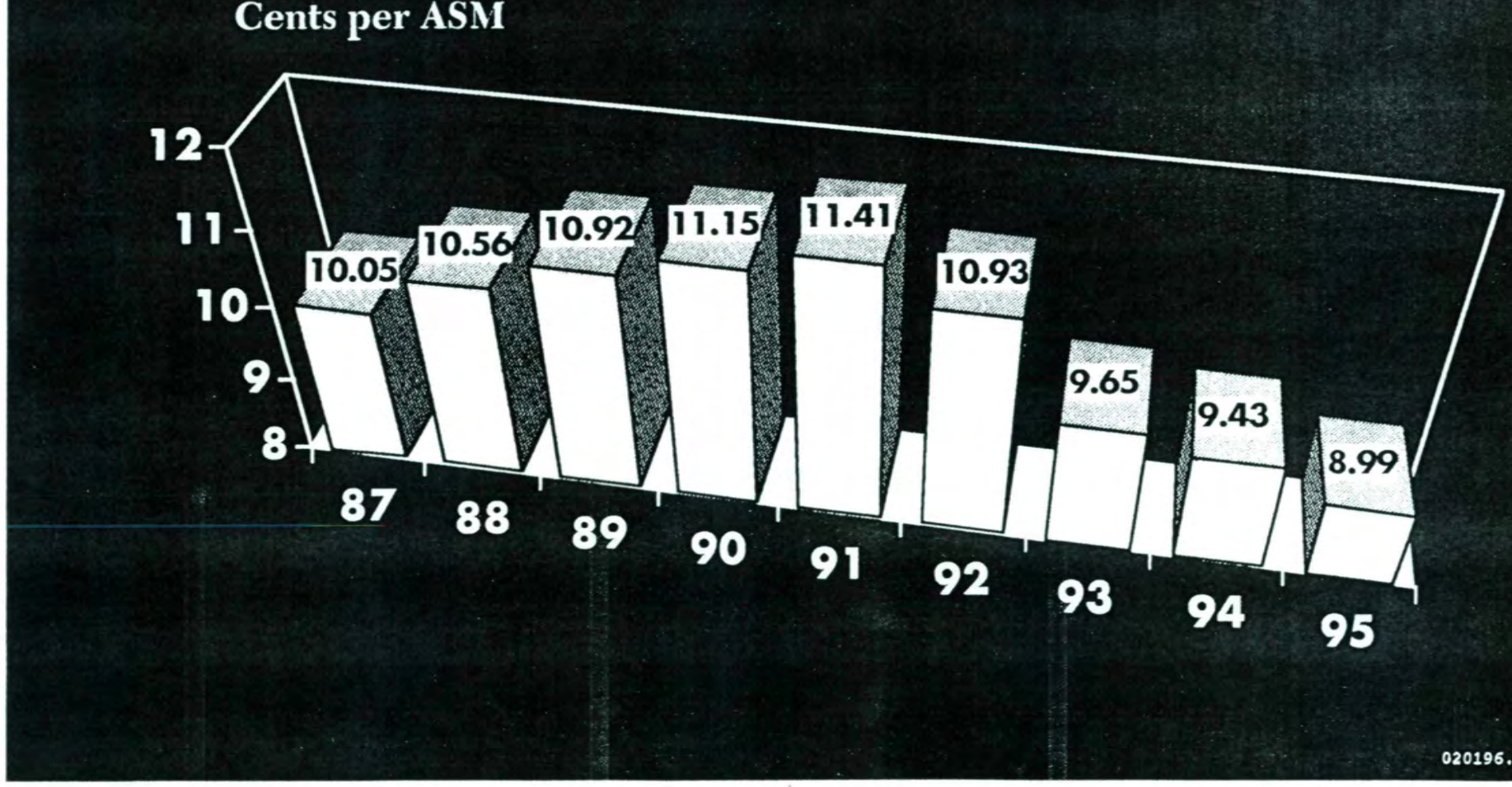
UNCERTAIN IMPACT OF TELECOMMUNICATIONS ON AIR TRAVEL

- 11% May Be Diverted (Apogee Research)
- 3% Diverted (ATA/Gallup Survey)
- No Clear Discernible Patterns (TDS Economics)
- Marginal Impact (MIT)

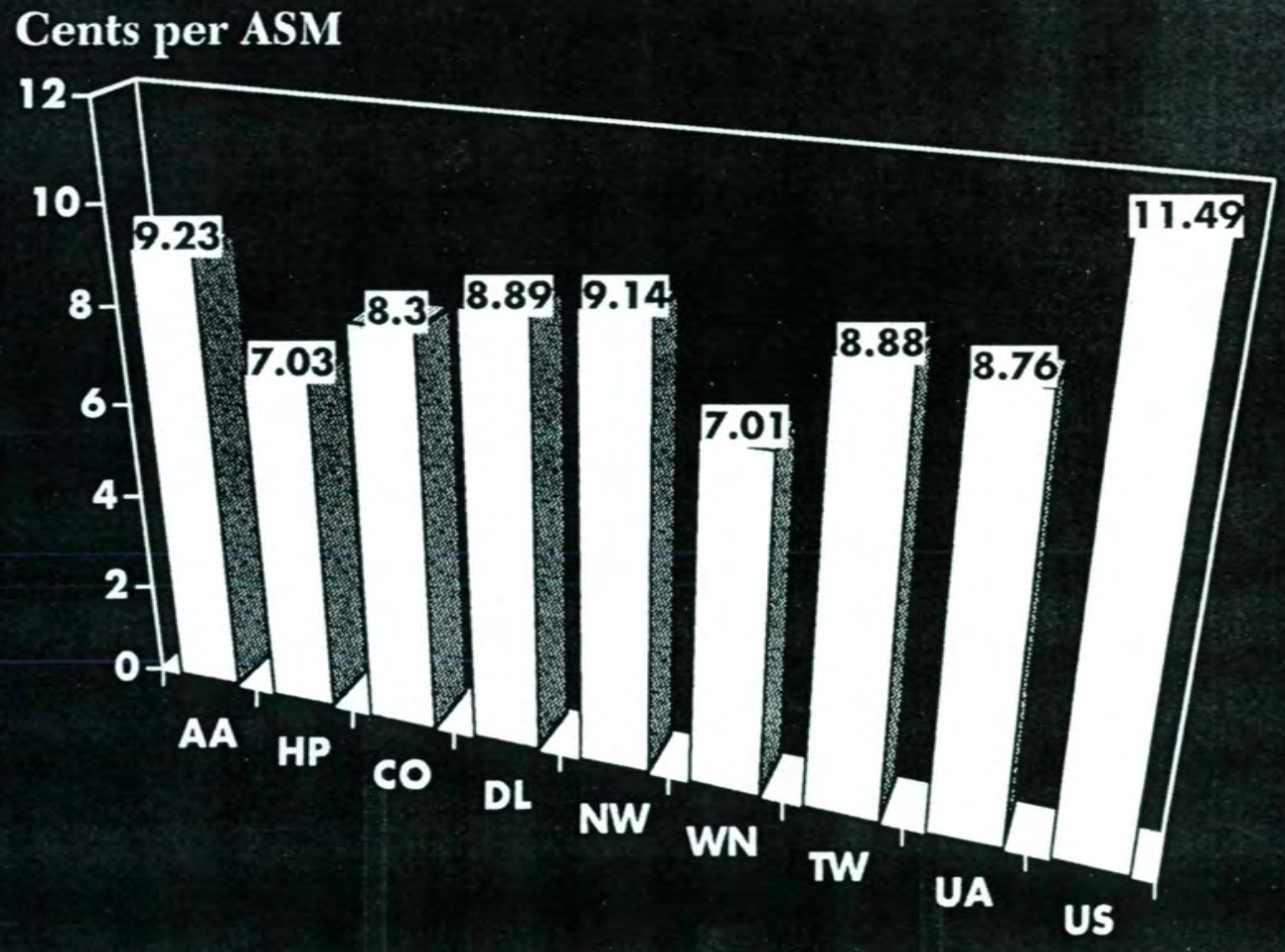
RESTRUCTURING TO REDUCE UNIT COSTS

- Route Realignments
- Wage Concessions
- Work Rule Changes
- Two-Tier Airlines
- Employee Ownership

INDUSTRY UNIT COSTS CONTINUE TO FALL (FY 1995 DOLLARS)



MAJOR AIR CARRIERS SHOW A WIDE VARIANCE IN UNIT COSTS (FY 1995)



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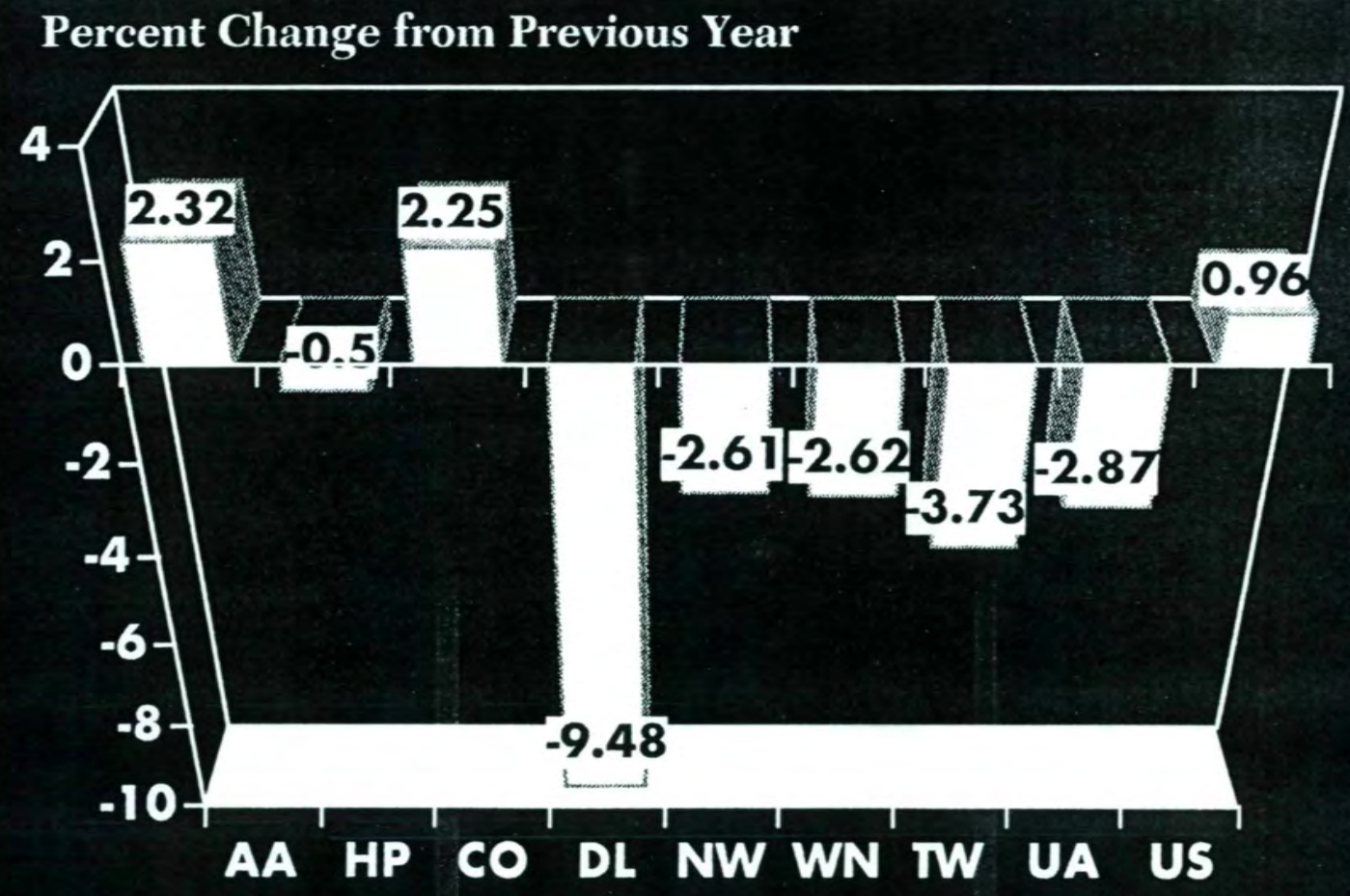
MAJOR AIR CARRIER UNIT COSTS ARE TRENDING DOWN (FY 95 COMPARED TO FY 94)



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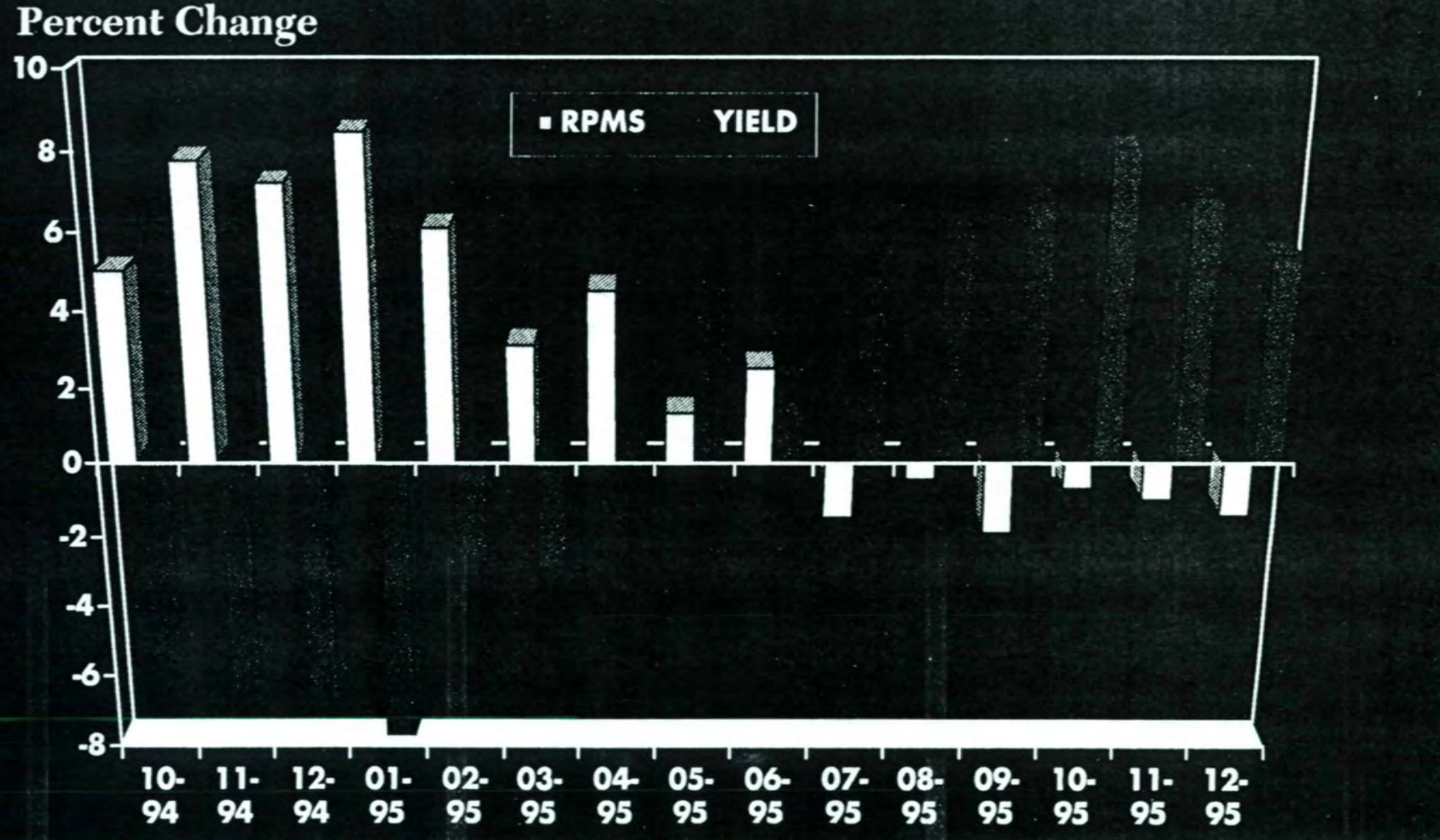
RPMS AND YIELD MOVE IN OPPOSITE DIRECTIONS (MAJORS – 50 STATES)



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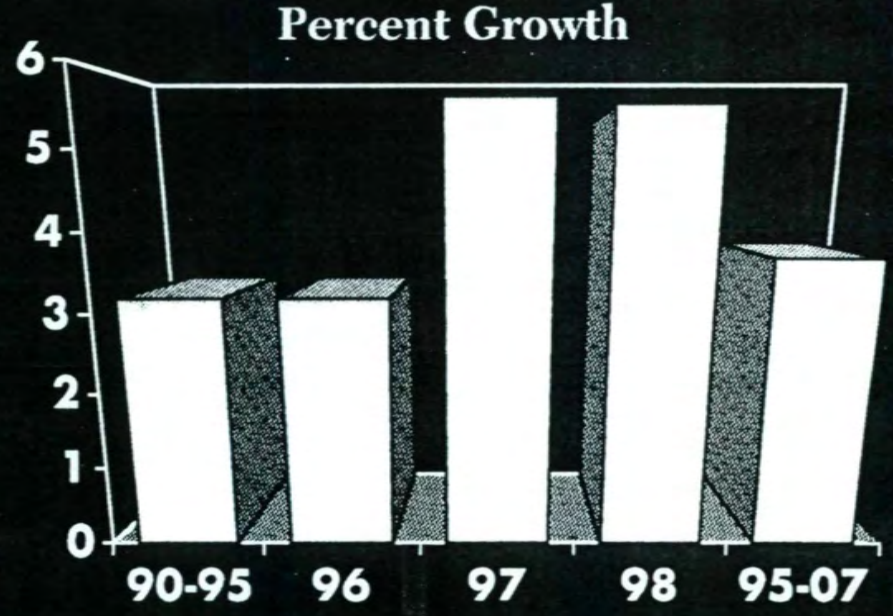
KEY FORECAST ASSUMPTIONS

- Increased Competition
- Reduced Unit Costs
- Lower Yields
- Expanded Short-Haul Service
- Rapid Expansion Of Some Airports

DOMESTIC ENPLANEMENTS CONTINUE TO GROW

- Robust Short-Term Growth
- Moderate Long-Term Growth



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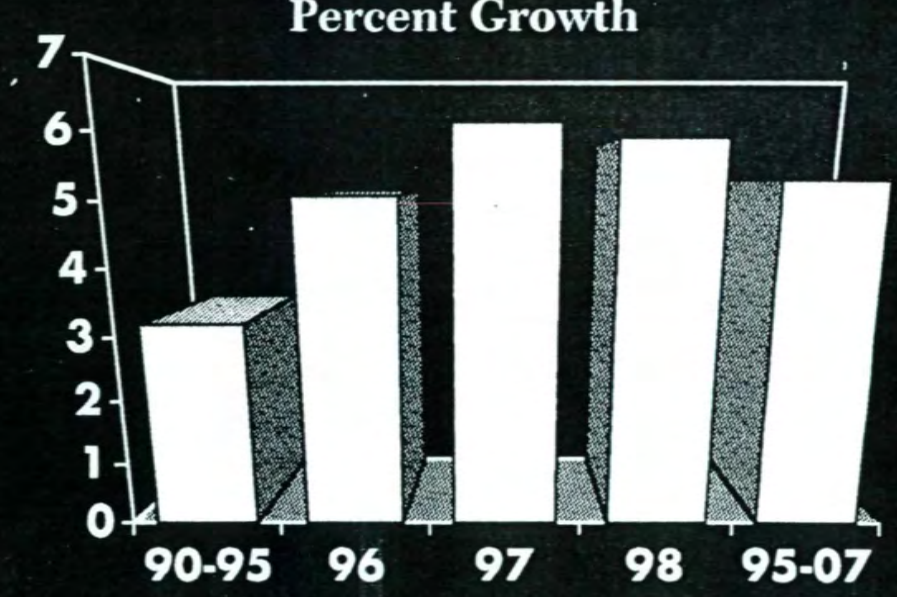
INTERNATIONAL ENPLANEMENTS ON A HIGH GROWTH PATH

- Healthy World Economy
- Strong Growth 1996 -1998
- Expansion Through 2007



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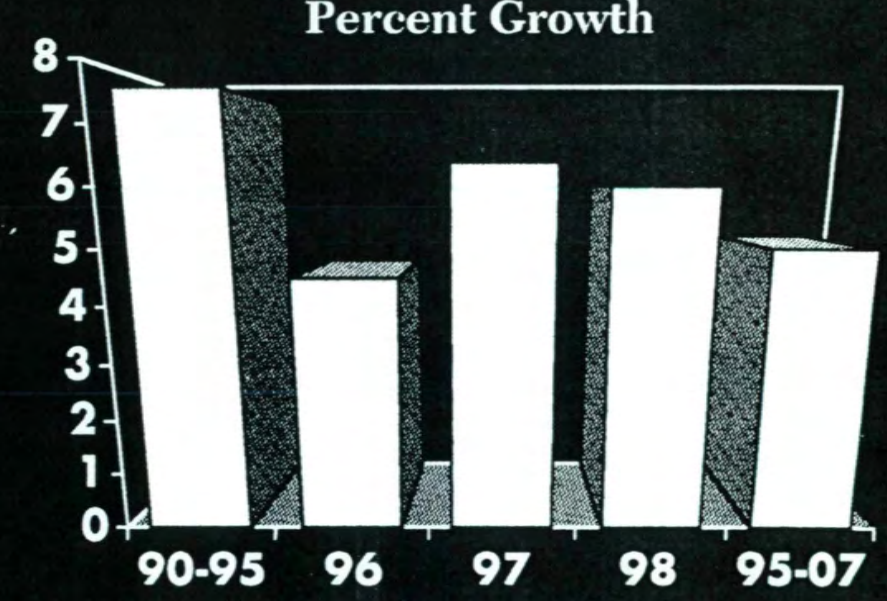
COMMUTER ENPLANEMENTS EXPECTED TO INCREASE 5.0 PERCENT PER YEAR

- Commuters Continue High Growth Rate
- Continued Route Transfers



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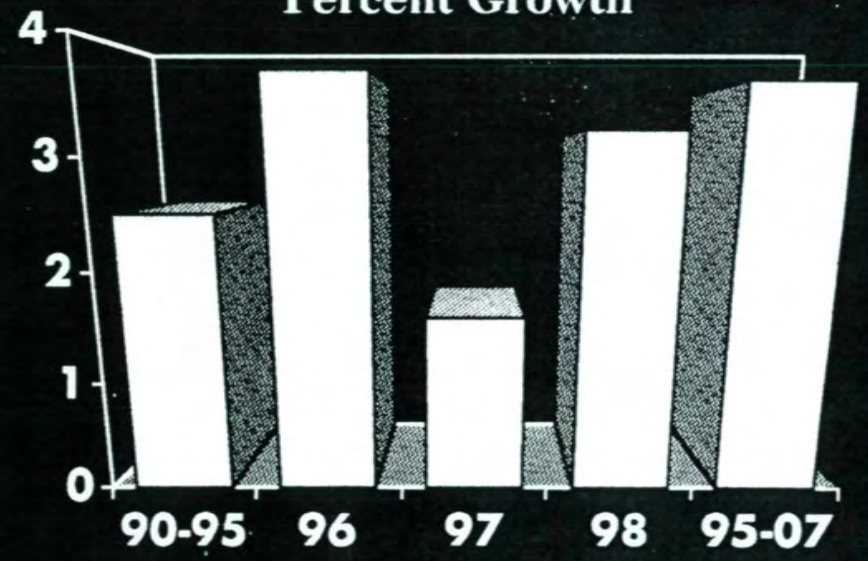
AIR CARRIER HOURS FLOWN GROW STEADILY

- Slow Fleet Growth In 1997
- Expansion Of 2 Engine Fleets
- Higher Rate For 1995-2007 Than 1990-1995



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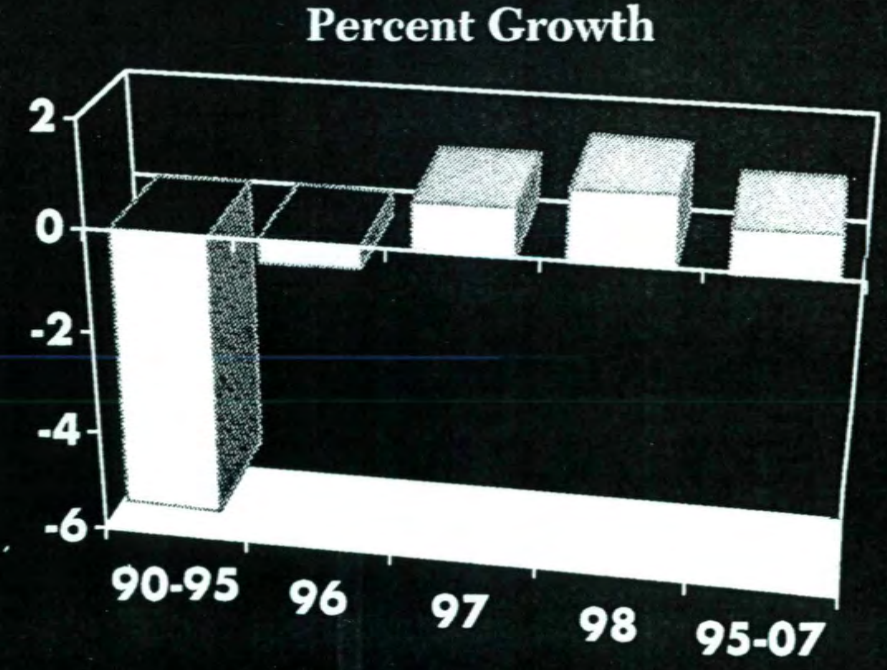
GENERAL AVIATION HOURS FLOWN GROW SLOWLY

- Hours Fell 2.5% In 1995
- Only 0.8% Yearly Growth Expected



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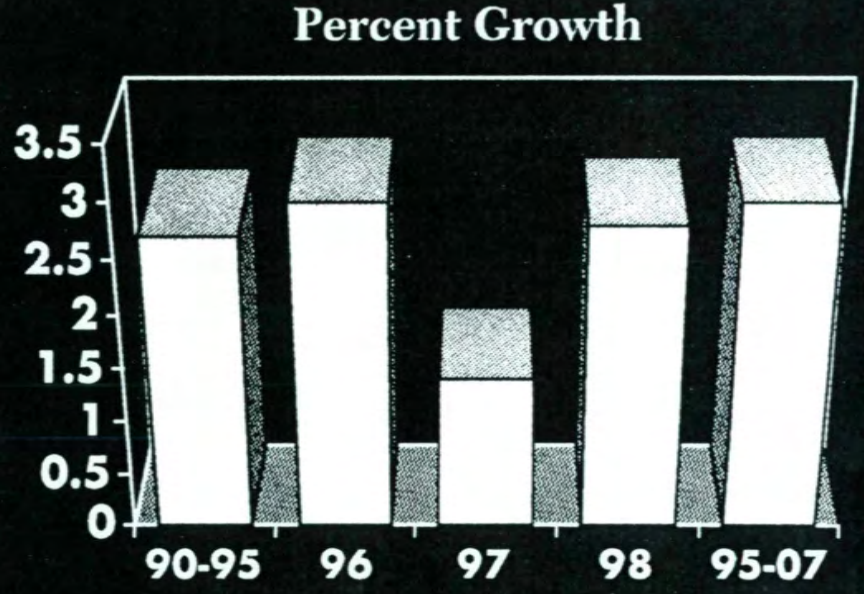
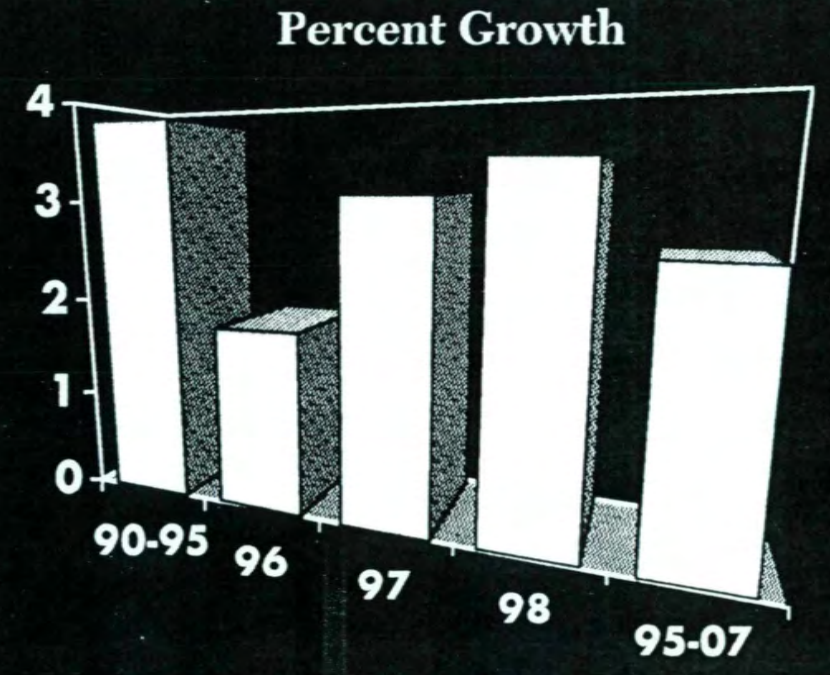
AIR CARRIER FLEET CHANGES MODERATELY

- Low Growth Expected In 1997
- Expansion Of 2 Engine Fleets
- Average Growth Of 3.0% A Year



GROWTH OF THE COMMUTER FLEET SLOWS

- Significant Growth In 1997-1998
- Average Growth Of 2.6% A Year



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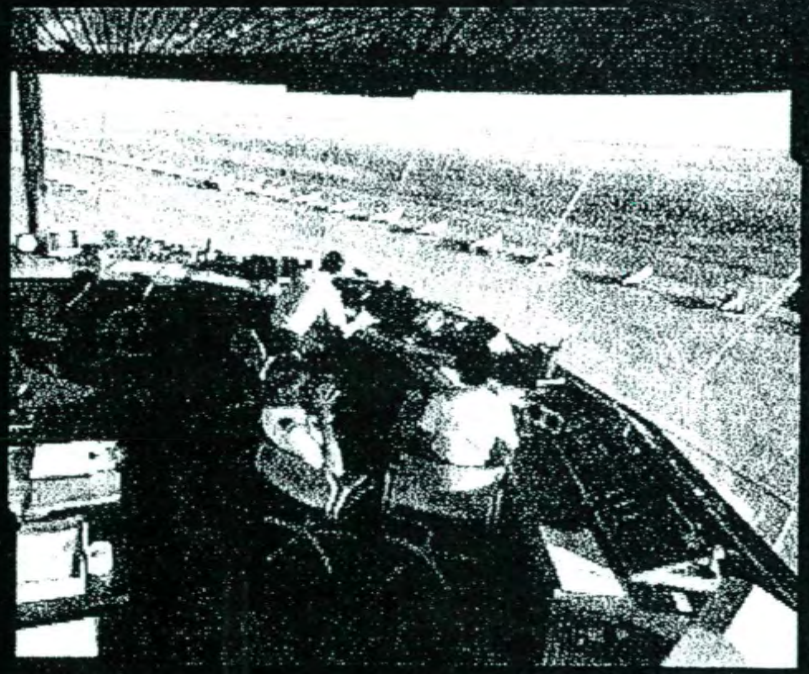
WORKLOAD MEASURES UP MODERATELY

- Combined Towered Airports Up 1.5%
- Combined Instrument Operations Up 1.7%
- IFR A/C Handled Up 2.0%
- FSS Services Remain Stable



FORECAST SUMMARY

- Expanded Competition
- Declining Costs And Yields
- Profit Margins Improving
- Moderate Growth Of Activity At Combined FAA And Contract Facilities