Even in good times, airlines depend on a hairline balancing of supply and demand.

On a recent flight from Los Angeles to Dallas, the American Airlines pilot thanked the passengers profusely at the beginning and end of the trip. The plane was packed, with only a few empty middle seats, and crew members were happy to be back to the world of crowded cabins and potential profits.

Before the Sept. 11 attacks, the airlines were struggling to overcome the effects of the economic downturn. Business travel in particular had dropped sharply. After the attacks, planes were grounded for two days, meaning the airlines kept paying their operating costs but had absolutely no revenue. Since then, fears not only of hijackings but of airport security problems and delays have discouraged passengers from flying.

All in all, it's been a very bad month for the airlines. They've laid off about 80,000 workers and dropped about a fifth of their flights. As Congress rushed to pass a bailout, giving the airlines $5 billion in grants and $10 billion in loan guarantees, the perception grew that airlines are an inherently bad business — a "failing industry," in the words of Peter G. Fitzgerald, the Illinois Republican who was the sole Senator to vote against the bailout.

Economists who study the industry say it's simplistic to argue that the airlines are always in trouble. The industry isn't exceptionally profitable, but it does make reasonable returns. Still, even under normal circumstances — and these aren't normal circumstances — the business does present definite challenges to managers.

The essential problem is matching capacity with demand, which requires making spending decisions far in advance of ticket sales. That may not sound unusual — many businesses have to guess how much product to make — but the problem is harder for airlines than for manufacturers. If they plan for too many passengers, they can't carry the extra seats in inventory.

"Either you sell the seat for this particular flight for this hour or you don't sell it," said Pablo Spiller, an economist at the Haas School of Business at the University of California at Berkeley. "You can't say, 'I'll keep the Thursday, Oct. 4, seat at 5 for next week.' No, it went away, that seat." If planes fly with few passengers because an airline overestimated demand, those flights tend to lose money. For a given flight, the costs of fuel, labor and the aircraft itself are essentially fixed, regardless of how many passengers the plane is carrying. That's why the airline's "load factor," the percentage of seats filled, is such an important indicator of how well it is doing.

When the load factor drops, airlines tend to get into fare wars. Adding another passenger to a given flight costs almost nothing, so any additional revenue will help cover those fixed costs. If one airline has too much capacity, it will sharply reduce fares to fill up its planes. Competitors will drop their fares to match, lest they lose their passengers.

"It's a very competitive industry," Professor Spiller said. "It's not a fragmented industry, you have a few large players — but it's very competitive because in every market you have several players." The hub-and-spoke system means that most travelers can choose among several airlines. This competition means air fares behave almost like agricultural commodities, with airlines having little control over prices. (The exception is for flights starting or ending at "fortress hubs," like Delta's in Atlanta, where one airline controls a great majority of flights.)

In any new industry, managers have to learn how to deal with the particular challenges of the business. Just ask the dot-commers. Airlines aren't a new business, of course, but they operated in a completely different environment from 1938, when the federal government imposed regulation, until 1978.

"They have fundamental challenges matching capacity with demand — both in getting that capacity and predicting what that demand will be — and adjusting to business cycles," said Clifford Winston, an economist with the Brookings Institution. Learning how to do that after deregulation, he adds, "was going to take them a while; for 40 years, they had no practice at it and no incentive to do anything about it."

Travel demand fluctuates greatly with overall economic conditions. Since 1978, when federal price and route controls were removed, the airlines have gone through just a couple of full business cycles. "In each successive decade, they were getting better," Dr. Winston said. After the 1981-82 recession, the airlines bounced back. But during the good time mid- and late-1980's, they bought far too planes. That gave them too much capacity, the economy turned down in the early 90's to fare wars and financial losses.

In the boom of the 1990's, the airlines plenty of money to the annoyance of they not only limited discounts but kept relatively tight. That discipline not only profits but made adjustment easier when downturn came. Before Sept. 11, Dr. W

Continental, like other big airlines, has announced cutbacks since the terrorist attack employees waited for customers at Bush International Airport in Houston on Sept. 11.

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