

We are not talking about real yield necessarily going up much if at all. Real yields may be flat. But that would be equivalent to a nominal yield increase of four percent or so at most unless we have a much more radical improvement in the long-term inflation rate than we presently are counting on.

So on the domestic side, yield increase of three percent and traffic of three percent means a six percent growth in revenue. As an industry average, this may be all one can get. American, Delta, and United, might do better than that for a period of time.

Passenger revenue has a long history of growing in proportion to increases in GNP and disposable personal income except in the 1980s when it flattened out and actually declined. There was some small recovery toward the end of the 1980s and into the 1990s but not much. During the 1980s while the airlines were working out strategies to deal with deregulation, there were great price advantages to the consumer, and the airline industry stopped growing for the first time. It has not resumed since. There is some slight evidence that growth might resume, but it is not certain. The 1990s could continue a trend that could truly be described as a mature industry, i.e., an industry that is not an increasing as a share of either GNP or consumer spending.

AIRPORT AND AIRLINE SECURITY

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We are going to shift gears. We are not going to talk about the economics of airlines but something that has an economic impact on the airline, and certainly on the travelling public, you and me and all those who buy tickets. I want to speak about security.

Security is something that airline presidents do not like to talk about. Certainly when the security chief of an airline comes to the president with another expense, the president sometimes gets somewhat upset because security is not a profit center. There is nothing that he can do in this area to increase his bottom line. All it does is drain cash flow even more than some other parts of his endeavor, such fuel and labor costs.

OVERVIEW OF SECURITY

Passenger Screening

Back in the 1960s and 1970s civil aviation was plagued by hijackings. It was sometimes known as the homesick Cuban period. A number of Cubans had come to this

country and found that the easiest way to get back to their own country was to hijack an airplane. It was pretty easy to do. Very few airplanes were ever hijacked using a real, live weapon such as a pistol. Most of them were hijacked more by threat than by actual violence.

But the Federal Aviation Administration came to the fore, and several measures were taken. Sky marshals were put on airplanes, and this tended to deter hijacking somewhat. FAA also established the pre-board screening program that we all live with today.

The passenger screening became the responsibility of the air carrier, on the rationale that anything that goes on board an airplane should be the responsibility of the owner and operator of the aircraft. Initially, the FAA and the Federal Government bought the equipment used for passenger screening. Later, as the responsibility flowed over to the air carriers, it became their responsibility to furnish the necessary equipment.

As the passenger screening required by FAA became more and more prevalent throughout the country equipment had to be put into terminals in several places. A single pre-board screening site was never going to be adequate at most airports. One of the difficulties experienced with installing pre-board screening facilities was that the air terminals were not built to accommodate them. As an example, here close to home, look at Dulles Airport. I have lived in this area for approximately 20 years, and I am not sure that the people at Dulles have yet determined where would be the best place to locate the pre-board screening. At present, in order to go to the main restaurant, you have to go through pre-board screening. If you happen to have a lot of change in your pocket, you have to remove it in order to get to the restaurant.

The new terminals being built today around the country are planned with the requirement for pre-board screening in mind. All of the terminals built since the mid-1970s, I would venture to say, have been designed to accommodate pre-board screening, but it still remains an expense to the air carrier.

Screening Airline and Airport Personnel

In the 1980s, we had some other developments in the field of aviation security. We had terrorists who used explosive devices on aircraft. We also had one individual, a former employee of PSA airlines, bypass the screening point by using his airport identification, get on board with a weapon, and destroy the aircraft. He destroyed it by first killing his former boss, then the crew of the aircraft, and consequently everyone on board including himself.

The outgrowth of those two new threats have cost a great deal of money, and I am not altogether sure whether we have really enhanced the security of our airports and civil aviation to any great extent as a result. After the PSA incident, Congress decided that what we needed was more security. The Secretary of Transportation decided in 1988 that what should be done was to have a secure access control system installed at each primary commercial service airport. This meant that 274 airports needed to install equipment and set up procedures to monitor access to aircraft servicing and maintenance facilities.

Initially, FAA said these systems should be in place within a year. We in the industry told them that there is no way to do it in one year even if the equipment were sitting on the ramp ready to install. This was followed by a change to FAR 107, designated FAR 107.14, Access to Secure Areas of Airports. This regulatory requirement is going to cost something in the vicinity of \$1 billion before it is fulfilled. I was talking to the director of security at Chicago O'Hare just yesterday, and he informed me that their price tag is hovering someplace around \$50 million just for that one airport. New York Kennedy claims that their system is currently estimated to cost of \$55 million, and they expect the cost to go up.

These systems are supposed to do several things, one of which is to deny access to secure ramps and working areas for anyone whose authority changes, such as an employee who has been fired or transferred or who has resigned or retired. If the person was authorized access to secure areas, it must be rescinded immediately. The only way for a large airport to do this is with a computer-based access system, which is what most airports are putting in.

Anti-Terrorism

The second threat that has emerged is explosives on board aircraft. Bombs have caused great numbers of casualties and enormous damage. As examples, in 1985 an Air India flight from Toronto to Great Britain was brought down by an explosive device. In 1986 a TWA aircraft was not brought down, but it did sustain severe damage from an explosive device placed on board, and several people died. Probably the most famous of these incidents occurred in 1988, when Pan Am 103 exploded in midair and came down in Lockerby, Scotland. In 1989, not more than three months later, a UTA aircraft out of Africa inbound to Paris was also destroyed by an explosive device.

ACCOMPLISHMENTS

As a consequence there have been several security measures required by FAA and put in place by airlines and airports that have made the security system better and aircraft more secure and more likely to arrive at their destination unharmed. But have we really done everything that could be done or should be done?

In the past nine years, 1980 to 1989, the number of attempted hijackings in the United States decreased from 21 to 10. The number of actual hijackings decreased from 2 to 0. That is certainly a remarkable improvement.

Worldwide hijackings have been reduced from 38 to 16 in the same period. Just recently I read in the Aviation Daily that there have been 38 airplane hijackings averted between 1980 and 1990 because of the screening devices now used at airports. These have detected 28,459 weapons, an average of eight daily or one for every 293 passengers!

To me it is staggering that so many people would attempt to take weapons onto airplanes. In most cases they claim that it is really an innocent gesture. They did not really intend to use this 44 magnum or to be surreptitious, even though it weighs 14 pounds and causes a huge bulge in their pocket. According to the same article, one out of every 746 weapons detected were in the possession of an individual who had an intent to use it.

Weapons have been found on some very strange people, such as a judge in Baltimore who said he always carried a weapon for self protection. He was caught and arrested, much to his indignation. However, we also find that weapons are being carried by a lot of little old ladies for a variety of reasons. They do not seem to understand that they cannot take them on the airplane even though they carry them in their pocketbook only to protect themselves in the parking lot.

RECENT SECURITY IMPROVEMENTS

What is being done to improve present security measures and to perfect new, more effective methods to detect weapons and explosive devices? Airports and airlines are working very diligently to identify everyone who is in secure working areas or out on the airside of the airport. Typically, every person in the secure area must wear a badge that not only serves as identification but also as the key that opens doors and access portals through which the employee must pass.

One of the problems is the number of people at the airports who are not employees of the airport or the airline. Airport security officers must identify these individuals and make sure that they are, in fact, where they are authorized to be -- and more importantly, that they are not where they are not supposed to be. An example is the difficulty that has been experienced with Customs agents. The Customs Service for some time has believed that their agents are properly identified by their uniform and badge. Airport ID devices are not to be worn on their outer clothing when they are in the ramp area but to be carried on their person. Customs agents also do not believe they should show identification or otherwise identify themselves to anyone except a law enforcement officer.

This causes difficulty for persons working on the ramp, who are responsible for identifying anyone in their vicinity. Certainly if they work for an air carrier and they are around their own airplanes, they want to know who is that person approaching them. Simply because the person is wearing a light blue shirt and darker blue trousers does not mean he or she is a customs agent. Anyone could buy such a uniform at any clothing store.

We need to close these loopholes; and to do that, we need to seek and obtain support from the Federal Aviation Administration and from all who work at airports.

The FAA is emphasizing intelligence gathering on terrorists and hijackers. This approach works well against larger groups and organizations. It does not work particularly well, however, for small groups or for individuals who have a grudge because they have been fired by an airline and are seeking revenge by bringing down one of their aircraft by planting dynamite or some other kind of explosive device on board.

We need to do more in the field of intelligence, and certainly we need the assistance of all the intelligence gathering agencies of the United States. This is beyond the capability of the air carrier. It is certainly beyond the capability of the airport community.

FAA is also encouraging the development of automated detection devices. As a matter of fact, I presently sit on a National Academy of Science committee that is looking at just this technology for FAA.

How can we devise a system that would clear everyone and everything going on board an aircraft? The general concept envisions that passengers would come to some central location at a terminal with all their baggage. They would go through a screening of their person as well as all carry-on items and bags or parcels to be checked. Everything going through the system would be screened. The first-level security system would

immediately clear 90 percent of everything checked. The remaining 10 percent would proceed through the next tier of the system, and so on down the line. Each element would clear 90 percent and leave 10 percent to be checked at the next station or phase.

This would result in perhaps one bag in 200 or 300 being opened for inspection, as opposed to the much larger number of bags that are now being opened. We expect this system to be totally automated. With present screening systems we have humans involved, and they are sometimes not as thorough or reliable as we would like them to be. Boredom and fatigue are common problems for security personnel looking at a television or an x-ray machine and monitor. Critical items may pass through.

RESPONSIBILITY FOR SECURITY

There is a debate about who should have responsibility for security at an airport. Should it continue to be the airlines who are responsible for pre-board screening or should it be the airport management? One of the common problems at any large airport is inconsistency. BWI, for example, has five different concourses -- five different screening points operated and controlled by five different carriers. Each carrier has its own procedures and requirements. Even though they fall within the parameters and the overall guidance established by FAA, they operate in different ways. I might add that each manager for each carrier responsible for these screening points has different ideas and approaches to security. Some managers are more interested in security than others, and they have a vast variety of methods and procedures. Certainly the thoroughness of one is not necessarily the thoroughness of all.

For this reason it might be argued that the airport operator, who is a single entity, should have the responsibility, the total responsibility, for all security measures at the facility, including all the screening points. This raises interesting questions. First, who would then have financial responsibility? Who would buy the equipment, and who would have the pecuniary liability if the security system failed and an airplane was brought down? As it is now, it is the responsibility of the air carrier. Would it then become the responsibility of the airport? This is an issue that will have to be settled. Parenthetically, it should be noted that in Europe security systems are operated by the airport authority and have been for a number of years.

One of our largest airports, San Francisco, now wants to assume, as an experiment, responsibility for security of the international building. That would include

the two new TNA machines that the FAA expects to install there in the coming months. The outcome of this experiment will be most telling, and it will probably have a long-term effect on how airport security is handled in this country, if not worldwide.

FUTURE DIRECTIONS

One question always come up. What are we doing about articles that go in the belly of a passenger airplane? As I mentioned earlier, statistics show that hijackings are down to zero. Hijacking attempts are approaching zero, and we hope that they will be at zero very shortly. It is very, very difficult to get on board an airplane today with any kind of a weapon.

But what about the baggage compartment? Every passenger aircraft carries not only baggage but a large amount of cargo in the belly. That cargo consists of packages, small freight, and mail. During Desert Storm the Postal Service refused to give the airlines packages heavier than 16 ounces. There were a great deal of gnashing of teeth and moaning by the airlines because this represented loss of a large percentage of their mail income and they wanted to keep that kind of business. By the same token, it made the travelling public feel a great deal better to know that large packages were no longer being carried in the belly of the airplane.

Maybe we should concentrate on making air cargo more secure before it is loaded on the airplane rather than denying such cargo on aircraft in the first place. The concern also extends to checked baggage. You and your carry-on articles are screened when you go on the airplane, but your suitcase that you check is not. In international traffic, it has been a requirement for some time that the air carrier have a baggage-passenger match to assure that before the baggage goes on the airplane, the passenger who brought it is also on board. Because there are not too many people with suicidal tendencies, this is thought to be an effective procedure to keep explosive devices off aircraft.

If the airlines do not want to carry out a baggage-passenger match, they should at least x-ray the bags; and many carriers have chosen to do that. But I would point out that x-raying a large suitcase of a traveller going to Switzerland for two weeks is a very difficult thing to do. Certainly it is difficult to determine if something in that bag is, in fact, an explosive device shaped like a hair dryer, a cassette player, a radio, an electric shaver, or any other innocuous personal item. Maybe an x-ray is not the best way to do it. We need to be more sophisticated and employ advanced technology to check those bags. Moreover, we need to check the bag in the presence of the owner.

What about the security of aircraft refuelers and the security of the fuel itself? Very few airports are doing anything to secure their fuel supply. Fuel farms are usually located on the edge of the airport so that they are immediately accessible by the land vehicles that deliver fuel and by a number of organizations that draw fuel from them. As another example, have you ever seen a catering truck checked by security forces on an airport? I have not. Catering trucks come and go. They are just a part of the team, and no one ever checks them.

But most important of all, no one is checking the employee -- not the employee who works around the airplane, not the employee of the airport operator, not the employee of the refueler caterer. Once the employee has an ID badge, all that is asked is that he show it. The employee is free to come and go freely. I suggest that before very many years have passed, we are going to have to make a change here.

I also see that we are going to have to change the overall construction of airports. They will have to have a number of built-in funnels and checkpoints. All incoming cargo will have to go through a screening funnel. Every employee who enters the secure working ramp area and gets close to an airplane will have to be screened, either individually or at least on a random basis. Employees will come through an area where they will have to use their identification badges to gain admittance; and, once admitted, some will be selectively taken aside and screened. Lunch buckets will be looked at, as will anything employees might be carrying. Random screening must take place frequently enough to cause trepidation about trying to carry weapons or any forbidden material into the airport.

Without screening of this sort our fears about the work force are well grounded. Though employees are checked once when they are hired, they may go bad. FAA and Congress have mandated a 10-year background investigation of new hires for criminal activities. It is, however, going to be done only once, even if the individual is with the company for 35 years. A new employee may be clean on the day he or she is hired, but goodness knows what might happen afterward.

With the PSA incident, it was a former employee. Who can say that the next incident will not be a current employee? In the PSA incident, the man was fired on a Tuesday, and he did his deed on a Wednesday. He could just as well done his deed on Monday knowing that he was going to be fired on Tuesday.

The long and the short of airport and airline security both for today and for the coming decades is screening, screening, and more screening. We will have to do it as efficiently and effectively as possible. We will have to do

it at the expense of the travelling public. It will not be an expense that airports or air carriers alone can support. Obviously it will have to come from the ticket price that the passenger pays.

As indicated by other speakers this morning, the air carriers will get into a better financial position in the years to come. The cost of security will be a part of the bottom line that the Bob Crandalls of the world will not be happy about, but it is something that they must face squarely. This is not just a U.S. problem; it is worldwide.

As a matter of fact, in Tel Aviv today, 23 percent of the operating costs of Ben Gurion Airport goes for security. In the United States, the percentage is something less than 10 percent. I do not expect our costs to go as high as those of Tel Aviv, which may be the upper limit.

To summarize, we have more secure airports and airlines than we had 10 or 15 years ago, but we still have some way to go to make them as secure as I personally want and you would like them to be.

QUESTIONS AND ANSWERS

Question: Would you care to comment on the likely influence of legal responsibility, i.e., litigation or the prospect of litigation, as it might affect the transfer of responsibility for screening passengers from airlines to airports.

Mr. Jackson: Legal responsibility is a major question that will have to be answered before any such transfer takes place. I am not suggesting in any way that airport operators are in favor of accepting responsibility for security. They oppose it for a variety of reasons, and liability is certainly a major one. They are not in favor of having the larger work force and greater expense that maintaining security would require. As I mentioned in my earlier remarks, the liability issue will have to be ruled upon and limits of responsibility will have to be drawn. What they are doing in Europe could be a pattern for us to follow. They have been doing it this way for some years, and it seems to work.

In passing, what is often referred to as the El Al system is not really their system, but that of Israeli security at Ben Gurion Airport. Israeli security is responsible for the system. They train all the people --

El Al as well as airport personnel at two airports.

Question: You suggested the future design of airport terminal buildings would be funnel-oriented, but at Hartsfield Airport in Atlanta, they have a central checkpoint that all passengers go through to one of four concourses. The cost is covered by the terminal corporation, and I think the liability is distributed in proportion to the shares that the airlines hold in the terminal corporation. Is that similar to what they do in Europe?

Mr. Jackson: For example, the British Airport Authority has six airports, and it is totally responsible for the screening and the security operation at all of them. I am not altogether clear about how financial responsibility and legal liability are distributed.

Question: In Atlanta, the city of Atlanta does not have any direct responsibility. It lies with the airlines consortium in the terminal corporation.

Mr. Jackson: Whether responsibility for security should go in that direction or whether it should go solely to the airport operator (whoever that may be) is an open question. But in my opinion there are a number of advantages to having one party with operational oversight responsibility for all the screening points at an airport.

At Atlanta there is one central entry building, from which passengers go by electric train and moving sidewalk to a number of other terminal buildings where the jet bridges are located. Atlanta is one of the few airports that are so designed. The new Denver airport is following the same pattern of one central entry building with one central screening point from which passengers will go to various terminal buildings.

One thing they are not doing in Atlanta, however, is screening each piece of baggage as it comes in. Passengers are still permitted to check baggage at the curb. Bags are then funneled down into the baggage make-up rooms without being screened. This is for domestic baggage only. Passengers must take international baggage into the terminal and personally check it. They cannot check it at the curb. This procedure has been required for several years by FAA regulation.