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### Major airlines insure the jumbo jets

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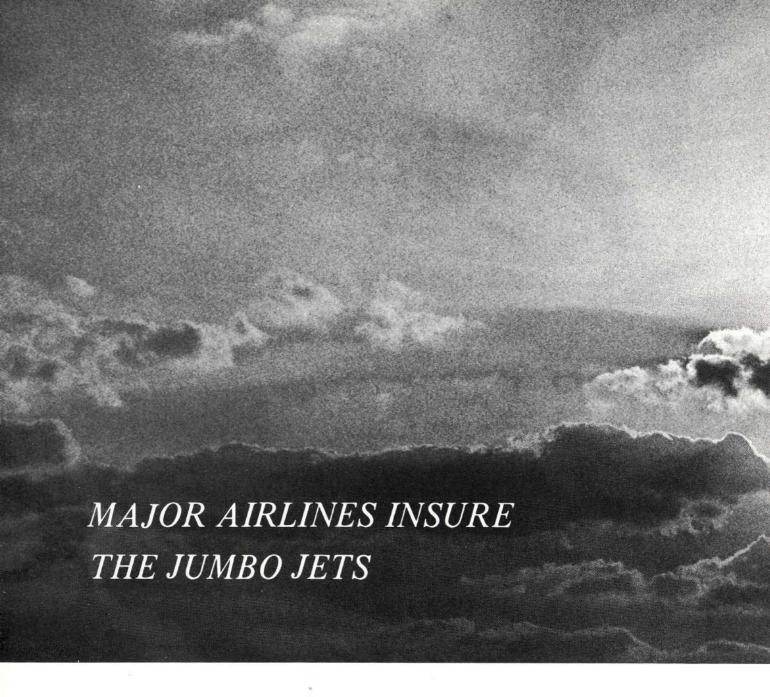


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### **Recommended Citation**

Tempo, Vol. 14, no. 4 (1968, December), p. 32-35

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### PART I

## Picking up the Insurance Tab for the Jumbo Jets

For 25 years the world's airline executives have been making periodic investigations into the feasibility of creating an airline-owned insurance company to provide the two major airline associations—the Air Transport Association and the International Air Transport Association—with hull and casualty insurance.

A 1943 study known as the Black Book Proposal was rejected, as were recommendations from studies made in 1946 and 1958. The proposals were each turned down for various reasons. But the real reason for the repeated rejection of the early plans appears to be timing—the airlines had not yet felt the need to participate in their insurance vehicle. They seemed to prefer to rely on their safety record and the established insurance markets.

But now that the \$25 million, 400-passenger jumbo jets are about to roll up to passenger terminals, the airlines are feeling the need. They do not know who will insure their larger and more expensive Boeing 747's, the McDonnell Douglas DC 10's and the Lockheed L1011's—and they are uneasy.

Airline officials are disturbed, not because they lack confidence in the airworthiness of

### PART II

# The Airlines Reach Out – After Careful Study

The decision of the two airline associations to reach out for that unprecedented insurance bill was not made without much study by airline officials.

And that study-like its results—was without precedent on the part of the Touche Ross management services team charged with analyzing the economic and business problems likely to face the fledgling organization.

To account for costs when they could not look to the past, the team blended management

judgment in business decision making with approaches usually reserved for academic or highly technical application.

The first part of the consultants' project was the most conventional. Here, they played devil's advocate to determine whether the conclusions of the Red Book were feasible and desirable.

They concluded that the data in the airline report could be used to estimate and review with a sample of airlines the benefits of the proposed insurance company, but that additional data would be necessary before a decision was within reach.

The management services team recommended that the financial attributes of an airlineowned insurance vehicle be estimated; that the

### PART I (continued)

their new planes, but because they fear the increased cost of the larger hull and the even higher costs expected to cover the additional passengers and third-party claims of persons and property injured by a fallen plane will exhaust normal aviation insurance capacity.

This expected shortage comes on top of an already-increased insurance bill, pushed higher in 1966 by the airlines' decision not to follow the Warsaw Convention limits and to allow liability up to \$75,000 per passenger. Prior to removal of the limits, the ceiling for passenger liability had been \$8,300.

Members of ATA and IATA have found little solace in the existing major insurance pools that cover about 80 percent of the industry's risks. The pools have told the airlines they are capable of continuing coverage for the huge jets—but they have not named their price.

And property and casualty insurance markets elsewhere are reeling under the impact of mounting claims on automobiles, property damaged in civil riots, the breakup of ocean tankers and various other industrial and natural disasters.

They too are reluctant to take on the jumbo jets and the accompanying insurance risks that will be greater than ever before. Although there cannot be any test cases, insurance experts have estimated that the crash of one jumbo jet could produce claims of \$100 million.

Opinion is mixed among economists and insurance experts as to whether it is advisable—or even possible—for the airlines to go into the insurance business. Some, such as London's ECONOMIST magazine, say the proposed venture is "out of the question", the price tag will be too high for too many.

Others say the airlines could pay the price since many are already carrying high deductible insurance.

Regardless of the dissenters, ATA/IATA announced from London on October 15 that it would move toward setting up an airline-owned corporation to provide any airline that wishes to join with the traditional forms of insurance. ATA/IATA plans to form the new company in mid-1969 after the required airlines and governments agree.

The airline groups also announced at that time that Sir Giles Guthrie, chairman and chief executive officer of British Overseas Airways Corporation, will serve as chairman of the board of the proposed organization, which is expected to be headquartered in Switzerland. About a month later the airlines selected Clarence Pell, formerly with the Association of Aviation Underwriters, to carry out their plans.

This decision was the result of several studies—an initial survey during 1967 by a working group of ATA/IATA airline insurance specialists and a subsequent study by independent consultants in mid-1968.

The ATA/IATA group concluded in its September 1967 report, called the Red Book, that the airlines should form a "non-profit, airline-controlled insurance company to provide coverage in three main areas—hull; legal liability in respect of passengers, cargo and mail; and other liability related directly to airline operations.

"The need for such a self-protective step is indicated by aviation insurance history," the Red Book said. "Available insurance facts show that hull—and to an extent passenger liability—insurance is overpriced during the introductory period for new equipment or new legislation relating to legal liability.

"Scheduled 1969 introduction of the Boeing 747 dictates immediate action in a situation where the need for such voluntary self-protection will continue through the SST (supersonic transport) introductory period well beyond 1975," the report continued.

The outside consultants were charged first with evaluating the results of the Red Book study and later with outlining whether and how the new insurance vehicle would function.

Three teams of consultants—in the legal, insurance and financial areas—were engaged to put together the jigsaw puzzle of an air insurance plan.

The legal consultants came up with the answers to such questions as how and where to incorporate to best satisfy the complex requirements of a multi-national organization—and do it with the best tax benefits.

Statisticians and operational research specialists were employed to develop a scientific and equitable formula for rating the airlines. These ratings were to become a tool for determining airline insurance premiums.

And Touche Ross was asked to analyze the economic and business problems inherent in the proposed venture.

#### PART II (continued)

results be reviewed with senior management of selected carriers; and the feasibility of an airlineowned insurance vehicle be re-evaluated before more steps were taken.

ATA/IATA accepted this first set of recommendations and sent the team on its second phase. That called on the diverse techniques of operations research, market research, financial analysis and sound business judgment.

Their task here was to:

Identify carrier interest in participating in the proposed insurance vehicle;

Determine the form of vehicle, type of coverage, extent of coverage and capital requirements that will influence carrier participation;

Estimate the amount of initial capital required to launch the vehicle and the supporting cash flow analysis.

The team divided its forces to accomplish this phase, sending three men on a brisk-paced trip through 14 countries and keeping another task force at home in the firm's New York office.

The traveling half of the team visited top management of 29 airlines to determine what characteristics of an airline insurance company would most interest them. The men visited carriers representing about 70 percent of the world airline passenger-kilometer business, discussing the economic and structural attributes which would be crucial to their participation.

In each country Touche Ross International provided a local partner or manager who sat in on the discussion so he could later give the American management services team the background on local problems and politics that would be necessary to the Americans' complete understanding of the talks.

While the three men were traveling through most of the non-Communist world, the operations research experts in New York gathered data and set up a computer model to determine the capital requirements for a successful insurance vehicle. The data gathered by the traveling team would later be fed into this model.

They set up a program to determine the amount of financial resources required to absorb fluctuations in predictable losses and unprecedented catastrophe.

The operations research experts found the amount of capital needed to cover normal loss by using a computerized mathematical model, which balanced income from premiums against losses and expenses. They used the Monte Carlo simulation technique, which uses random numbers rather than past history to generate data, for projecting hull and passenger liability losses through 1975.

This technique is often applied to technical and middle management problems. But by balancing mathematical analysis and analytical business judgment, the team used operations research for top management decision making.

Although there is no meaningful data to predict unprecedented catastrophes, the research did provide the airlines with a quantitative analysis that would be useful to the airline owners, who would ultimately decide the extent of their need of catastrophe coverage.

The team gathered and interpreted the data in two months—a project operations research experts had estimated would take more than a year—by using the firm's time-share computers and leaving part of the team at home to work in parallel with their traveling colleagues.

In the third phase of its project, Touche Ross estimated the insurance characteristics, operating costs and capital requirements that would be needed for several types of insurance vehicles; developed a framework for dividing capital requirements among the carriers; outlined the next steps the carriers should take to implement the plan.

Their final report presented the monetary requirements essential to setting up either of two suggested vehicles.

The report also reflected one of the aims of the project by suggesting a plan whereby the airlines would establish their insurance company in cooperation with the existing insurers—rather than in competition.

This arrangement leaves the market to lead in such matters as setting individual rates and handling claims.

After reviewing the reports of all the consultants, ATA/IATA elected to move into the insurance business.

As the associations begin to carry out their daring venture, they will take the Touche Ross management services team along for continued help with financial and management matters.