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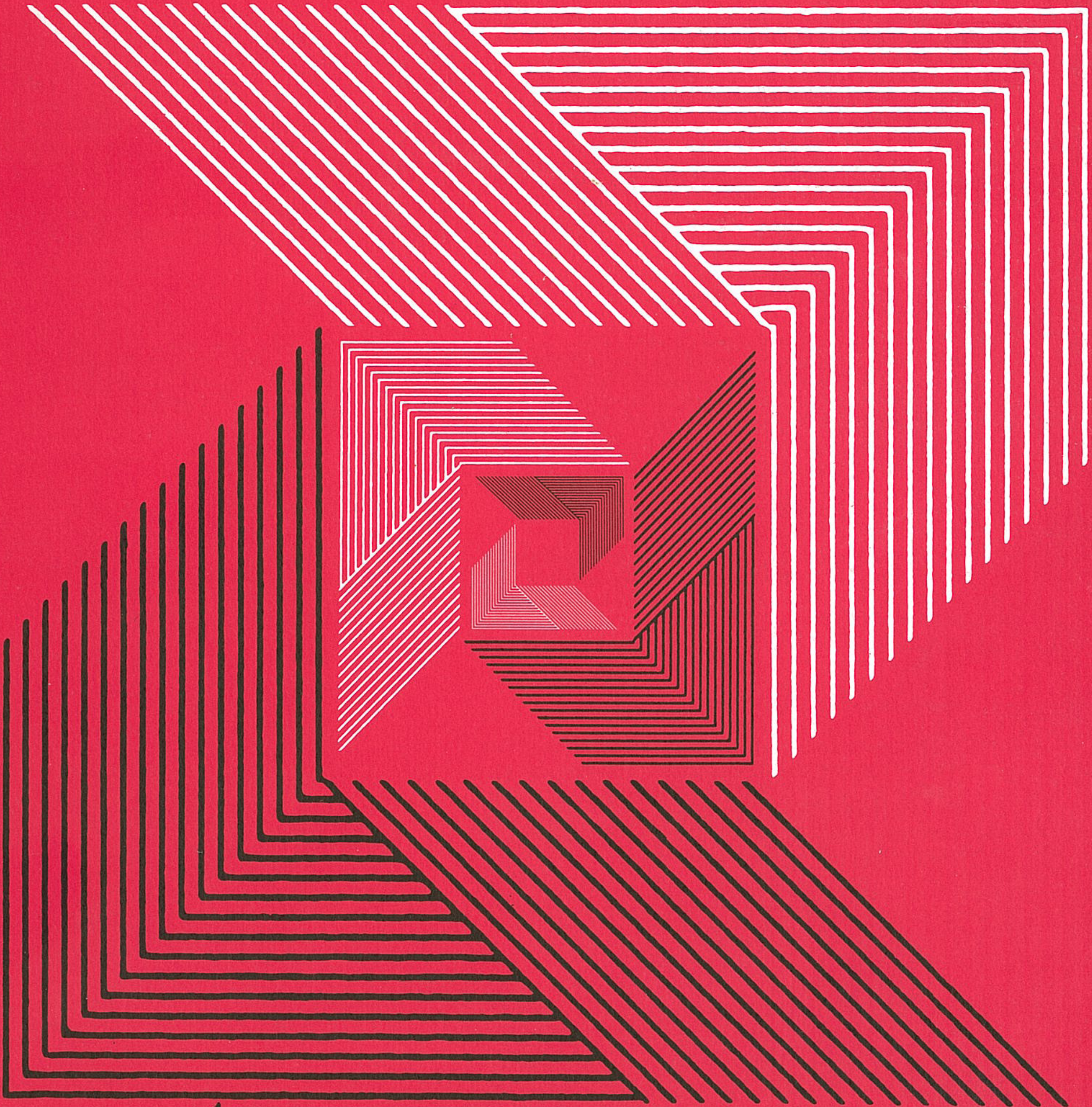
A STUDY OF AIRPORT SYSTEM FINANCING DEPARTMENT OF TRANSPORTATION

A REPORT TO THE LEGISLATURE OF THE STATE OF HAWAII



SUBMITTED BY THE LEGISLATIVE AUDITOR OF THE STATE OF HAWAII

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The office of the legislative auditor endeavors to fulfill this responsibility by carrying on the following activities.

1. Conducting examinations and tests of state agencies' planning, programming, and budgeting processes to determine the quality of these processes and thus the pertinence of the actions requested of the legislature by these agencies.
2. Conducting examinations and tests of state agencies' implementation processes to determine whether the laws, policies, and programs of the State are being carried out in an effective, efficient and economical manner.
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A STUDY OF AIRPORT SYSTEM FINANCING
DEPARTMENT OF TRANSPORTATION

A Report to the

Legislature of the State of Hawaii

Submitted by the

Legislative Auditor of the State of Hawaii

Special Report No 77–1
February 1977

Foreword

In its 1975 session, the legislature observed that the airport-airline lease agreement was scheduled for renegotiation in 1977. It reported that the time was appropriate for legislative committees to begin conducting a thorough review of airport system financing and to examine the existing agreement to determine legislative policies which should be considered in renegotiation. To assist the legislature in its review, the legislative auditor was requested to conduct an examination of airport system financing. This report is the result of our study. It contains background information on the development of the airport financing system, our findings and comments concerning the present financing system, as well as a discussion of the financing policy that the State might pursue in the future.

We wish to acknowledge the cooperation and assistance extended to our staff by the officers and employees of the department of transportation, particularly the personnel of the airports division, and the representatives of the various airlines.

Clinton T. Tanimura
Legislative Auditor
State of Hawaii

February 1977

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INTRODUCTION AND BACKGROUND

Chapter 1

INTRODUCTION

This report has been prepared in response to Conference Committee Report No. 18, Act 195, SLH 1975, which requests the legislative auditor to conduct an audit of airport system financing. The committee report notes that renegotiation of the present airport-airline lease agreement is scheduled for 1977, and that the legislature deems it important to examine the existing agreement to determine the legislative policies which should be considered in the renegotiation.

Objectives of the Study

The legislative request has been interpreted as requiring a special study and analysis of the airport financing system, rather than a conventional audit of procedures. With this in mind, the study was carried out with the primary general objective of providing the legislature with information and recommendations to assist it in policy formulation in the area of airport financing. The study was conducted secondarily to aid the state administration in negotiating a new agreement in 1977. More specifically, we attempted:

1. To provide a description of the present financing system.

2. To isolate and discuss issues that exist in the financing system and their policy and economic implications.

3. To suggest means by which the identified issues may be resolved.

Scope of the Study

This report is focused almost entirely on the systematic aspects of airport financing, not the administration thereof. Furthermore, since it is designed to be of maximum value during the period of renegotiation, it accepts as fixed those legal constraints that are not, in the ordinary course of events, alterable before June 30, 1977. These constraints are: (1) the State Constitution, (2) the certificates issued in support of the sale of revenue bonds maturing as late as the year 2000, and (3) the basic airport-airline lease agreement which is firm until 1982 and thereafter until 1992 if the option to renew, reserved to the airlines, is exercised. This leaves as variables the following: (1) state statutes; and (2) "Exhibit One" attached to the airport-airline lease, which contains the method of computing use charges and which expires in its entirety on June 30, 1977; it is this exhibit, rather than the basic lease agreement, which is to be renegotiated in 1977.[1]

[1] The airports division, department of transportation, has prepared a booklet, *Airport-Airline Leases, Honolulu International Airport, Department of Transportation, Airports Division, State of Hawaii,* which contains sample copies of the airport-airline leases, including Exhibit I.

Organization of the Report

Part I of this report contains this introduction and a brief background description of airport financing in Hawaii and its historical development.

Part II contains our findings and comments concerning the present financial system, as well as a discussion of the financing policy that the State might pursue in the future.

Chapter 2

HAWAII'S AIRPORTS

The department of transportation (DOT) through its airports division has operated and maintained the facilities of all public airports in Hawaii since July 1, 1961.[1] In 1968, DOT was directed to operate these facilities as a single system.[2] Currently, the public airports in Hawaii consist of 14 airports and one heliport (Ala Wai). These are located throughout the principal islands of the State.

The state airport system serves four major categories of air carriers: certificated air carriers (both overseas and interisland),[3] air taxis (commuter airlines),[4] general aviation,[5] and the military. Honolulu International Airport (HIA) and General Lyman Field in Hilo serve all categories of carriers, including both overseas and interisland certificated carriers. Six other airports[6] also serve all categories of carriers, except that they do not serve scheduled overseas certificated carriers. The remaining six public airports[7] and the heliport are primarily for general aviation use.

In addition to the public airports, most of the major islands have one or more small private landing strips serving hotels or used for agricultural purposes. The most active private strip is located at Kaanapali, Maui. The operators of this private facility reported to the airports division in 1975 that they serviced about 62,000 arriving and departing passengers. Several airports and airstrips used exclusively by the military are also located in Hawaii.

Size of Airports

The size of the various state airports may be measured in several ways. In table 2.1, it is measured by the number of passengers handled and acreage. In table 2.2, the size of the airports is measured by air operation, a take-off or landing constituting one operation.

It is readily apparent from the tables that the major public airports are Honolulu International, General Lyman Field (Hilo), Kahului, and Lihue. These airports have substantial terminal facilities, parking areas, air cargo buildings, airport maintenance buildings, airline operating offices, small plane hangars,

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[1] Act 1, SLH 1959 (Second Special Session).

[2] Act 20, SLH 1968.

[3] Certificated air carriers are air carriers certificated by the Civil Aeronautics Board (CAB). They generally provide regularly scheduled air service from point to point. However, some certificated air carriers do not operate on a regularly scheduled basis, but rather on a demand basis. An example is Trans World Airlines.

[4] Air taxis are air carriers not certificated by the CAB. They include carriers which provide commuter services. They operate either on a scheduled or nonscheduled basis.

[5] General aviation means air activities other than air commerce, but includes flight schools.

[6] Kahului, Lihue, Ke-ahole, Molokai, Waimea-Kohala, and Lanai.

[7] Hana, Kalaupapa, Upolu, Port Allen, Dillingham Field, and Ford Island.

Table 2.1

Hawaii Statewide System of Airports
Location, Size of Facility, and Passenger Traffic

Airport	Island	Airport Acreage	Arriving and Departing Passengers CY 1975 Overseas (Thousands)	Interisland* (Thousands)
Honolulu International. . . .	Oahu	4811	6089	4311
General Lyman Field.	Hawaii	1056	227	1059
Kahului	Maui	1533	–	2180
Lihue.	Kauai	157	–	1918
Ke-ahole	Hawaii	2722	–	866
Molokai	Molokai	316	–	154
Waimea-Kohala	Hawaii	90	–	73
Lanai	Lanai	91	–	44
Hana	Maui	139	–	15
Kalaupapa	Molokai	59	–	8
Upolu	Hawaii	98	–	2
Others:				
Port Allen	Kauai			
Dillingham Field . . .	Oahu			
Ford Island	Oahu			
Ala Wai Heliport . . .	Oahu			

*Includes passengers on scheduled airlines, commuter air carriers and some air taxis.

Source: Records of the airports division, state department of transportation.

and concessions for passenger and visitor utilization. The remaining airports have fewer amenities for passengers and visitors. Some such as Port Allen and Upolu have only runways and no buildings for passengers.

Overseas Passenger Services

Both HIA and General Lyman Field are equipped to handle overseas flights. However, only HIA has the facilities to handle international flights. Facilities for customs, immigration, public health, and agricultural activities of the U.S. government are available only at HIA. Thus, while HIA serves both domestic and international overseas flights, General Lyman Field handles only domestic flights.

Seventeen U.S. and foreign flag airlines provide scheduled overseas service at HIA. These airlines are as follows:

U.S. Carriers

- American Airlines
- Braniff International
- Continental Airlines
- Northwest Airlines
- Pan American World Airways
- United Airlines
- Western Airlines

Foreign Carriers

Air Micronesia
Air New Zealand
Air Siam
Canadian Pacific Airlines
China Airlines
Japan Air Lines
Korean Airlines
Philippine Airlines
Quantas Airways
UTA French Airlines

In addition to the above, many other airlines provide overseas service at HIA on a demand or nonscheduled basis. Included among them are Trans World Airlines and British Airways, which have landing rights similiar to the carriers listed above. Other nonscheduled airlines operate charter flights for tour groups and provide service to the Military Airlift Command on a contract basis.

United, Western, Continental, and Northwest provide domestic, scheduled, overseas services at General Lyman Field. In addition, other nonscheduled overseas airlines operate charter flights to Hilo, Kahului, and Lihue.

Interisland Passenger Services

Two certificated carriers, Aloha Airlines and Hawaiian Airlines, provide scheduled interisland service. They fly to and from the State's four major airports (HIA, General Lyman Field, Kahului, and Lihue) and four other smaller airports (Ke-ahole, Molokai, Waimea-Kohala, and Lanai). Each of these airports is capable of handling passenger jet aircraft. A number of commuter air carriers, air tour companies, and air taxi services operate interisland flights with small aircraft. They carry interisland passengers to nearly all of the state-owned airports, including those not serviced by Aloha Airlines or Hawaiian Airlines, and also to some of the private airports and airstrips in the State.

Uniqueness of the Hawaii Airport System

The State's airport system is somewhat different from any other in the United States. It has five features that make the system different from others.

First, the airports are operated by a department of state government rather than by

Table 2.2

Air Operations at Hawaii's Four Busiest Airports[1]

Calendar year 1975

Location of airport	Air carriers	Air taxis	General aviation	Military	Total operations
Honolulu	108,451	48,260	111,813	51,257	319,781
Hilo	20,056	2,756	14,622	13,711	51,145
Kahului	35,135	18,120	14,488	9,319	77,062
Lihue	23,629	14,137	11,085	4,505	53,356
Total	187,271	83,273	152,008	78,792	501,344

[1] An air operation consists of one take-off or landing.

Source: Statistical records of the airports division, state department of transportation.

a unit of local government or a special authority. Only in three other jurisdictions are airports operated by the state or its equivalent. These are Alaska, Maryland, and the Commonwealth of Puerto Rico. Thus, in Hawaii, responsibility for airports involves major elements of statewide policy determination, rather than the purely local viewpoint which characterizes most carrier airports on the mainland.

Second, the Hawaii system consists of many airports. No less than eight of them serve certificated air carriers. Multi-airport systems are rare; where they do exist, the administering agency operates no more than three airports that serve certificated air carriers. The only agencies (other than Hawaii) known to operate multi-airport systems serving major carriers are: (1) The Port Authority of New York and New Jersey, (2) Chicago, (3) Metropolitan Washington (administered by the Federal Aviation Administration); and (4) Alaska. Of these, only the systems operated by New York and Washington approach the financial interdependence of the Hawaii system.

Third, Hawaii's airports and their carrier users possess a virtual monopoly over the movement of persons within and without the State. The competition that air transport faces from the ubiquitous automobile in continental settings does not exist here, and there are obviously no long-distance bus or train services. Water-borne passenger travel among the islands and to overseas destinations is negligible. Only Puerto Rico, among American jurisdictions, approaches this monopoly situation.

Fourth, a large portion of the air traffic at Hawaii's airports represents short distance certificated air service which is virtually non-existent elsewhere in the U.S. Whereas most short distance or local air service provided by certificated airlines in the continental U.S. ranges in distance from 200 to 600 miles, in Hawaii the longest run is only about 200 miles and most routes are less than 50 miles. This has significant economic implications because takeoffs, landings, and related terminal services constitute a very high proportion of total airline operating costs. Thus, much of Hawaii's interisland certificated air service would be considered uneconomic elsewhere and the demand for such service would be met either by air taxis with small planes or by alternate means of surface transportation. However, Hawaii's geography requires that such certificated air service be provided here, at least between the larger centers of population. This, in turn, means that much of Hawaii's airport system is devoted to serving air carriers which must operate with per unit costs that are unavoidably much higher than those found elsewhere in the country.

Fifth, in Hawaii the airports are a quintessential element of the economic and social fabric of the State. Even Puerto Rico, otherwise in many ways comparable to Hawaii, does not share in this dependence in its internal transportation, as it is primarily a one-island community. Alaska might be the most comparable, with its vast distances and less-than-superior internal communications systems, but its needs are served by a large number of small, often remote, airports. In Hawaii, the airports must be capable of handling modern jet aircraft and large numbers of passengers.

Hawaii is not unique in any of the five elements described above, but a combination of the five adds up to a unique total. This unique system has impacted the method of financing airports. It has raised numerous problems concerning such financing. The Territory and the State of Hawaii have faced these problems for many years, and will continue to face them in the foreseeable future. How financial arrangements for the airports have developed to meet this challenge is the subject of chapter 3.

Chapter 3

DEVELOPMENT OF THE AIRPORT FINANCING SYSTEM [1]

The Hawaii airport system had its humble beginning in the legislative session of 1925. The initial airport appropriation consisted of $45,000 for an airport on Oahu (to be expended after $20,000 was raised by private subscription) and $10,000 for the maintenance of prisoners who were to construct an airport in Hilo. From then until 1940, airport development was largely an informal cooperative effort between the Territory, the federal government (primarily WPA), and Inter-Island Airways. By the end of 1940, cumulative expenditures on the airports totaled $1,235,000, of which $567,000 came from the federal government and $153,000 from the airlines. Most of the Territory's share was appropriated from the general fund. The only dedicated revenue was the gasoline tax, which in 1939 amounted to a mere $13,600.

The onset of World War II revolutionized airports in Hawaii. In 1941 alone, almost $5 million was received from the federal government. After the outbreak of war, all airports except Port Allen and Hana were taken over for defense purposes and were vastly improved. By V-J Day, John Rogers Airfield in Honolulu (predecessor of the present Honolulu International Airport [HIA]) was one of the largest in the world, and many others had been greatly upgraded.

After the war, Hawaii inherited a superior airport system, but by 1956 the need for a major expansion became apparent, particularly in Honolulu. For the airport in Honolulu, a joint-use agreement was executed with the U.S. Department of Defense, and plans were made for the construction of a new terminal building and other physical facilities. Land was acquired for the new facilities at a cost of $5 million and, in 1959, $14 million of revenue bonds were issued.[2]

The Shift to Landing Fees as a Major Source of Revenue

Between the end of World War II and 1962, the major source of revenue to support the airports was the aviation fuel tax paid by the carrier-users of the airports. The tax revenues were pledged as collateral for the revenue bonds issued for airport improvements. Shortly thereafter, however, several factors caused a different revenue base to be needed. The first impetus for a new base came from the Hawaii supreme court when it decided that bonds secured by user taxes (of which the aviation fuel tax was one) were chargeable against the debt limit of the State.[3] This decision caused the then outstanding airport revenue bonds to be so charged. It also meant that any future revenue bonds

[1] Much of the material in this chapter is drawn from Henry David Bess, *The Honolulu International Airport: Economics and Measurement*, 1967. (Unpublished Ph.D. thesis available through University Microfilms, Ann Arbor.)

[2] Pursuant to JR 32, SLH 1957 (Regular Session).

[3] *Employees Retirement System v. Ho*, 44 Haw., 154 (1960).

issued for airport purposes would limit the State's general borrowing power so long as the primary collateral consisted of aviation fuel taxes.

In addition to the legal problem, another very practical issue arose. The entry of jet aircraft into the Hawaii routes resulted in vastly increased fuel consumption. The airlines began to perceive the 3½ cents per gallon fuel tax, which was recognized by all as a poor measure of use of the airport, as a severe imposition. Further, international flights involved extensive use of bonded fuel, and taxation of this fuel by the State was of questionable legality. However, to have exempted bonded fuel from the tax would have largely exempted international carriers from user charges, to the obvious detriment of domestic carriers and the revenue base of the airports.

The impasse was solved by obtaining airport revenues from fees rather than fuel taxes, although retaining on a pro forma basis the imposition of a one cent per gallon fuel tax. This was accomplished by adopting the principle of the agreement which the city of Chicago entered into with the airlines serving Chicago's airports. That agreement, which was designed to produce sufficient revenues to secure the large issue of revenue bonds for the construction of O'Hare Field, created a profound precedent, not only for Hawaii, but for all major hub airports. Before the Chicago agreement, all airports–including major hub airports–had required annual subsidies from the political jurisdictions which owned and sponsored the airports. The Chicago agreement marked the transition from an era of universal subsidy to a new era in which major hub airports became "self-supporting" propositions.

The principle of the Chicago agreement is basically simple. Following the close of a fiscal year, the expenses of the airport (including debt service) are first computed, then all revenue derived from "other" sources are subtracted, and any deficit is charged to the air carriers utilizing the airport. Hawaii adopted this principle in the agreement it entered into in 1962 with the air carriers utilizing HIA. The agreement was specifically for HIA, since the major carriers were then utilizing HIA almost exclusively and major airport improvements were being concentrated at HIA. The agreement and the Chicago principle incorporated into the agreement have continued to this day.

The 1962 agreement with the air carriers consists of a basic airline lease with each carrier and an Exhibit I attached to the lease. The basic lease and Exhibit I are the same for all air carriers who are parties to the agreement.[4] The basic lease is firm for 20 years and, at the airline's option, is renewable for an additional ten years through June 30, 1992. The basic lease can be amended, but it contains no automatic reopener (except for space rentals). For purposes of this report, therefore, its provisions are considered to be fixed. This presents few problems concerning analysis of airport finances, because the method of computing the charges payable by the air carriers is almost wholly contained in Exhibit I, and not in the basic lease, and Exhibit I is subject to renegotiation from time to time. The basic lease merely refers to Exhibit I for purposes of determining the charges to be paid by the air carriers.

The initial Exhibit I drawn in 1962 remained in effect until June 30, 1970. In 1970, it was amended for the period July 1, 1970 to June 30, 1973. In 1973, with a few minor changes, the 1970 amended version was continued to 1977. The 1970 amended version, as extended in 1973, is to be renegotiated in the spring of 1977 for a five-year period lasting through June 30, 1982. The following sections describe the evolution of Exhibit I to its current form. This description constitutes important background information since Exhibit I, as

[4]Not all airlines using HIA are parties to the agreement. Those who are not signatories to the lease pay the same use charges imposed upon the lessee airlines but do not share in either the obligations or benefits which the lessee airlines assume or enjoy.

currently constituted, will be the starting point from which negotiations will commence.

The 1962 Exhibit I

Following the principle of the Chicago agreement, the 1962 Exhibit I provided for computing the fees to be paid by the air carriers as follows. (In the basic lease and Exhibit I, the fees payable at HIA are referred to as "use charges" and the fees payable at other airports are referred to as "landing fees." In this report, "use charges" and "landing fees" are used interchangeably, although all effort is made to use the term "use charges" for HIA and "landing fees" for other airports.)

Before July 1 of each year, all expenses and all "other" revenues for HIA were estimated for the forthcoming fiscal year. The projected deficit was then divided by the estimated landing weights for the same period to yield a use charge fee expressed in dollars per 1000 pounds of maximum landing weight. This fee was then collected throughout the year. After the close of the fiscal year, an accounting was made of the actual experience, and adjustments were made to achieve an exact balance between revenues and expenses. Adjustments were inevitably required because of inexactness in estimating revenues, expenses, and landing weights. When use charges actually paid exceeded the difference between revenues and expenses, the excess was credited to the air carriers on the basis of weights actually landed. In the event that use charges paid during the year resulted in a deficit, the carriers were liable for an assessment to make up the difference, but this situation never occurred during the time that the initial Exhibit I was in effect.

Although patterned after the Chicago plan, Hawaii's agreement also contained some unusual features. *First*, with the adoption of the Chicago principle of assessing the user-carriers for all costs of the airport not otherwise covered by "other" revenues, the need to rely on aviation fuel tax revenues diminished. But the fuel tax could not be eliminated entirely for at least two reasons: (1) it was needed for the purpose of charging general aviation and (2) the State's bond counsel recommended its retention, since the then outstanding revenue bonds referred to it. How to implement the principle that the use charge, not the fuel tax, was to be the core of the airport financing system, in light of the continued existence of the fuel tax, was a problem that needed to be dealt with. The problem was met by giving all carriers who paid use charges full credit against those charges for fuel taxes paid; this effectively reduced the fuel tax to zero for air carriers. In addition, the legislature reduced the tax rate from 3½ cents to 1 cent per gallon in an attempt to obviate the possibility that tax payments would exceed gross use charges.[5]

Second, although the agreement pertained only to HIA, it allowed an expense of $720,000 per year for the support of airports other than HIA. For the first time, the air carriers obligated themselves to underwrite a subsidy for airports on islands other than Oahu.

Finally, the 1962 Exhibit I contained a unique exercise in supporting home industry. Air carriers were classified according to whether they operated exclusively within the State or extended operations to other states or countries. Intrastate carriers were subject to a use charge equal to 9 percent of the amount charged the overseas carriers. This provision is said to have been the result of computing what the interisland carriers would have paid if the fuel tax had remained at 3½ cents and comparing that with what their liability would be if they paid use charges (at HIA) and landing fees (at neighbor island airports). The interisland carriers were willing to accept the change from the fuel tax base to the use charge base only on condition that their net payments would not be increased by the change. This feature of the

[5]Further legislation (Act 99, SLH 1969), providing for direct tax rebate, was required to attain this end with respect to intrastate airlines. The tax rebate provision was later incorporated into the standard airline lease (Article V-E, second paragraph), but it actually affects only intrastate carriers.

1962 agreement is still in effect today. Parties to the negotiations in both 1962 (and 1970) agree that the State played no role in determining this differential between overseas and interisland carriers. It was agreed to by the carriers themselves and then adopted by the State. Since the total revenue from all carriers was to be the same however distributed among them, the State's major interest at that time was chiefly to secure agreement.

The 1970 Exhibit I

The provisions of the 1962 Exhibit I remained in effect until 1970. By 1968, however, several matters seemed to indicate a need for change. One was that the off-Oahu airports needed more support: receipts from landing fees were small, income from insufficiently developed concessions was almost trivial, and the HIA airline agreement limited the amount that could be transferred to the other airports to $720,000. Hawaii's economic and social needs clearly required that adequate support be given to the other airports. More money was needed both for operations and capital improvements, and the only sources of such money seemed to be HIA revenues and the general fund.

Another matter which indicated a need for change was the magnitude of the capital investment program required at HIA. Expansion was required to accommodate new wide-body aircraft and the rising surge in traffic.

In recognition of the increasing demands for financing the airports, the legislature took two important steps. First, in 1968 the legislature mandated that all airports in the State be operated as a single system and charged the department of transportation (DOT) to generate sufficient revenues to meet the expenses of all airports. No longer was a single neighbor island airport expected to meet all its costs from revenues generated solely at that airport. Rather, the total revenues generated at all airports was expected to meet the total expenses of all airports. DOT was vested with broad authority to levy fees and authorized to enter into necessary agreements to achieve this end.[6] The second legislative action was to take advantage of the constitutional amendments of 1968, which put both tax-collateral revenue bonds and general obligation reimbursables outside the newly liberalized debt ceiling. In 1969, the legislature authorized DOT to pledge various airport revenues, including the aviation fuel tax, for redemption of revenue bonds.[7]

These two pieces of legislation had a profound effect on the negotiation for a new Exhibit I which began in 1968 but which took over two years to complete. Indeed, the 1968 legislation was deliberately timed to coincide with the opening of the negotiation for a new Exhibit I.

The new Exhibit I which took effect in July 1, 1970 (and is still in effect) set the airport use charge payable by the air carriers at whatever level necessary to achieve financial self-sufficiency of the entire airport system. In essence, the 1970 Exhibit I required the use charge to be computed by (1) deducting total revenues (except the use charge) from total expenses *of the entire airport system,* and then (2) dividing the deficit by chargeable landing weights to obtain the charge per thousand pounds landed. This method of calculation is similar to the one adopted in 1962, except that the formula adopted in 1970 required the inclusion of revenues and expenses of the entire system instead of HIA only.

The 1969 legislation impacted the 1970 Exhibit I as follows. Shortly after the enactment of the legislation, DOT issued a bond certificate which pledged various airport revenues as collateral for the redemption of all revenue bonds issued under the certificate and obligated the State to take a number of actions with regard to the fiscal management of the airport

[6] Act 20, SLH 1968.

[7] Act 10, SLH 1969.

system, including the generation in each fiscal year of net revenues in an amount equal to 35 percent of the revenue bond debt service payable in the fiscal year.[8] To meet the bond certificate's requirement that the annual net revenues equal 35 percent of the revenue bond debt service, Exhibit I included the amount equal to 35 percent of the revenue bond debt service paid in each fiscal year as an "expense" of the airport system.

The 1970 Exhibit I retained the other major features of the 1962 Exhibit I, such as crediting fuel taxes to user fees and charging interisland carriers 9 percent of the amount charged overseas carriers.

Experience with the 1970 Agreement

Ever since the new financial arrangement was implemented in 1971, the airport system's revenues have equaled its expenses. This result is sometimes referred to as a "no-profit, no-loss" situation. Each year, however, this no-profit, no-loss performance has actually resulted in a surplus equal to 35 percent of the revenue debt service requirements. This is because of the bond certificate requirement that the airport system generate net revenues in that amount annually and the inclusion of that amount as "expense" in calculating the annual use charge. This surplus has accumulated to more than $28 million between 1971 and 1976. These surplus revenues have been retained in the airport fund and from time to time have been made available for authorized airport projects.

A summary of the airport system's revenues, expenditures, and surplus under the 1970 amended Exhibit I is given in table 3.1. As shown, the revenue has been sufficient to produce the surplus required under the bond certificate (column [3]) and to cover all expenses, including the surplus, as mandated by law (column [2]). The table also shows the revenue-producing capability of the airport system. Between 1971 and 1976, the total cost more than doubled, but the revenue was nevertheless sufficient to meet all commitments.

The preceding observation that the airport system has been self-sufficient leaves many issues and questions unanswered. Self-sufficiency does not mean that the present system is achieving all that it should or that it is adequate. In the subsequent chapters, we discuss these issues and questions and offer suggestions as to how they may be dealt with.

Table 3.1

Summary of Revenues and Expenses For the Airport System, State of Hawaii, 1971–1976

(thousands of dollars)

Fiscal year ended June 30	Total revenues all airports (1)	Total expenses all airports (2)	.35 coverage requirement for revenue bonds (included under expenses in col. 2)[1] (3)
1971	$ 20,780	$ 20,777	$ 2,967
1972	24,384	24,380	3,613
1973	30,106	30,100	4,614
1974	32,933	32,925	4,810
1975	39,247	39,240	5,803
1976	48,996	48,990	6,914
Total	$196,446	$196,412	$28,721

[1] The bond certificate requires that an amount equal to .35 times the annual debt service be included as part of annual expenses, and that total revenues of the airport system equal (or exceed) all expenses, including this amount.

Source: Coopers & Lybrand, *State of Hawaii, Department of Transportation, Airports Division, Accountants Report,* fiscal years 1971–1976.

[8] $245 million of revenue bonds have now been issued under this bond certificate, which remains in effect until all revenue bonds have been repaid. Final repayment of existing revenue bonds is now scheduled for around the year 2000. The bond certificate places some important restrictions on the State, and subsequent parts of this report will discuss the relevant provisions and their implications at some length.

PART II

FINDINGS AND RECOMMENDATIONS

Chapter 4

INTRODUCTION

In this part we identify the issues that exist under the State's present financing policy. In particular, we focus on these questions: (1) how real is the self-sufficiency; is the airport system really paying its own way or is it being subsidized to some degree from external sources; (2) are the carrier-users of the airport system paying their fair share of the costs of the system?

Chapter 5 is devoted to a discussion of the first question; the remainder of this part is focused on the second question.

Chapter 5

IMPLICIT EXTERNAL SUBSIDIES

An implicit external subsidy arises when services are rendered by other state agencies to the airport system without reimbursement from the latter and the costs of these services are not recorded on the books of the airport system. If implicit subsidies exist, apparent costs of the system are less than true costs. A large implicit subsidy would put in question whether the airport system is in fact self-sufficient.

Our examination revealed that the Hawaii airport system may be considered to receive implicit subsidies in at least two areas: (1) interest-free construction loans made by the state general fund to the airport system and (2) administrative overhead costs paid by the airport system to the state general fund. We discuss each of these and conclude with some observations concerning remedial actions that may be taken with respect to these matters.

Interest-Free Construction Loans

From time to time, money is advanced from the state general fund to a special fund for the purpose of constructing capital improvements, pending the issuance of bonds for such construction. Upon the issuance of bonds, the general fund is reimbursed for the advance. By section 39–67, HRS, special funds are not charged any interest for the money so advanced.[1]

With respect to the airport system, the airport fund has from time to time received such advances. An example is the reef runway now nearing completion at HIA. In 1973 approximately $38 million was appropriated for construction of this project, and construction was begun promptly.[2] Between July 1, 1973 and June 30, 1975, cash advances to this project amounted to approximately $12 million. G.O. reimbursable bonds in the amount of $38 million were finally issued for the project on September 1, 1975. At that time the cash advance was repaid and the airport system began to be charged with debt service for this project.

The law forbidding the charging of interest on interfund transfers causes the State to forego interest that the State could otherwise earn. In the case of the reef runway, the State gave up interest on the $12 million advanced from the general fund. In essence, each time the airport fund is advanced money from the general fund for construction purposes, it receives a subsidy to the extent that it need not pay interest on the advance. In the reef runway case, we did not ascertain the exact amount and timing of each advance during the 26 months from July 1, 1973 to September 1, 1975. However, if state investments were earning 6 percent during that time and if the equivalent of $12 million was

[1]Section 39–67, HRS, deals with the transfer of funds, and states that *"no interest shall be charged upon any transfer so made."* [Emphasis added.]

[2]Act 218, SLH 1973.

outstanding for just one year, this project received an implicit subsidy of $720,000 in general fund earnings foregone.

Charge on Airport Fund for State Administrative Costs

Under section 36–27, HRS, all special funds, unless specifically exempted, are required by law to pay to the general fund a surcharge amounting to 5 percent of their operating revenues. A similar statute applicable specifically to the airport revenue fund is contained in section 36–28.5, HRS. Unfortunately, the purpose of this surcharge is not entirely clear, as the scanty legislative history of the surcharge falls somewhat short in identifying its purpose. A reasonable case can be made that the surcharge is intended simply as a tax on special funds. In the view of some, however, this surcharge is intended to defray the State's costs of providing central services by the legislature, the governor's office, and the state departments such as budget and finance, accounting and general services, and the attorney general. If this is so, then it appears anomalous that the surcharge is on revenues rather than expenditures. The State's central overhead costs occur mainly in connection with the *processing of expenditures* on behalf of the special fund; there is virtually no central service involved in collecting and depositing receipts.

If the surcharge is in fact intended to defray the cost of centrally provided services, two questions arise. The first question arises from the fact that proceeds from bond sales and federal grants are not counted amongst operating revenues when applying the surcharge. Indeed, insofar as the airport special fund is concerned, the amount necessary to cover the debt service on bonds is deducted from operating revenues before calculating the 5 percent surcharge, with the result that no surcharge is paid either when bonds are sold or when revenues are raised to pay them off. In effect, all bond-financed capital improvements escape any surcharge whatsoever. Query: why is this so? The amount of money involved is substantial. For example, take the case of bond issuance. Between May 1, 1969 (the date of issuance of the bond certificate) and June 30, 1976, approximately $270 million of revenue and reimbursable G.O. bonds were issued for airport construction. A 5 percent surcharge for overhead expenses incurred in the processing of $270 million of expenditures would have added $13.5 million to general fund revenues.

The second question is, why 5 percent? For the airports, various state agencies incur costs. The attorney general's office, for example, has several attorneys on full-time assignment to the department of transportation. Their salaries are contained in the attorney general's budget. Then, retirement and other personnel benefits of these attorneys are contained in a central overhead account in the department of budget and finance. Whether 5 percent represents an appropriate estimate of these costs is not clear.

Assuming that the purpose of the assessment is to defray the State's central overhead expenses, to the extent that (1) proceeds from bond sales and federal grants are not included in calculating the 5 percent surcharge and (2) the 5 percent is less than the actual cost of the State's central overhead expenses attributable to the airport system, the airport system is receiving an implicit subsidy.

Remedies

The implicit external subsidies flowing from the application of the statutes on no-interest advances and 5 percent surcharge (if the assumption is that the surcharge is for the purpose of recouping the indirect costs incurred by other state agencies in behalf of the airport system) violate the principle of self-sufficiency for the airport system. Thus, if the statutes were applicable to the airports alone (that is, if only section 36–28.5, HRS, were present), the remedy is fairly simple–amend the statutes to require the payment of interest by the airport special fund on all general fund advances and the payment of a reasonable surcharge on the expenditures of the airport system for state overhead expenses incurred in connection with such expenditures. However, we hesitate to recommend such statutory amendments at this time, since the statutes in question apply not only to the airport system but to other state agencies and programs. Included among such other state agencies and programs are undoubtedly those which are expected to be self-sufficient and those which are not. The scope of our study did not permit us to segregate the state agencies and programs into self-sufficient or non-self-sufficient categories. Thus, to amend the statutes to require the airports alone to pay interest on all general fund advances and to pay a reasonable surcharge on expenditures or cover the indirect administrative overhead costs of other state agencies in servicing the airport system in such expenditures may be unfair to the airports when other agencies and programs are also expected to be self-sufficient. On the other hand, to amend the statutes generally to require all agencies and programs, as the case may be, to make such payments may not be in the best interest of the State, particularly with respect to programs which are not intended to be self-sufficient.

This being so, we recommend, instead, as follows.

Recommendation

We recommend that the legislature examine sections 39–67, 36–27, and 36–28.5, HRS, to determine (1) the purposes of the sections and (2) the impact and advisability of amending the statutes to require the payment of interest on general fund advances for capital improvement construction and the payment of a reasonable surcharge on expenditures by (a) the airport system and (b) all state agencies and programs for the State's general overhead expenses incurred in servicing the airport system and other agencies and programs.

Chapter 6

INTERNAL SUBSIDIES

In this chapter, we lay aside the issue of subsidies from external sources and focus on the question: Who is paying for what costs of the airport system? This inquiry is a prelude to the further issue of who should be paying for what costs. The fact that the airport system is presently financially self-sufficient does not necessarily mean that each class of users is paying its fair share of the costs.

Here we observe what is being paid by each class of users; in the subsequent chapters we discuss the reasonableness and fairness of that which is being paid.

Summary of Findings

In summary, our findings are as follows:

1. Neither the overseas carriers nor the interisland carriers are paying the full costs of their programs.

2. Both the overseas carriers and interisland carriers are being heavily subsidized by off-airport concession revenues.

Program Categories

In an effort to determine who is paying for what costs, we identified the following as constituting the major components or programs of the airport system: (1) overseas services, (2) interisland and general aviation services, and (3) general support services.

Overseas services consist of all airport facilities (including terminals, hangars, aircraft parking areas, and concessions) and services rendered by the airport system which support the movement of overseas passengers and goods. Interisland and general aviation services consist of all airport facilities (including terminals, hangars, aircraft parking areas, and concessions) and services rendered by the airport system which support the movement of interisland passengers and goods. Some airport facilities and services support both the overseas services and the interisland and general aviation services. To the extent that the expenses and revenues of these facilities and services can be reasonably allocated to the two programs, they are included in each.

General support services include administrative and overhead services. They also include facilities used and services provided for the movement of both overseas and interisland passengers and goods, the expenses and revenues of which cannot reasonably be allocated to the two programs (e.g., access roads, lighting for access roads and runways, and common parking areas for airport patrons). (See appendix A for a description of the program categories.)

Revenues and Expenses

To each of the program categories, we assigned the revenues and expenses of the facilities and services provided in support of the program category in fiscal years 1971 to 1976. The expenses and revenues of the airport as reported by the airport accountant were used in making the assignments. Where facilities and services were provided in common to both the overseas services program and the interisland and general aviation program, the revenues and expenses of the facilities and services were allocated to both programs to the extent they could be fairly and reasonably allocated. Where they could not be fairly and reasonably allocated, they were included as revenues and expenses of general support services. Approximately 86 percent of the airport system's total operating expenses and 93 percent of its total debt service were assigned or allocated to the overseas and interisland and general aviation programs; the remainder was assigned to general support services. (See appendix A for details on the assignment and allocation of revenues and expenses.)

The assignment of one item of revenues is worthy of note. The item is concession revenues. The airport receives fees from concessionaires, both (1) those located in and who utilize a certain portion of the airport facilities and (2) those located entirely outside of the airport premises. The leases with concessionaires located in the airports typically require them to pay a fixed rent or a percentage of their gross receipts, whichever is higher. Payments received from these concessionaires were treated in our study as fair market rent or as reimbursements of the cost of providing the facilities occupied. As such, these revenues were credited directly to the program that the concession facilities support (except revenues which could not be fairly and reasonably allocated). Thus, revenues from concessions located inside the overseas terminal at Honolulu International Airport (HIA) were credited to the overseas services program.[1]

Revenues from concessions located entirely outside the airport were treated differently. Those concessionaires who do not occupy airport facilities or land and who do not cause the airport to incur any significant costs pay a fee for *access to the airport.* For example, the agreement with the duty-free shop is premised upon its having the *exclusive* right of access for in-bond deliveries at the airport. Revenues from concessions not located on airport property are in no way related to fair market rental or the cost of providing services. They arise solely from exercising the monopoly position of the State's airports. In our study, these payments were therefore considered to be more akin to a tax than a fair-market rent. Because of this important distinction, revenues from concessions not located at the airport were assigned to the general support program, rather than to either the overseas program or the interisland and general aviation program. A substantial portion of these off-airport concession revenues is from the duty-free store in Waikiki, but it also includes revenues from certain in-flight kitchens, and ground transportation services not located on airport property.[2]

The Results

For each of the program categories, overseas services and interisland and general aviation services, the expenses assigned were deducted from assigned revenues. The results for each of the six fiscal years 1971 to 1976 are displayed in table 6.1. Where a surplus (+) figure is shown, it means that in that fiscal year the program in question generated sufficient revenues to cover all costs assigned to the

[1]Revenues from concessions in the General Lyman Field terminal were prorated between the overseas services program and the interisland and general aviation program.

[2]From 1971 to 1973, an estimated average of 42.3 percent of all concession revenues, statewide, were derived off-airport; from 1974 to 1976, this average rose to 57.6 percent. At HIA alone, from 1971 to 1973, an estimated average of 44.8 percent of all concession revenues came from off the airports; from 1974 to 1976, the average was 60.2 percent. In terms of duty-free concession revenues, about 67 percent were allocated to the duty-free store in Waikiki in 1971 to 1973, and about 80 percent in 1974 to 1976.

program. Where a deficit (–) figure is shown, it means that in that fiscal year, the program in question failed to produce revenues sufficient to cover the costs assigned to the program.

For the program, general support services, table 6.1 displays the revenues and expenses assigned to that program category. For each of the six fiscal years, the revenues assigned to general support were more than sufficient to offset the costs assigned to the program. The amount of the surplus (+) for each year is easy enough to calculate. However, table 6.1 displays the revenues and expenses and not the amount of the surplus for two reasons.

First, in the case of overseas services and interisland and general aviation services, both the revenues and expenses arise from the facilities and services rendered by the airport system to these programs. Thus, the revenues and expenses for these programs can properly be offset against each other to secure a net figure. However, in the case of program support services, while the expenses arise from the facilities and services rendered by the airport system, a substantial portion of the revenues do not. Rather, it is derived solely from the monopoly position of the State's airports; that is, from concessions located off the airport premises. These off-airport concessions use very little or none of the facilities and services provided by the airport system and thus contribute little or no costs to the operations of the system. Table 6.2 shows how substantial the off-airport concession revenues are in relation to the total revenues assigned to general support.

Table 6.1

Net Surplus or Deficit of Major Airport Programs
1971–1976
(thousands of dollars)

Fiscal year ending June 30	Surplus (+) or deficit (-): Services to overseas passengers (1)	Surplus (+) or deficit (-): Services to interisland passengers and general aviation (2)	General support: Expenses (3)	General support: Revenue (4)
1971 ...	$+ 1,231	$ - 2,280	$ 2,199	$ 3,251
1972 ...	+ 851	- 2,812	2,385	4,352
1973 ...	- 1,309	- 2,883	3,177	7,375
1974 ...	- 5,786	- 3,214	3,274	12,282
1975 ...	- 4,173	- 5,306	3,539	13,205
1976 ...	- 2,620	- 7,097	4,052	13,774
Total ...	$ -11,806	$-23,592	$18,628	$54,060

Source: See appendix A, table A.1.

Table 6.2

The Make-Up of Total Revenues Assigned to General Support
(thousands of dollars)

Fiscal year ending June 30	Total revenues general support (1)	Total off-airport concession revenues (2)	Off-Airport duty free concession revenues (3)
1971	$ 3,251	$ 2,154	$ 2,088
1972	4,352	3,244	3,171
1973	7,375	6,129	6,049
1974	12,282	10,934	10,618
1975	13,025	11,377	11,040
1976	13,775	11,955	11,585
Total	$54,060	$45,793	$44,251

Source: Coopers & Lybrand, CPA, *State of Hawaii, Department of Transportation, Airports Division, Accountants' Report,* fiscal years 1971 through 1976, and fiscal records, airports division, department of transportation, State of Hawaii.

Second, revenues and expenses are shown for general support, rather than the surplus amount, because by displaying them rather than the surplus figure, a comparison can be made (1) between any surplus in overseas services and interisland and general aviation services and the expenses assigned to general support, and (2) between any deficit in overseas services and interisland services and the revenues assigned to general support. Such comparisons are relevant.

A comparison between any surplus in overseas services and interisland and general aviation services and the expenses assigned to general support is meaningful inasmuch as the expenses noted in general support are all properly allocable to overseas services and interisland and general aviation services. The expenses arise from the facilities and services provided by the airport system to the two programs. The only reason why they are not allocated in table 6.1 is that no fair basis could be found for such an allocation. A comparison between any deficit in overseas services and interisland and general aviation and the revenues shown under general support is relevant because such a comparison reveals the extent to which the overseas and interisland and general aviation programs receive support from sources which utilize little or none of the facilities and services of the airport system and thus contribute little or nothing toward the cost of operating the airport system. In the paragraphs which follow, we make these comparisons.

Overseas services. The program serving the overseas portion of the airport system showed a surplus in the years 1971 and 1972 (see column 1 of table 6.1). The surplus, however, was not sufficient to cover all general support expenses of the airport system for each of the years. When the size of the expenses assigned to general support is considered, it is doubtful that during each of the two years the overseas program and the overseas carriers paid their own way. For the four years 1973–1976, services to overseas passengers reflected sizeable program deficits, which means that the use charge paid by overseas carriers was not sufficient, together with other program revenues, to cover the expenses of the overseas portion of the airport system. For the six years under review, the cumulative deficit of the overseas program was approximately $11.8 million. This deficit does not include any portion of the $18.6 million of general support cumulative expenses.

Interisland and general aviation services. The interisland and general aviation program had a substantial deficit each year. For the six years 1971–1976, the interisland and general aviation program is estimated to have had a cumulative deficit of $23.6 million, not including any portion of the $18.6 million of general support cumulative expenses. This result was to be anticipated, since the use charge paid by the two interisland carriers is only 9 percent of the use charge paid by the overseas airlines, and user fees received from general aviation are quite small.

The financial performance of the 12 state airports used almost *exclusively* by the interisland carriers and general aviation is summarized in table 6.3 and the financial performance of the 6 more frequently used of these 12 airports is shown in table 6.4. The most interesting fact shown by tables 6.3 and 6.4 is that for the 6-year period from 1971 to 1976, revenues attributable to these airports did not even cover their operating expenses.[3] Despite

Table 6.3

Revenue, Operating Expense, and Debt Service of All Hawaii State Airports Except Honolulu International Airport and General Lyman Field

(thousands of dollars)

Fiscal year ending June 30	Revenues (1)	Operating expense (2)	Debt service (3)
1971	$1,144	$ 1,123	$ 2,254
1972	867	1,184	2,788
1973	1,414	1,492	3,075
1974	1,858	2,086	3,218
1975	1,984	2,654	3,733
1976	1,926	3,136	4,054
Total	$9,193	$11,673	$19,122

Source: Coopers & Lybrand, CPA, *State of Hawaii, Department of Transportation, Airports Division, Accountants' Report,* fiscal years 1971 through 1976.

[3] Although in the aggregate for the six-year period, the operating expenses exceeded the revenues of each of the six airports, in certain years the revenues exceeded the operating expenses for the Kahului, Lihue, and Ke-ahole airports. See appendix B, table B.1.

the growth in interisland travel,[4] the gap between operating expenses and revenues has widened over the years. Experience elsewhere indicates that this gap ought to have narrowed, not widened.

A broad basis of experience is reflected in a wide-ranging study conducted by the Federal Aviation Administration (FAA).[5] In this study the FAA measured the financial capabilities of carrier airports. It found a rather consistent relationship between the size of an airport and its financial capability. This relationship is depicted in figure 6.1. As depicted, the size of the airport is measured in terms of the number of passengers boarded each year, or "annual enplanements." The FAA found that the operating break-even point, that is the point where total revenues of an airport equal its operating expenses, is generally reached when annual enplanements number 97,000. It estimated that the ability to cover all operating expenses and to service all outstanding debt charges as well occurs at around 275,000 annual enplanements. It found that only when the annual enplanements reach 2,000,000 is an airport able not only to generate sufficient revenues to pay its operating and debt service expenses but also to finance continued expansion and growth of the airport.

Enplanements at Hawaii's six carrier airports (whose financial performance is reflected in table 6.4) are shown in figure 6.1 along the right-hand scale (the figures in parentheses indicate calendar year 1975 enplanements). On the basis of the break-even points shown, the airports at Lihue, Kahului, and Ke-ahole are far above the operating break-even point of 97,000 passengers. These airports should be able to pay all their operating expenses and also make a substantial contribution toward debt service. However, as noted in table 6.4, they are not now generating sufficient revenues to pay for their operating expenses.

The subsidy. The deficits experienced by both the overseas and the interisland and general

Table 6.4

Six-Year Summary of Revenue, Operating Expense, and Debt Service of Ke-ahole, Waimea-Kohala, Kahului, Kaunakakai, Lanai, and Lihue Airports
Fiscal Years 1971 through 1976*
(thousands of dollars)

Airport	Revenues	Operating expense	Deficit	Debt service
Kailua-Kona ..	$1,624	$2,322	$698	$13,519
Kamuela	187	510	323	–
Kahului	3,766	3,846	80	3,595
Kaunakakai ..	341	473	132	421
Lanai	124	295	171	–
Lihue	2,186	2,922	736	1,397

*See appendix B, table B.1 for year by year figures for each airport.

Source: Fiscal records, airports division, department of transportation, State of Hawaii.

aviation programs have required substantial subsidies. The subsidies have come from the revenues assigned to the general support program. Two observations are pertinent concerning the subsidies.

First, the subsidies have come principally from sources which have contributed little or nothing to the costs of the airport system. They have come from revenues from off-airport concessions. *Second,* the subsidies have been deliberate, and they have inured exclusively to the benefit of the air carriers, and to no other users of the airports. This result has been unavoidable under Hawaii's present airport

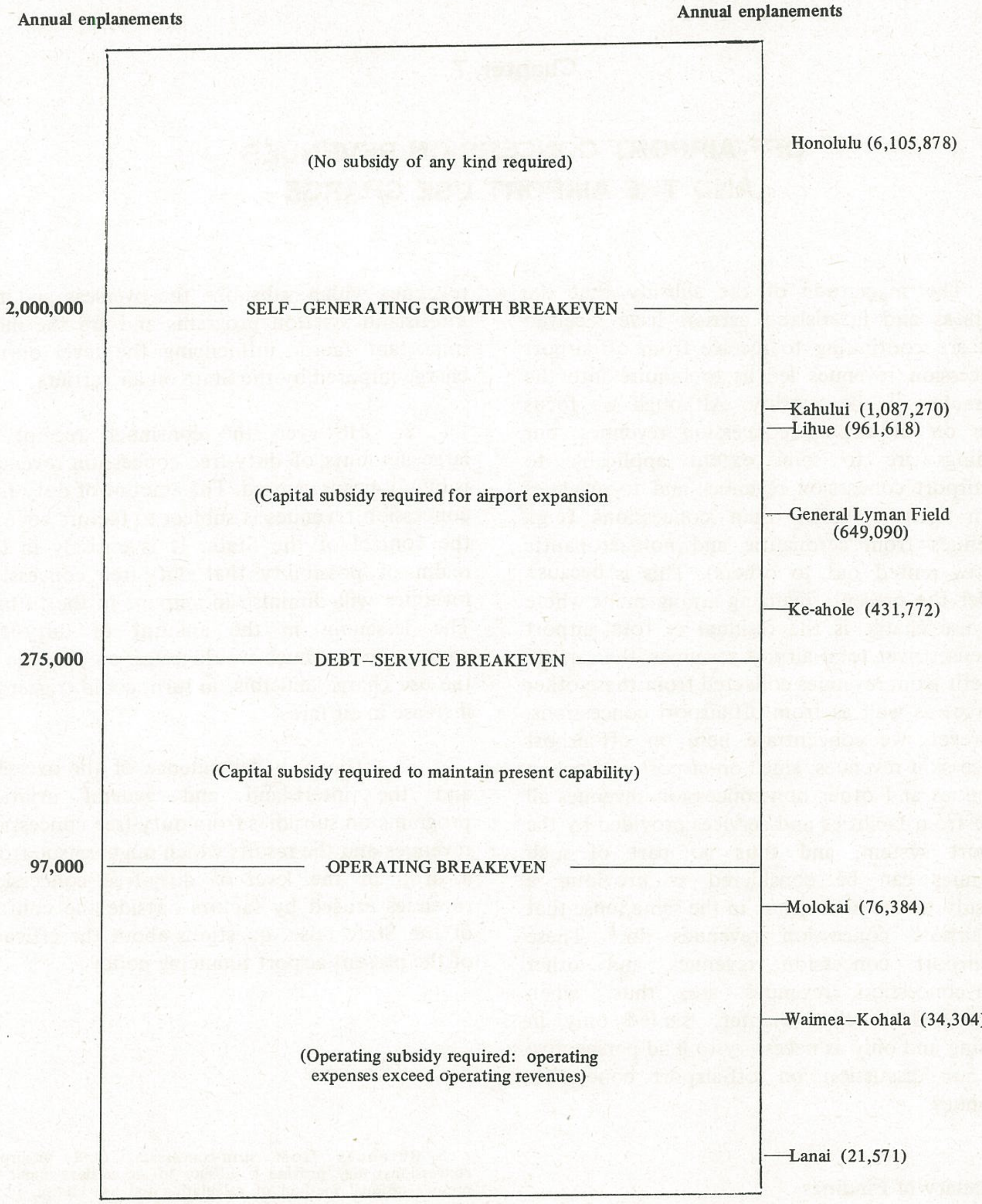
[4]Between 1970 and 1975, the number of passengers handled at all airports other than HIA and General Lyman Field increased by over 50 percent.

[5]See *Economics of Airport Operation, Calendar Year 1972,* prepared by The Aerospace Corporation for Office of Aviation Economics, Federal Aviation Administration, U.S. Department of Transportation (April 1974). See also William R. Fromme, *The Airport Passenger Head Tax: Analysis of Its Potential Impact,* Office of Aviation Policy, Federal Aviation Administration, U.S. Department of Transportation, (July 1974).

financing policy of exact self-sufficiency which requires all revenues of the airport system, other than use charges, to be applied to the total cost of the system before the use charge to be paid by the air carriers is determined and which limits the use charge imposed to the difference between the total cost of the system and all revenues of the airport other than use charges. In light of the fact that interisland carriers pay a use charge of 9 percent of the charge paid by overseas carriers, the benefit has been greatest to the interisland carriers.

Figure 6.1

Airport Financial Capabilities Compared with Needs, by Size of Airport (1975 enplanements at Hawaii airports shown in parentheses at right)



Source: *Economics of Airport Operation, Calendar Year 1972,* prepared by The Aerospace Corporation for Office of Aviation Economics, Federal Aviation Administration, U.S. Department of Transportation, April 1974.

Chapter 7

OFF-AIRPORT CONCESSION REVENUES AND THE AIRPORT USE CHARGE

The magnitude of the subsidy that the overseas and interisland carriers have received and are continuing to receive from off-airport concession revenues led us to inquire into the character of the subsidy. Although we focus here on off-airport concession revenues, our findings are to some extent applicable to on-airport concession revenues and to revenues from sources other than concessions (e.g., revenues from aeronautic and non-aeronautic spaces rented out to others). This is because, under the present financing arrangement where the use charge is the residual of total airport expenses over total airport revenues, the carriers benefit from revenues collected from these other sources as well as from off-airport concessions. However, we concentrate here on off-airport concession revenues, since on-airport concession revenues and other non-concession revenues all arise from facilities and services provided by the airport system, and thus no part of such revenues can be considered as providing a subsidy to the air carriers in the same sense that off-airport concession revenues do.[1] These on-airport concession revenues and other non-concession revenues are, thus, when mentioned in this chapter, treated only in passing and only as necessary to lend perspective to our discussion on off-airport concession revenues.

Summary of Findings

1. The duty-free concession revenues constitute the bulk of all off-airport concession revenues which subsidize the overseas and the interisland aviation programs and are the most important factor influencing the level of use charge imposed by the State on air carriers.

2. However, the continued receipt of large amounts of duty-free concession revenues is by no means assured. The amount of duty-free concession revenues is subject to factors beyond the control of the State. It is entirely in the realm of possibility that duty-free concession revenues will diminish in amount in the future. The lessening in the amount of duty-free concession revenues would cause an increase in the use charge and this, in turn, could trigger an increase in air fares.

3. The high dependence of the overseas and the interisland and general aviation programs on subsidies from duty-free concession revenues and the results which might ensue from a drop in the level of duty-free concession revenues caused by factors outside the control of the State raise questions about the efficacy of the present airport financing policy.

[1] Revenues from non-concessions (and on-airport concessions) may provide a subsidy to air carriers under the present residual method of calculating the use charge, if the revenues are in excess of the costs of facilities and services provided by the airport system to the producers of these revenues and the air carriers are not otherwise paying for all costs of the airport facilities and services provided directly to them by the airport system.

Impact of Off-Airport Concession Revenues on Use Charge

Since the benefit of concession revenues to the air carriers is deliberate and fully intended, and since the present airport financing policy is one of exact self-sufficiency (that is, revenues and expenses be exactly equal), the amount of off-airport concession revenues collected by the airport system influences the use charge paid by the carriers. That is to say, the level of the use charge varies with the amount of off-airport concession revenues received. Of course, the use charge is also dependent on the amount of revenues generated from on-airport concessions and other non-use charge sources, but the greatest impact on the use charge comes from off-airport concession revenues, particularly the off-airport, duty-free concession.

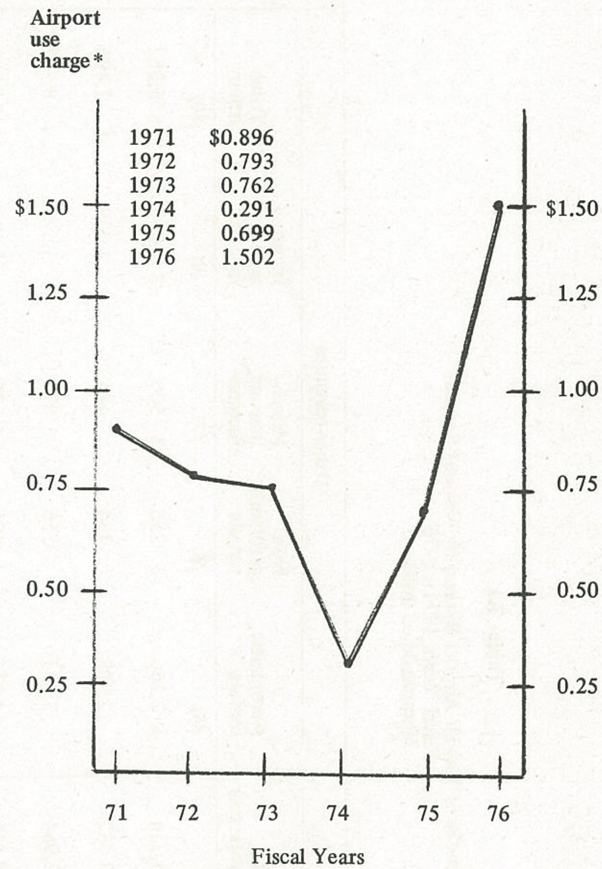
In figure 7.1, we depict the effective use charge per thousand pounds of aircraft weight landed in fiscal years 1971 to 1976.[2] In table 7.1, we note the amount of revenues collected from all sources by the airport system in 1971 to 1976. Table 7.2 translates the amount of revenues received by each source into a percentage of the total airport revenues received.

It is quickly evident from an examination of the figure and tables that the variations in the use charge have resulted from the variations principally in concession revenues. The variations in concession revenues in turn have resulted from the variations in duty-free concession revenues. Indeed, there is a high correlation between the variations in duty-free concession revenues and the variations in the use charge. As duty-free concession revenues increased, the effective use charge decreased, and this occurred despite the fact that the total airport expenses increased. In 1974, in particular, the sharp drop in effective use charge was accompanied by a steep climb in duty-free concession revenues.[3]

The high correlation between duty-free concession revenues and the use charge imposed on carriers takes on an added significance when

Figure 7.1

Airport Use Charge Per 1,000 Pounds of Landing Weights
Fiscal Years 1971–1976
(Overseas Carriers Only)



* $ per thousand pounds of aircraft landing weights.

Source: See appendix C, table C.1.

[2]The airport accounting records show the fuel tax as a separate item. The effective use charge represents the sum of (1) fuel taxes credited to the use charge, plus (2) net use charges actually paid, after retroactive adjustments and credits, divided by (3) actual gross landing weights.

[3]The fairly steep rise in use charge in 1976, even though concession revenues constituted 43.4 percent of the total airport revenues, is attributable in the main to fewer landings. With the use of more and more wide-bodied aircraft, the air carriers experienced less landings in fiscal years 1975 and 1976, even though the volume of passengers increased. In addition to fewer landings, the rise in the effective use charge in 1976 is attributable to an increase in the costs of the airport system. In 1976, debt service on bonds recently issued for the construction of the reef runway at HIA and improvements at General Lyman Field in Hilo commenced, and salary increases resulting from collective bargaining were instituted. Thus, the rise in the effective use charge in 1976 does not in any way minimize the influence of concession revenues on use charge.

Table 7.1

Revenues of Hawaii Airport System by Various Sources
Fiscal Years 1971–1976
(thousands of dollars)

Fiscal year	Use charge[1]	Concession revenues: Duty-free concessions	Concession revenues: Other concessions	Concession revenues: Total concessions	Other revenues: Aeronautic rentals	Other revenues: Non-aeronautic rentals	Other revenues: Miscel-laneous income[2]	Other revenues: Invest-ment income	Other revenues: Total other	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1971	$ 8,644	$ 3,114	$ 3,140	$ 6,254	$ 2,166	$ 256	$ 500	$ 2,960	$ 5,882	$ 20,780
1972	8,852	4,733	3,304	8,037	2,908	334	444	3,809	7,495	24,384
1973	8,595	9,028	3,936	12,964	3,441	556	874	3,676	8,547	30,106
1974	3,269	13,273	5,040	18,313	4,011	495	1,525	5,320	11,351	32,933
1975	7,822	13,800	6,101	19,901	4,626	508	1,288	5,102	11,524	39,247
1976	16,361	14,479	6,804	21,283	4,821	435	898	5,198	11,352	48,996
Total	$53,543	$58,427	$28,325	$86,752	$21,973	$2,584	$5,529	$26,065	$56,151	$196,446

[1] Represents gross use charge revenues prior to deducting credits claimed for fuel taxes.

[2] Includes unclaimed or disallowed fuel tax credits.

Sources: Coopers & Lybrand, CPA, *State of Hawaii, Dept. of Transportation, Airports Division, Accountants' Report,* fiscal years 1971–1976; fiscal records of the airports division, department of transportation, State of Hawaii.

Table 7.2

Revenues of Each Revenue Source as a Percentage of Total Airport Revenues

Fiscal Years 1971–1976

		Concession revenues			Other revenues				
Fiscal Year	Use charges[1]	Duty-free concessions	Other concessions	Total concessions	Aeronautic rentals	Non-aeronautic rentals	Miscellaneous income[2]	Investment income	Total other revenues
1971	41.6%	15.0%	15.1%	30.1%	10.4%	1.2%	2.4%	14.3%	28.3%
1972	36.3	19.4	13.6	33.0	11.9	1.4	1.8	15.6	30.7
1973	28.6	30.0	13.1	43.1	11.4	1.9	2.9	12.2	28.4
1974	9.9	40.3	15.3	55.6	12.2	1.5	4.6	16.2	34.5
1975	19.9	35.2	15.5	50.7	11.8	1.3	3.3	13.0	29.4
1976	33.4	29.5	13.9	43.4	9.8	0.9	1.8	10.6	23.2
Spread between highest and lowest	31.7%	25.3%	2.4%	25.5%	2.4%	1.0%	2.8%	5.6%	11.3%

[1]Represents gross use charge revenues prior to deducting credits claimed for fuel taxes.

[2]Includes unclaimed or disallowed fuel tax credits.

Source: *Ibid.*

one considers that (1) more than half of all concession revenues statewide have come from duty-free concessions[4] and (2) in fiscal years 1971 to 1973, an estimated 67 percent, and in fiscal years 1974 to 1976, an estimated 80 percent of the duty-free concession revenues were generated at the concession located off-airport in Waikiki.

Uncertainty of Duty-Free Concession Revenues; Some Projections

The impact of duty-free concession revenues on the use charge, particularly the impact of the off-airport, duty-free concession revenues, presents some concerns. Although non-use charge revenues from sources other than the duty-free concession are rather stable and predictable (see table 7.2), revenues from the duty-free concession are not. Duty-free concession revenues are fragile at best. They are highly dependent on the policy of the Japanese government. Duty-free concession revenues have grown in recent years largely due to purchases made by Japanese nationals under a liberal Japanese government policy toward importation of duty-free goods into Japan. That such a liberal Japanese policy will continue in the future is by no means certain. In addition, Hawaii thus far has enjoyed minimal competition from duty-free shops situated elsewhere. This situation, however, is not likely to continue. For instance, a new duty-free shop is scheduled to open soon in Guam.

[4]An estimated 61.9 percent during fiscal years 1971 to 1976 and an estimated 69.7 percent during fiscal years 1974 to 1976. The percentage of duty-free concessions is higher if only HIA is considered.

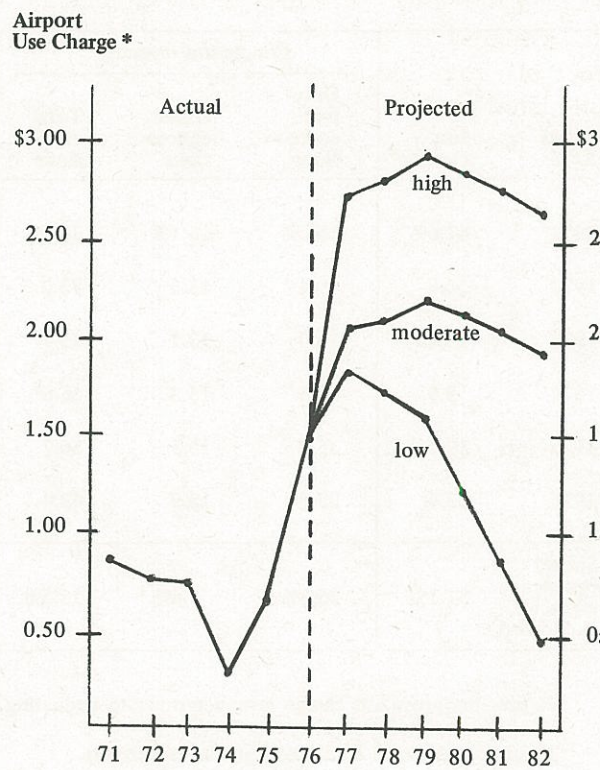
The difficulty here is that these factors which influence the rise and fall of duty-free concession revenues are completely outside the control of the state government. Thus, conceivably, revenues from duty-free concessions could diminish in the future, with a consequent upward effect on the use charge imposed on the carriers. To determine the degree to which the rise and fall of duty-free concession revenues might affect the use charge, if the use charge continues to be employed as a residual balancing item, we projected the airport use charge on varying assumptions about the duty-free concession revenues.

Three alternate assumptions about the level of duty-free concession revenues and other airport revenues and expenses were developed. The assumptions and the use charge that result from each assumption are summarized here and detailed in appendix D. Actual 1971 to 1976 and projected 1977 to 1982 airport use charges are plotted in figure 7.2. The impact projections are labeled as low, medium, or high according to the effect on the airport use charge of the three alternate assumptions. The projections range from a low of $.50 to a high of $2.95 per thousand pounds landed.

Moderate projection.[5] The moderate impact projection may be regarded as the single "most likely" outcome, although all outcomes spawned by the low and high impact projections are plausible. It assumes that concession revenues will continue to grow but at a compound annual rate of 8 percent through 1980 and thereafter at a compound annual rate of 5 percent. In comparison to the previous growth rate of 25 percent, this assumption could be on the conservative side. It further assumes periodic rate increases in future aeronautical rental revenues and generally a full space rental. All other revenues are assumed to remain essentially unchanged. With respect to expenses, the moderate impact projection assumes that operation and maintenance costs will grow at a compound annual rate of 10 percent, and administrative expenses will grow at a compound annual rate of 5 percent.

Figure 7.2

Airport Use Charges
Actual Fiscal Years 1971–1976
And Projected Fiscal Years 1977–1982



*$ per thousand pounds of aircraft landing weight.
See appendix D.

Low impact projection. The low impact projection is slightly optimistic, but it can be easily justified in light of recent growth rates. It assumes concession revenues to grow at a compound annual rate of 15 percent. This growth rate is somewhat higher than that for the moderate impact projection, but still considerably below the growth rate of the past.

[5]The moderate projection is an updated version of the projection developed by the department of transportation, airports division's consulting engineer in 1975. See Speas-Wemple-Warskow, *Report on Traffic Revenues and Expenditures for the Airports System of the State of Hawaii*, June 12, 1975. The consultant's projection was based on fiscal year 1974 data. In this report, the projection is based on the 1976 actual data. Our low and high projections are also based on fiscal year 1976 data. The methodology used is the same as that for the moderate projection. We observe that the consultant's projection made in 1975 was quite accurate for fiscal years 1975 and 1976. The actual experience in fiscal years 1975 and 1976 was very close to the forecasts made by the consultant in his projection.

In terms of expenses, the low impact projection assumes that operation and maintenance expenses will grow at a compound annual rate of 6 percent rather than the 10 percent rate assumed for the moderate impact projection. This assumption is realistic if operating expenses taper off after the major construction phase is completed around 1979. All other assumptions for the low impact projection are the same as for the moderate impact projection.

If concession revenues and expenses grow in accordance with the assumptions, by 1982, the effective use charge could decline to $.50, unless a minimum use charge is specified at a higher level in the airline leases at that time.[6]

High impact projection. The high impact projection assumes a decline in duty-free concession revenues to only the guaranteed minimum level provided in the existing duty-free concession lease which expires on December 31, 1980. For 1981 and 1982, the guaranteed minimum is assumed to increase by $800,000 per year, which is the same rate by which it increases in the existing lease. This assumption is in the realm of possibility. The Japanese government could, for instance, establish a duty-free shop at the airport in Japan, enabling Japanese nationals returning from abroad to purchase duty-free goods in Japan rather than in Hawaii.

The high impact projection assumes, however, that all other concession revenues will grow at a compound annual rate of 5 percent. All other revenues are assumed to materialize at the same levels for the moderate impact projection. With respect to expenses, the high impact projection assumes the same growth as for the moderate impact projection.

Inflation. The three projections shown in figure 7.2 do not reflect any inflation in the general price level. An analysis of the impact of future inflation is contained in appendix D. To summarize that analysis, a high proportion (60 to 68 percent by 1982) of the costs of the airport system consists of debt service on bonds already issued. Since the annual debt service amount is fixed, inflation that occurs between 1976 and 1982 will affect only a small portion of the expenses of the airport system. In contrast, concession revenues and rental of space which constitute a major portion of the airport system revenues (over 66 percent in 1976) can be expected to increase with inflation; concession revenues because they are based on gross revenues, and rental of space because of periodic adjustments in fair market rates provided in the leases. This means that future inflation will, in effect, reduce the burden placed on the use charge, assuming that it continues to be computed as a residual balancing item. Thus, in terms of airport finances, neither the airport nor the airlines need be overly worried about the impact of future inflation. Under the present arrangement, future inflation will work to the distinct advantage of airlines.

Summary. The most important point to emerge from the foregoing analysis is that there is a wide range of possible future use charges, depending on what happens to the level of duty-free concession revenues. On the one hand, it is entirely plausible that between 1977 and 1982 the share of total revenues paid by air carriers could again approach that of 1974, which was indeed rather low. On the other hand, the carriers could also pay a substantially higher portion of the total bill than in the past.

Effect of Projected Use Charge on Air Fare

That the use charge might vary widely in the future, depending on the duty-free concession revenues, is not in itself the matter of concern. What is disturbing is the possible effect of a high use charge resulting from diminished duty-free concession revenues on air fares.

U.S. airlines are said to allocate about 3 percent of total operating costs, or between 2 and 3 percent of total revenues, for domestic

[6]The present specified minimum is 27 cents per 1000 pounds of aircraft landing weight.

landing fees.[7] Using these figures as a bench mark, a way of looking at the impact of Hawaii's use charge on air fares is to determine what percentage the use charge constitutes of the average one-way fare to Hawaii and of the average one-way interisland fare. If the use charge exceeds 3 percent of the one-way fare, it can be reasonably assumed that the use charge will result in higher air fares. On the other hand, if the use charge is less than 3 percent, it is not likely that the use charge will result in higher air fares.

One observation is pertinent here. A low use charge will not necessarily result in lower air fares. A low use charge means a high level of duty-free concession revenues, but since duty-free concession revenues are sensitive to the policy of the Japanese government on duty-free importation and on other factors beyond the State's control, it is highly unlikely that the carriers will rely on a continued high level of duty-free concession revenues and pass on their savings to air travelers. This means that a high level of duty-free concession revenues would simply constitute a windfall to the air carriers. This is precisely what happened in the past when duty-free concession revenues reached unprecedented levels. None of the savings resulting from high levels of duty-free concession revenues and low use charges was ever passed on to air travelers, even though the use charges actually paid were considerably less than 3 percent of air fares.

In the paragraphs which follow, we present our findings regarding the use charges of the past six years and the projected use charges from 1977 to 1982 as a percentage of one-way air fare to and within the State.

The use charge in relation to overseas air fares. Estimating the average one-way fare to Hawaii is not a simple matter, because the fare structure to Hawaii happens to be among the most complicated fare structures in commercial aviation. The fare to Hawaii depends on the distance traveled; the day of the week; whether the person traveling is an adult or a child; whether the passenger is traveling first-class, coach, or economy; the length of the visit; whether a special tour discount is applicable; etc. We have therefore made a "guesstimate" of the average one-way fare to Hawaii, which is shown in column (1) of table 7.3. Our estimated one-way fare is slightly greater than the minimum economy fare between the West Coast and Hawaii.[8] The increase in the estimated fare

Table 7.3

Airport Use Charge in Relation to the One-Way Fare to Hawaii Fiscal Years 1971–1982

Fiscal year ending June 30	Average one-way fare on non-stop flights to Hawaii[1] (1)	Airport use charge per arriving passenger[2] (2)	Use charge as a percentage of one-way fare (3)
	Actual		
1971	$130	$3.61	2.78%
1972	130	3.30	2.54
1973	130	3.18	2.44
1974	135	1.06	0.78
1975	140	2.16	1.54
1976	145	3.94	2.72
	Projected[3]		
1977	150	4.88–7.16	3.26–4.78
1978	158	4.34–7.14	2.75–4.52
1979	165	4.01–7.37	2.43–4.47
1980	174	3.21–7.17	1.84–4.12
1981	182	3.20–6.82	1.76–3.75
1982	191	1.21–6.54	0.63–3.42

[1] Increases in the assumed one-way fare reflect increasing length of non-stop flights as well as projected fare increases.

[2] Source: Appendix D, table D.4.

[3] Figures in columns (2) and (3) are the low- to high-impact projections.

[7] "Landing Fee Increases Punish Carriers," *Aviation Week and Space Technology,* Vol. 105, No. 5 (August 2, 1976), pp. 36–37.

[8] If a passenger originating in, say, Chicago were to stop enroute in San Francisco, the airline would have to pay two landing fees on this passenger. If this same passenger were to fly to Hawaii on a non-stop flight, then only one landing fee would be applicable. The desired statistic would thus be the average fare received by the airlines for the last non-stop portion of all flights to Hawaii. Due to a lack of data, we have been forced to "guesstimate" the average fare on non-stop flights to Hawaii.

reflects anticipated fare increases as well as an increase in the average length of non-stop flights to Honolulu (e.g., an increasing number of non-stop flights from places like Chicago, Denver, or Dallas).

The airport use charge as a percentage of our estimated one-way fare is given in column (3) of table 7.3. Based on these figures, the only times during the years 1971–1976 that the airport use charge approached 3 percent of the average one-way fare were in 1971 and 1976. Future use charges may fall anywhere between $.50 and $2.95 per thousand pounds landed (or even outside this range). Should the projected low use charges shown in figure 7.2 materialize, they would average about 2.1 percent of the estimated one-way fare to Hawaii. It can reasonably be concluded that since the low use charges do not approach 3 percent of the estimated one-way fare, they will not cause any increase in air fares.

Turning attention to the other extreme, a use charge of $2.95 per thousand pounds landed would be equivalent to about $7.37 per landing passenger. This is about 4.4 percent of our estimated one-way fare to Hawaii. Thus, if the use charge were to rise to such a level and remain at that high level, it could well mean its explicit inclusion in the fare calculation to Hawaii. Although little is known about the elasticity of demand for pleasure travel to Hawaii (it has been estimated at approximately unity in mainland situations where automobile travel furnishes major competition), it is certain that fare increases will not increase tourism–they can only have the opposite effect.[9]

Use charge in relation to interisland air fares. Due to Hawaii's geography, interisland flights are among the shortest scheduled flights anywhere in the country, and Hawaii's two major air carriers probably have the shortest average haul of all fully certificated air carriers in the country. Because the distances involved are so short, interisland fares reflect a relatively high cost per mile. As with the overseas air fares, we have "guesstimated" the average one-way interisland fare. This is shown in table 7.4, column (1). The use charge per arriving passenger shown in column (2) is based on the current practice of the interisland carriers paying an airport use charge equal to only 9 percent of that paid by overseas carriers. Since the overseas use charge has averaged less than $.90 per thousand pounds landed in the past years, the interisland carriers in effect have paid only a few cents per thousand pounds of landed weight.

The airport use charge as a percentage of the average one-way fare is shown in column (3) of table 7.4. As shown there, during the years

Table 7.4

Airport Use Charge in Relation to Average One-Way Interisland Fare Fiscal Years 1971–1982

Fiscal year ending June 30	Average one-way inter-island fare (est.) [1] (1)	Airport use charge per arriving passenger[2] (2)	Use charge as a percentage of one-way fare (3)
		Actual	
1971	$20	$.15	.75
1972	20	.12	.60
1973	21	.11	.52
1974	22	.04	.18
1975	23	.09	.39
1976	24	.19	.79
		Projected[3]	
1977	25	.23–.34	.93–1.36
1978	26	.21–.35	.82–1.34
1979	27	.20–.36	.73–1.34
1980	28	.16–.35	.56–1.25
1981	29	.11–.33	.37–1.14
1982	30	.06–.32	.19–1.06

[1] Estimated airfares shown do not reflect discounted airfares which went into effect in late 1976.

[2] Source: Appendix D, table D.5.

[3] Figures in columns (2) and (3) are the low- to high-impact projections.

[9] If elasticity of demand is unity, increases in price result in equivalent reduction in demand. Thus, a 2 percent increase would, at unity, reduce pleasure travel by 2 percent.

1971 to 1976, the use charge was considerably less than 1 percent of the average fare. For the years 1977 to 1982, it appears that the use charges will not exceed 1.5 percent of the average one-way fare, even if the high projection should materialize. Thus, it would appear that no increases in interisland fares attributable to use charges need to be anticipated. This is true, however, only so long as the 9 percent rule continues to hold. That it will continue to do so, if the high projection comes true, is not all that certain.

Under existing Exhibit I of the basic airline leases, the 9 percent rule is applicable in any fiscal year only to the extent that the actual deficit (expenses less revenues other than use charges) for the neighbor island airports, other than General Lyman Field in Hilo, does not exceed the deficit that was estimated for the fiscal year. If the actual deficit exceeds the estimated, the excess is not subject to the 9 percent rule, but is prorated among all carriers by actual weights landed at the neighbor island airports. Since the interisland carriers are almost the exclusive users of these neighbor island airports, the excess deficit falls on them. Moreover, the estimated deficit (expenses less revenues other than use charges) for the neighbor island airports, other than General Lyman Field, for each fiscal year is subject to negotiation and agreement between the State and the air carriers utilizing the Honolulu International Airport. If the State and the airlines cannot agree on the amount of the deficit, all of Exhibit I is nullified and the State must establish for the fiscal year in question an airport use charge or landing fee by rules and regulations.

The implication of the above is that if the projected high use charges should materialize, the overseas carriers are not likely to agree to higher deficit figures for the neighbor island airports which would result in high use charges that they would thereby be required to pay, particularly if such high use charges mean higher overseas air fares. In recent years, the use charges which the overseas carriers paid had placed a burden on overseas air fares three to four times as great as the burden that the interisland use charge had imposed on interisland air fares. The overseas air carriers are not apt to agree to deficit figures which result in use charges which further increase the burden on overseas air fares. Rather, they are likely to push for a low deficit estimate or opt for no agreement at all. In either case, it means that the use charges that the interisland carriers would have to pay would probably be higher than those reflected in table 7.4. Exactly what impact such higher use charges will have on interisland fares is not entirely clear. However, that the effect would probably be adverse is manifested when one considers that the bulk of future airport capital improvements is slated to occur on the neighbor islands rather than at the Honolulu International Airport.

Efficacy of Present Financing Policy

The possible diminishing level of duty-free concession revenues and the resulting impact on air fares raise serious questions about the efficacy of the present airport financing policy. That the system as a whole should be self-sufficient is not questioned. However, the following require review:

(1) That the system should produce an exact no-profit, no-loss situation every fiscal year.

(2) That the use charge should be established at a level sufficient to produce charges equal to the residue of *all system* expenses over *all system* non-use charge revenues.

(3) That the use charge for interisland carriers should be limited to 9 percent of the use charge for overseas carriers.

These features in combination make the use charge highly dependent on the level of duty-free concession revenues.

Perhaps even more undesirable in the first instance is the fact that the above enumerated attributes of the present airport financing policy obscure rather than make evident the potential dangers of the system's heavy reliance on duty-free concession revenues. They hide rather than surface the subsidies that flow to the air carriers from duty-free concession revenues. Because the subsidies are hidden, the connection between the level of duty-free concession revenues and air fares is not readily apparent.

One other effect of the present policy needs to be observed. When the level of duty-free concession revenues is high, the 9 percent rule results in interisland use charges that are so low that they bear little or no relationship to the costs of the interisland program. Such has been the case in the past years. Use charges that have little or no relationship to program costs tend to cause the carriers to have little incentive to promote lower program costs or better cost controls. Rather, they tend to lead the carriers to request even higher subsidies. Yet, the costs of the program are precisely the costs that the interisland carriers would be required to support if duty-free concession revenues should diminish and the overseas carriers refuse to bear the burden of such costs.

From the discussion above, it appears that the interests of the State are best served if the airport financing policy is refashioned to make the use charge less dependent on the vagaries of duty-free concession revenues, to surface rather than hide the internal subsidies that flow to the carriers, and to require the interisland carriers to assume greater responsibility for the costs of the interisland program. How this may be accomplished is the subject of the next chapter.

Chapter 8

FINANCING POLICY FOR THE AIRPORT SYSTEM

In this chapter we discuss the kind of financing policy that the State might pursue to reduce the dependence of the use charge on the uncertainties of duty-free concession revenues and to foster greater responsibility on the carriers for the costs of the airport system. The suggestion here is not intended as hard and fast. There are undoubtedly ways in which our suggestion might be improved upon. Our suggestion here is intended to provide a framework through which the deficiencies in the present airport financing policy might be corrected.

Summary

By way of a summary, the financing policy we suggest consists of the following:

1. All costs and expenses of the airport system be accounted for by the following program components: (a) overseas, (b) interisland and general aviation, and (c) general support.

2. All costs and expenses of the system arising from facilities and services provided on the airport premises be allocated to the overseas and the interisland and general aviation programs. All such costs and expenses that are not reasonably allocable, and all revenues derived from sources situated off the airport premises be assigned to general support.

3. The overseas program be self-sufficient; that is, that it be required to generate sufficient revenues (from use charges, rentals, and concession revenues) to meet all of its expenses. The interisland and general aviation program be self-sufficient to the extent of 50 to 60 percent of the costs of the program.

4. Revenues from off-airport concessions and other sources be accumulated and be used (a) to pay for general support expenses not otherwise covered by other general support revenues, (b) to subsidize the interisland and general aviation program to the extent of 40 to 50 percent of the costs of the program, (c) to subsidize the overseas program should the program be unable to pay for all of its costs without the necessity of raising the use charge to such a level as to cause an increase in air fares, (d) to finance general aviation, and (e) to finance interisland airport capital improvements.

Constraints

The basic airline leases are for a term ending June 30, 1982, but with an option in the airlines to extend the leases for two successive five-year periods. This means that the lease term, on the outside, extends to June 30, 1992, some 15 years from now. In addition, there are now outstanding certain revenue bonds which do not mature until the year 2000. The proposed financing policy set forth here is intended to cover the period of the leases and the bond issues. Therefore, before discussing the proposed policy itself, it is pertinent to inquire whether there are any provisions in the basic lease (which are not alterable over the period in question) or in the bond certificates under which the revenue bonds were issued, which constrain or limit the options available to the State in refashioning its financing policy for its airport system.

The bond certificate. There are today some $ 245 million in airport revenue bonds outstanding, with the revenues of the airport system as their sole collateral. Thirty-two million dollars more are authorized but unissued. All of the outstanding bonds were issued under a "Certificate of the Director of Transportation providing for the issuance of State of Hawaii Airports System Revenue Bonds." The original certificate was dated May 1, 1969, and supplemental certificates were issued for subsequent bond offerings. The substantive parts of the original certificate were not changed by any of the supplements.

Leaving aside the requirements for direct funding and payment of bonds and the interest thereon, there are at least three provisions in the bond certificate which affect the options of the State in financing its airports. They are: (1) the definition of "Revenues" that must be deposited in the airport revenue fund and that constitute the collateral for the bonds;[1] (2) the definition of "Undertaking," the revenues of which are required to be placed in the airport revenue fund;[2] and (3) the stipulation of the kinds and priorities of payments that may be made from the airport revenue fund.[3]

"Revenues" are defined to include "all income, revenues, and moneys derived by the State of Hawaii from the ownership by the State or operation and management by the Department of the Undertaking," later elaborated to include revenues "derived from or arising through . . . the Undertaking." The only general exceptions are gifts, grants, and bond proceeds, but it is explicitly provided that tax revenues other than aviation fuel taxes need not be considered "revenues."

"Undertaking" is defined as "the statewide system of airports of the State of Hawaii and includes all airports, . . . rights or interests in airports, . . . now or hereafter belonging to or controlled by the State of Hawaii." The numerous specific inclusions refer, among others, to buildings, land and water areas, roads, parking lots, equipment, and any property or facility constructed or acquired from bond proceeds. The only important exclusion is properties subject to special facility lease, and this exclusion is somewhat qualified by other provisions of the certificate.

The uses to which the revenues from the undertaking may be applied are specifically enumerated in a priority order. Higher priority uses must be fully satisfied before funds may be applied to others. The uses by priority are:

1. to pay for all revenue bonds and interest, including reserves;

2. to pay the costs of operation, maintenance and repair;

3. to pay for major maintenance, renewal, and replacement costs;

4. to reimburse the general fund of the State for all bond requirements for general obligation bonds issued for the airports system;

5. to provide for betterments and improvements;

6. to provide for special reserve funds as are or may be created by law; and

[1] Art. I, Sec. 1.01(u).

[2] Art. I, Sec. 1.01(x).

[3] Art. VI.

7. for any other purposes connected with or pertaining to the issuance of bonds or the airport system, or both, now or in the future that may be authorized by law. The State of Hawaii, however, is specifically restricted from transferring to its general fund or to apply to any other purposes any part of the revenues from the airports or aviation fuel taxes, unless and until adequate provision has been made for the first through the sixth purposes.

The net effect of the above is to require the State to meet all its airport obligations first, thus assuring not only prompt and full payment of debt service but also the maintenance of a viable airport system with its revenue potentials unimpaired. However, it does not necessarily follow that, if revenues exceed the requirements of specified costs, they may not be used for whatever purposes the State desires. The bond certificate sets only a floor under airport revenues.

The bond certificate itself requires some excess of revenues over cost. It provides that the State shall so operate its airport system as to generate net revenues in an amount equal to 35 percent of the revenue bond debt service payable in any fiscal year. As an insurance against imprudent or hand-to-mouth financial administration, this is a common and appropriate provision of revenue bond covenants. It raises the "floor" under required revenues, but, again, it does not necessarily introduce constraints concerning the use of the net so generated.

The present airline leases. As pointed out previously, the basic airline leases are long-term arrangements, which, in effect, commit the airlines to use HIA, and the State to furnish facilities and services at HIA until 1992. Although the basic lease could be amended, there is no automatic reopener (except for space rentals), so its provisions are fixed, for purposes of this report. However, no provisions in the basic lease, except one, appear to limit the options open to the State in the financial area. This one exception provides for crediting fuel taxes against use charges and for partial refund of any taxes paid in excess of gross use charges. Even though this paragraph refers to Exhibit I for a definition of fuel taxes, it is considered to be fixed until 1992, for purposes of this report. If there should be no Exhibit I sometime in the future, however, and hence no definition of fuel taxes, this particular provision presumably would have no effect.

Except for the limitation concerning fuel taxes, the basic lease appears to open rather than limit, the options available to the State. *First,* how the use charge is to be calculated is spelled out in Exhibit I, not in the basic lease itself. Since Exhibit I is subject to renegotiation in 1977 (and at other times), any restrictions or limitations now contained in Exhibit I could be renegotiated. *Second,* the basic lease provides that in the event no agreement is reached in renegotiating Exhibit I "the continued use of airport area . . . shall be subject to such rates and/or charges therefor established by or pursuant to . . . any and all laws, rules and regulations of the State."

Accounting System

The financing approach discussed here is anchored on the establishment of an accounting system which identifies the revenues and expenses of the State's airport system by its major program components: (1) overseas program, (2) interisland and general aviation program, and (3) general support. Revenues and expenses arising from the facilities and services provided by the airport system in support of overseas flights are recorded under the overseas program. Revenues and expenses arising from the facilities and services provided by the airport system in support of interisland flights are recorded under the interisland and general aviation program. Revenues and expenses arising from the facilities and services provided by the airport system in support of both the overseas and the interisland and general aviation programs are allocated to the two programs to the extent reasonably possible. If not so allocable, they are recorded as general support revenues and expenses. In addition, all revenues derived from sources off the airport premises and which contribute little or nothing to the costs of the airport facilities and services are recorded under general support.

The recording of all revenues from off-airport sources under general support recognizes that these revenues are really public moneys. These revenues being public moneys, there is some question whether they should be considered as revenues of the system at all. The definition of "gross receipts" in the duty-free concession lease [4] appears to include all sales made by the duty-free concession without regard to whether the sales were made on or off the airport premises, in calculating the fee to be paid to the State. However, there is nothing in the statute, the bond certificate, or the basic lease which requires that the revenues from off-airport concessions be included in the revenues of the airport system. To the contrary, the provisions of all of these documents appear to exclude, rather than include, off-airport concession revenues from within the meaning of "revenues of the airport system."[5]

However, for reasons which will become apparent later, we consider in our proposal revenues from off-airport concessions as being a part of the revenues of the airport system. But they are considered as revenues arising from other than the overseas and the interisland and general aviation programs.[6]

The Hawaii airport system does not now segregate its revenues and expenses into the program categories outlined above.[7] However, as demonstrated in chapter 6, the segregation of the revenues and expenses of the airport system by the program categories mentioned above is possible. In chapter 6, the revenues and expenses properly attributable in some proportions to both the overseas and the interisland and general aviation programs were placed in general support. This was because, given the data on hand, we had no real, reasonable basis to allocate these revenues and expenses to the two programs. It

[4]Article VI-B of the duty-free concession lease defines "gross receipts" as: "All monies *paid or payable* to the Lessee in connection with any . . . sale . . ., *regardless of the time or place the orders for the sale were received* . . . ." [Emphasis added.]

[5]The Hawaii Revised Statutes nowhere define what constitute "airport revenues," but section 261–1(3), HRS, does define the term, "airport," as follows:

> "Airport means *any area of land or water* which is *used,* or intended for use, *for the landing and take-off of aircraft,* and appurtenant areas which are used or intended for use, for airport buildings or *other airport facilities* or rights-of-way, including approaches, together with all airport buildings and facilities located thereon." [Emphasis added.]

The bond certificate, in section 1.01(u) defines the term, "revenue," more precisely, as follows:

> "Revenues means and includes *all income,* revenues and moneys *derived by the State of Hawaii from the ownership* by the State or operation and management by the department *of the undertaking* . . . ." [Emphasis added.]

The term, "undertaking," is, in turn, defined broadly in section 1.01(x) as:

> "The statewide system of airports of the State of Hawaii and includes all *airports,* . . . and *related facilities* and *related properties* (real, personal, or mixed), and any rights or interests in airports, . . . and other related facilities by the State of Hawaii or under the *(administration), jurisdiction, control* and management of the Department, ..." [Emphasis added.]

The basic lease in Exhibit I defines "airport revenues" as follows:

> "All *rents,* fees, interest income, aviation fuel taxes and other charges received or expected to be received during such fiscal year by the Lessor which are being or will be *deposited in the Airport Revenue Fund pursuant to Section 261–5,* HRS, as amended, [less certain specified items not affecting this discussion]." [Emphasis added.]

All of the foregoing provisions appear to point to "airport revenues" as only those revenues generated within the geographical limits of the airports and related facilities, and not to revenues generated off the airport premises.

[6]Treating off-airport concession revenues as "airport revenues" would also obviate any legal problems with revenue bond holders who may argue, notwithstanding the apparent exclusion of these concession revenues from "revenues of the undertaking," that the revenues are "derived" from the airports and are includable in the airport revenue fund.

[7]Except to a limited extent. The present Exhibit I requires a separate estimate each fiscal year of the probable deficit at neighbor island airports other than General Lyman Field, for the purpose of determining how much of the costs of the neighbor island airports are to be included in the costs for computing use charges for overseas carriers.

appears to us, however, that with some refinements in the allocation mechanism, the bulk of these revenues and expenses can be allocated to the two programs.

We might note here that even if the remainder of our suggestion on reshaping the financial policy for the airport system is not seriously considered, accounting by programs offers some beneficial results. It assists in surfacing hidden internal subsidies such as the subsidies received by the overseas and the interisland and general aviation programs from off-airport, duty-free concession revenues. Subsidies, if hidden, pose an insidious threat because the public disclosure mechanism would be lacking.

Overseas Program Self-Sufficiency

An important aspect of the financing policy suggested here is that the overseas program should be self-sufficient–that is, it should pay for itself. All revenues assigned to this program, including the use charges paid by the overseas carriers and the rentals and concession fees paid by those renting spaces and having concessions on the airport premises which support the overseas program, should equal all of the program's expenses.

The use charge. The use charge to be paid by the overseas carriers would be at a level sufficient to produce revenues equal to the balance between all expenses of the program and all of the program's revenues other than use charges. This concept of the use charges equalling the residue of expenses over other revenues is the same concept presently followed, except that under the suggested alternative financing policy, the residual concept is confined to the revenues and expenses of the overseas program itself and not spread over the revenues and expenses of the entire airport system.

Neither the basic airline leases nor the bond certificate precludes the State from limiting the residual concept to the overseas program. The application of the residual concept to the revenues and expenses of the system as a whole is contained only in Exhibit I of the basic leases, and Exhibit I is subject to renegotiation. Limiting the residual concept only to the overseas program is a relatively simple matter. All it requires is to redefine the terms, "revenues" and "expenses," contained presently in Exhibit I as they pertain to the use charge calculation for overseas carriers.

The term, "revenues," as used in Exhibit I, is not to be confused with the term, "revenues," as used in the bond certificate. The bond certificate's definition of "revenues" is for the protection of bondholders, not for the purpose of computing the distribution of financial burden among airport patrons and users. Provided only that the accounting is done through the airport revenue fund, as required by the bond certificate, any revenues of the airport undertaking can be either included or excluded in the computational definition.

Limiting the application of the residual concept to the overseas program proper removes the dependence of the use charge on the vagaries of the duty-free concession revenues, at least the off-airport, duty-free concession revenues which constitute the bulk of all duty-free concession revenues. This is not to say that the use charge might not vary from time to time. Conceivably the expenses of the program and the level of non-use charge program revenues could vary from time to time, causing the use charge correspondingly to change. However, as noted in an earlier chapter, both the expenses and non-use charge revenues are rather stable and predictable. This means then that the use charge would also be relatively stable and predictable with the removal of off-airport, duty-free concession revenues from consideration.[8] Equally important, limiting the application of the residual concept to the overseas program places responsibility for paying for the costs of the program squarely on the primary users of

[8]See table 7.2, chapter 7.

the facilities and recipients of the services provided for the program.

Figure 8.1 displays what the use charge might have been in the past, and what it might be in the future (based on the projections discussed in chapter 7), if the overseas carriers' use charge were determined on the residue of the overseas expenses less overseas revenues other than use charges. Table 8.1 notes the effect of the various levels of use charge on the average one-way air fare to Hawaii.

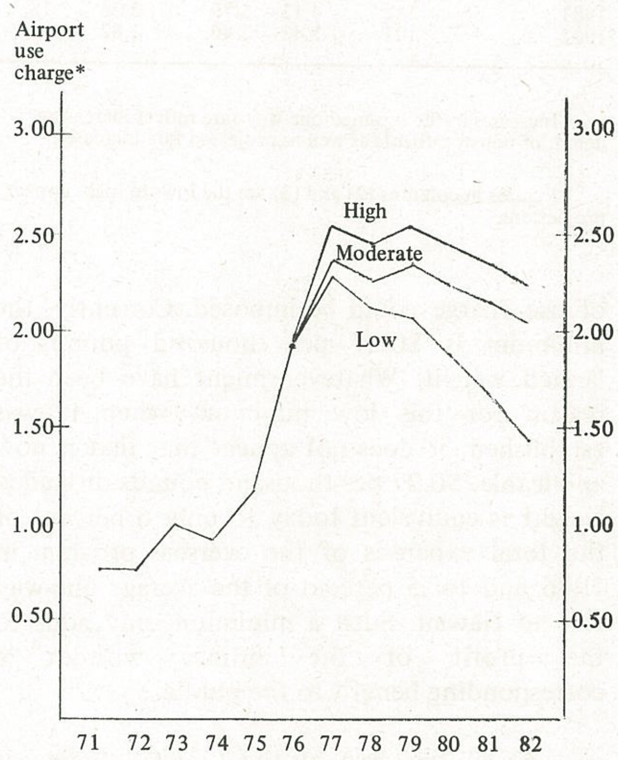
Use charge limitation. As shown in table 8.1, to require the overseas carriers to pay a use charge which will produce revenues sufficient to pay the residue of all expenses over all other revenues of the overseas program may result in a use charge exceeding 3 percent of the average one-way air fare to Hawaii, and this could result in higher air fares. To minimize the occurrence of this possibility, the State's financing policy could include a limit on the level of the use charge to be imposed on overseas air carriers. The limit could be established in various ways. One way is to tie it to a percentage of the average one-way air fare to Hawaii. Another is to fix it as a percentage of the total expenses (requirements) of the overseas program.

The limit established is by no means to be considered as the "maximum" use charges to be paid by the airlines. Rather, the limit is only that level above which use charges will not be allowed to rise without the application of the "surplus" described below. If, after applying the "surplus," the use charge is still over the limit, it will be effective. The limit is to minimize, not necessarily to prevent, the occurrence of use charges rising to a level which necessitates increases in air fares.

Minimum use charge. A corollary of the "limit" is the "minimum." Just as it is conceivable that the use charge could exceed the limit, it is equally conceivable, although not likely, that the use charge could reach very low levels, so low that under no circumstances could it be said that the carriers are paying their just share of the program expenses. For instance, unless the State undertakes further major expansions of the airport facilities in future years at the Honolulu International Airport, the expenses for the overseas airport program could level off and become relatively fixed; on the other hand, due to inflation, the revenues at the airport other than use charges could rise.[9] To avoid what could become a subsidy of the overseas carriers by revenues generated from sources other than use charges, a minimum level

Figure 8.1

Airport Use Charges for Overseas Program
Fiscal Years 1971–1982



*$ per thousand pounds landing weight.

See appendix E, table E.1.

[9]See chapter 7.

Table 8.1

Overseas Program Airport Use Charge
In Relation to One-Way Fare to Hawaii
Fiscal Years 1971–1982

Fiscal year ending June 30	Average one-way fare on nonstop flights to Hawaii[1]	Estimated airport use charge per arriving passenger	Use charge as a percent of one-way fare
	(1)	(2)	(3)
		Actual	
1971	$130	$3.22	2.48%
1972	130	3.25	2.50
1973	130	3.62	2.78
1974	135	2.92	2.16
1975	140	3.69	2.64
1976	145	5.06	3.49
		Projected[2]	
1977	$150	$6.01–$6.61	4.01%–4.41%
1978	158	5.33– 6.17	3.37 –3.91
1979	165	5.17– 6.27	3.13 –3.80
1980	174	4.66– 6.04	2.68 –3.47
1981	182	4.12– 5.79	2.26 –3.18
1982	191	3.48– 5.46	1.82 –2.86

[1]Increases in the assumed one-way fare reflect increasing length of nonstop flights as well as projected fare increases.

[2]Figures in columns (2) and (3) are the low- to high- impact projections.

of use charge could be imposed. Currently, the minimum is $0.27 per thousand pounds of landed weight. Whatever might have been the reason for this low minimum when it was established, it does not appear that that is now applicable. $0.27 per thousand pounds of landed weight is equivalent today to only 6 percent of the total expenses of the overseas program in 1976 and to .5 percent of the average one-way fare to Hawaii. Such a minimum only adds to the profit of the airlines without a corresponding benefit to the public.

As in the case of the "limit," there are various ways in which the minimum can be established. It could be set at a definite amount like it is today or it could be set like the "limit" at a percentage of the total requirements of the overseas program or of the average one-way air fare to Hawaii.

Interisland Program: Partial Self-Sufficiency

The need for subsidy. On the surface it might appear that the interisland program should be treated in the same manner as the overseas program; that is, that the interisland program should be self-sufficient and the use charge paid by the interisland carriers should be at a level sufficient to generate revenues at least equal to the balance between all program expenses and all program revenues other than use charges. There is, however, one important consideration that requires a treatment of the interisland program different from the treatment accorded the overseas program.

The economics of interisland transportation differ markedly from those for overseas transportation. As stated earlier, because the distance between point to point is short, interisland flights are distinguished by their high cost per mile. If the concept of full self-sufficiency is applied to the interisland program and the interisland carriers are required to pay use charges equal to the residue of all program expenses over all non-use charge program revenues, an added burden would be placed on the interisland carriers. This added burden results because the nature of interisland travel does not permit the neighbor island airports to generate non-use charge revenues in amounts anywhere comparable to those generated at overseas airports. As it is, even without this added burden, the interisland carriers have found it necessary in the past (and one carrier still finds it necessary) to secure federal subsidies to survive.

Under these circumstances, and in light of the fact that costs at the neighbor island airports are anticipated to increase in the future as a result of scheduled capital improvements and otherwise, it does not appear reasonable to expect the interisland program to be able to pay for all of its expenses. To expect it to be able to do so would mean high interisland use charges with a consequent adverse impact on interisland air fares. It would appear, then, that the interisland program will need to be subsidized.

The form of the subsidy. The subsidy, however, should not be in the present form. Presently, the interisland program receives a subsidy through the 9 percent rule. Under the 9 percent rule, the interisland carriers pay use charges equal to 9 percent of the use charges paid by overseas carriers.[10] However, under the financing policy suggested here, the use charges paid by the overseas carriers are based on the requirements solely of the overseas program and not at all on the requirements of the interisland program. Thus, the 9 percent rule would be clearly inapplicable under the financing policy suggested here. The subsidy should be related to the costs of the interisland program.

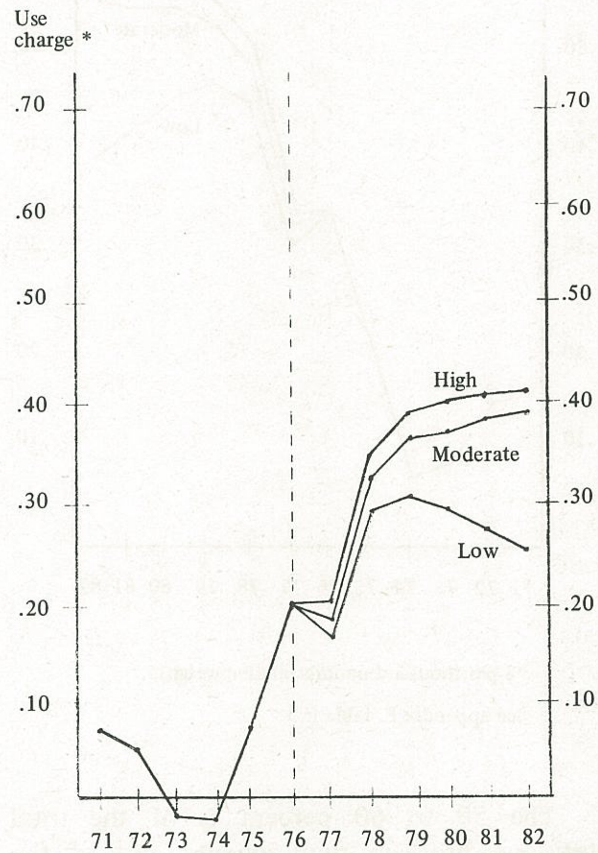
The subsidy to the interisland program is perhaps best stated as a percentage of the total requirements of the program. To state this in terms of the obligation of the program itself, the interisland program should be expected to generate sufficient revenues to pay for a stated percentage of its total requirements.

The level of subsidy. The percentage of the total requirements of the interisland program that the program itself should meet should be such that it will not result in use charges requiring an increase in interisland air fares. To determine what that percentage might be, we arbitrarily selected several percentages and for each calculated the resulting level of use charge and the impact of the use charge on the average one-way interisland air fare. The results are shown in figures 8.2 and 8.3 and in tables 8.2 and 8.3.

It appears from the figures and tables that, if the interisland program were required to generate revenues equal to 60 percent of its total expenses, this would result in use charges equalling less than 3 percent of the average one-way interisland air fare, even under the high projection of future interisland airport expenses. At 50 percent, it would be less than 2 percent. At these levels, there would be no adverse impact on interisland air fares. It thus appears reasonable to require the interisland program to pay for 50 to 60 percent of its expenses.

Figure 8.2

Interisland Program Airport Use Charge
Based on 50 Percent of Total Cash Flow Requirements
Fiscal Years 1971–1982



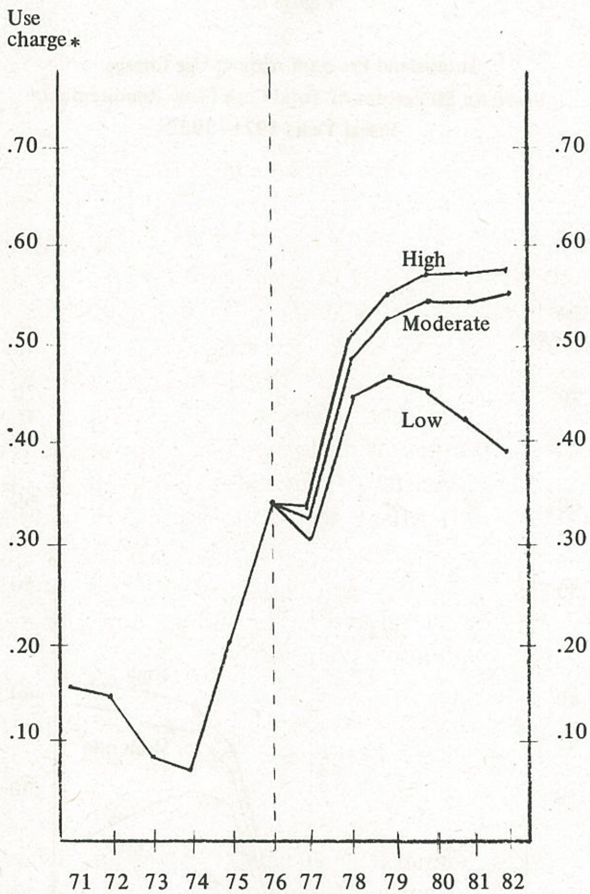
*$ per thousand pounds landing weight.

See appendix E, table E.2.

[10] Under the 9 percent rule, ostensibly the interisland program is subsidized by the overseas program. However, in fact, it has received subsidies not from the overseas program but from duty-free concession revenues. The concession revenues have been at such high levels in recent years that they have subsidized both the interisland and the overseas programs.

Figure 8.3

Interisland Program Airport Use Charge
Based on 60 Percent of Total Cash Flow Requirements
Fiscal Years 1971–1982



*$ per thousand pounds landing weight.

See appendix E, table E.3.

The 50 to 60 percent is of the total interisland program requirements, not of the residue that the air carriers would be required to pay in the form of use charges. Since all or substantially all of the subsidy will inure to the benefit of the airlines (assuming that rents and fees payable by on-airport concessionaires and others will reflect a fair market rental or value), purists may insist that the percentage be applied to the residue, rather than to the total requirements. However, if the percentage is made to apply to the residue, it will need to be less than the 50 to 60 percent mentioned above. We have chosen to apply the percentage to total requirements to emphasize program responsibility. We further believe, as elaborated below, that applying the percentage to total requirements will cause greater consciousness on the part of the airlines to program expenditures.

Use charge limit; minimum. Since requiring the interisland program to pay for 50 to 60 percent of its total expenses does not appear to result in a level of use charge so high as to impact adversely the interisland fares even under the high projection, it does not appear necessary that a "limit" on the use charge payable by the interisland carriers be established. However, the 50 to 60 percent will hold true, only so long as

Table 8.2

Airport Use Charge in Relation to
Average One-Way Interisland Fare
Based on 50 Percent of Total Cash Flow Requirements
Fiscal Years 1971–1982

Fiscal year ending June 30	Estimated average one-way interisland fare[1]	Airport use charge per arriving passenger	Use charge as a %age of one-way fare
	(1)	(2)	(3)
		Actual	
1971	$20	$0.137	0.69%
1972	20	0.093	0.47
1973	21	(0.014)	0.07
1974	22	(0.036)	0.16
1975	23	0.112	0.49
1976	24	0.286	1.19
		Projected[2]	
1977	$25	$0.225–$0.261	0.90%–1.04%
1978	26	0.397– 0.469	1.53 –1.80
1979	27	0.415– 0.524	1.54 –1.94
1980	28	0.398– 0.544	1.42 –1.94
1981	29	0.361– 0.548	1.24 –1.89
1982	30	0.325– 0.552	1.08 –1.84

[1]Estimated one-way fares shown in column (1) do not reflect discounted airfares which went into effect in late 1976.

[2]Figures in columns (2) and (3) are the low- to high-impact projections.

Table 8.3

Airport Use Charge in Relation to
Average One-Way Interisland Fares
Based on 60 Percent of Total Cash Flow Requirements
Fiscal Years 1971–1982

Fiscal year ending June 30	Estimated average one-way interisland fare[1]	Airport use charge per arriving passenger	Use charge as a %age of one-way fare
	(1)	(2)	(3)
		Actual	
1971	$20	$0.292	1.46%
1972	20	0.240	1.20
1973	21	0.131	0.62
1974	22	0.114	0.52
1975	23	0.291	1.27
1976	24	0.486	2.03
		Projected[2]	
1977	$25	$0.423–$0.462	1.69%–1.85%
1978	26	0.608– 0.685	2.34 –2.63
1979	27	0.632– 0.748	2.34 –2.77
1980	28	0.610– 0.767	2.18 –2.74
1981	29	0.562– 0.761	1.94 –2.62
1982	30	0.519– 0.760	1.73 –2.53

[1]Estimated one-way fares shown in column (1) do not reflect discounted airfares which went into effect in late 1976.

[2]Figures in columns (2) and (3) are the low- to high-impact projections.

the "surplus" from which the subsidy to the interisland program comes is sufficient to pay for 40 to 50 percent of the program's requirements. If the surplus is insufficient, the 50 to 60 percent may not hold true, unless subsidy is received from some other source.

Although no "limit" need be established for interisland use charge, it appears desirable that a minimum be established. Although unlikely, it is possible for the 50 to 60 percent to result in extremely low use charges. As in the case of the overseas program, through causes not now foreseen, the 50 to 60 percent could result in the air carriers being subsidized by sources generating program revenues other than use charges. The minimum could, as in the case of the overseas program, be set at a definite level, or at a percentage of the total program requirements or of the average one-way interisland fare. The current minimum of $.0243 per thousand pounds of landed weight is, of course, far too low a minimum.

Surplus

The present financing policy does not recognize the generation of revenues in excess of expenditures, except to the extent of 35 percent of the annual debt service amount as required by the bond certificate. The policy, rather, is to achieve an exact no-profit, no-loss status. This is so even though neither the basic lease nor the bond certificate prohibits the accumulation of surplus.

In our proposal here, the generation of surplus, over and beyond 35 percent of debt service charges, is an important component. The surplus consists of revenues from all airport-related, but off-airport concessions. It includes revenues from the off-airport duty free shops. In essence, it includes substantially all of the revenues accounted for under our program category "general support."

The surplus each year is to be used, to the extent needed, to pay for the following in the order listed:

(1) General support expenses not otherwise paid for by unallocable overseas and interisland and general aviation programs.

(2) Subsidy (40 to 50 percent) to the interisland program.

(3) Any deficit in the overseas program after the overseas carriers have paid use charges up to the "limit" specified in our discussion of overseas program self-sufficiency.

If the surplus is more than sufficient to cover all of the above, it is to be accrued to the airport fund. The sums so accrued could from time to time be made available by the legislature for any purpose. In our view, it appears that the surplus accrued to the airport fund could be used for purposes such as the following: (1) to finance capital improvements for general aviation; and (2) to finance capital improvements at interisland airports.

The Benefits

The financing policy suggested in this chapter retains the integrity and self-sufficiency of the airport system. Within such system self-sufficiency, however, the financing policy provides several benefits.

(1) Although it does not eliminate subsidies, particularly to the interisland program, it surfaces rather than hides the subsidies. Subsidies, when hidden, are removed from public scrutiny and control; when surfaced, it becomes clear who is being subsidized by whom.

(2) It removes the dependence of use charges on the vagaries of the duty-free concession revenues, and thereby makes use charges highly stable and predictable.

(3) It places squarely on the users of the facilities and the recipients of the services of both the overseas program and the interisland and general aviation program the responsibility to pay for the costs of such facilities and services. It further causes the air carriers to pay their fair share of the costs of their respective programs.

(4) It compels the air carriers, particularly the interisland carriers, now that they are made directly responsible for program costs, to pay greater attention to the expenses of the programs.

In addition to the above, one other benefit should be mentioned. This additional benefit is not as self-evident as those listed above, nor has it been touched upon as yet in this report.

The approach to financing the airport system suggested here does away with the fiction of the overseas airlines' guarantee of payment of the system cost. The self-balancing system of financing by requiring the airlines to pay the deficiency in revenues realized during a fiscal year has been considered to be a guarantee that all airport expenses will be met. So long as "expenses" specifically include deficits from airports other than HIA, debt service for the whole system, and coverage on the revenue bond debt service, the guarantee appears indeed to exist. However, the guarantee is illusory at best. *First,* the guarantee, if real, is good only so long as Exhibit I in its present form continues. But there is no assurance that Exhibit I will continue beyond 1977. *Second,* as pointed out earlier, the guarantee as it applies to the cost of neighbor island airports is only good to the extent of the agreement that the overseas carriers are able to reach with the State on the estimated deficit for the neighbor island airports. If in any given fiscal year, the actual deficit exceeds the estimated deficit, all airlines utilizing the neighbor island airports are required to pay the excess in proportion to their respective landing weights. But, since the neighbor island airports (other than General Lyman Field in Hilo) are utilized primarily by the two interisland carriers, the burden of paying this excess falls on the interisland carriers.

If the estimated deficit at neighbor island airports for any fiscal year is estimated at an unrealistically low amount, and the interisland carriers are unable to pay the excess of the actual over the estimated deficit, the State cannot look to the overseas carriers for payment. A low estimation of the deficit at neighbor island airports is possible, since Exhibit I states that if no agreement is reached on the estimated deficit, the whole of Exhibit I is nullified. Under these circumstances, the State could be forced to accept an unrealistically low estimate. Indeed, the possibility is real as debt service costs on neighbor islands begin to reflect the major improvements planned for them, and if duty-free concession revenues, which in fact has paid for the neighbor island deficits should begin to diminish. Thus far, thanks to the duty-free concession revenues, the problem has been obviated.

It has been widely assumed that the guarantee, although illusory, is essential to or a major aid in marketing revenue bonds at reasonable rates of interest. However, experience indicates otherwise. Indeed, it appears that a guarantee even if real, is not a necessary element in the sale of revenue bonds at reasonable rates. The experience of the City of Houston is pertinent in this regard.

The City of Houston built a new airport in the late sixties. Although information on the exact amount of revenue bonds sold is not available to us, it was large as evidenced by $94 million oustanding in 1974. The Houston system of levying use charges at its intercontinental airport is based strictly on cost recovery for various cost centers, such as the aircraft aprons and airfield area. Interest, depreciation, and maintenance and operations expenses are totaled and the users of the areas are responsible for no more or less than that amount. No guarantee is possible in such an operation, but the city was able to sell a large amount of bonds. In proportion to total revenues, Houston has about as much revenue bond debt as Hawaii (about six times annual revenues) yet no guarantee could have been offered, as none existed.

As a matter of fact, no airline guarantee is ever mentioned in Hawaii's official statements accompanying offers to sell revenue bonds. This indicates that the absence of an airline guarantee is not decisive.

State Responsibility

So far in this chapter, we have emphasized responsibility from the perspective of the air carriers. The description of the new financing policy would not be complete without some mention of the responsibility of the State. As we see it, there are at least two areas in which the State has responsibility. The responsibility of the State in these areas is not new; it has existed under the present financing policy. However, with emphasis on program self-sufficiency, as contrasted from system self-sufficiency, the responsibility takes on added importance.

In general. *First,* it is incumbent upon the State to maximize revenues other than use charges. In this report we have assumed that the rentals, concession fees, and other charges now being levied by the airport system reflect the fair market rental or value of the spaces rented, facilities furnished, and services rendered. That they are in fact so is determinable only after a detailed analysis of the rents, fees, and charges, a task which was beyond the scope of this study. To the extent they are not, the use charges imposed on the air carriers under the financing policy suggested here would be discriminatory to the air carriers.[11]

Second, the State must make every effort to keep the costs of the overseas and the interisland programs to the minimum consistent with the need for airport facilities and services. Although, again, an examination into the reasonableness of the costs now being incurred was beyond the scope of this study, there are indications that the airport system is probably less than efficient in the management of its programs, especially with regard to the processes involved in the planning and construction of capital improvements. At present, this office has a management study underway to assess the DOT's effectiveness and efficiency in operating the airport system.

[11]To the extent they exceed the fair market rental or value, they would constitute a subsidy to the air carriers. To prevent such subsidy, we have suggested the establishment of a minimum level of use charge for both the overseas and the interisland carriers.

If the air carriers are expected to shoulder more fully and directly the responsibility for paying program costs, it behooves the State to exert greater control over costs. The policy suggested in this chapter is intended to have the carriers pay use charges more directly in line with the costs of the facilities and services provided them. Unless cost controls are exercised, the use charges can, of course, under our proposal, rise to levels which adversely affect air fares. The State, thus, has an obligation, not only to the carriers, but to the public as well as to make every effort to minimize costs.

Air carrier input. In the exercise of control over costs of the airport system, it appears only reasonable that input be received from the air carriers. Under the present Exhibit I, a mechanism exists for such input. Two observations are pertinent concerning this mechanism.

First, although the mechanism has existed for many years, it is doubtful that the carriers, particularly the neighbor island carriers, have taken seriously the opportunities to make their input. In the years when duty-free concession revenues rose rapidly, the payment of a substantial portion of the costs of the airport by these concession revenues tended to give the carriers little incentive to be concerned about system costs. Under our suggestion here, the need for the carriers to become more cost-conscious is apparent. They are now clearly made responsible for the costs of their respective programs.

Second, the mechanism that now exists is probably weighted too much in favor of the carriers, although the carriers may not have taken full advantage of this fact. Among other things, the mechanism unduly restricts the freedom of the State and vests in the carriers the right to infringe on the administrative discretion of the State. Two examples will suffice to illustrate this point.

The first example is contained in Article VIII of the current Exhibit I. Article VIII restricts the use of the 35 percent of the annual debt service amount (required by the bond certificate to be collected) to certain specific purposes. It provides that the State may use this coverage (1) to redeem any outstanding bonds or (2) to finance on a cash basis any capital improvements. It then states that after the use of the coverage for these two purposes the State may use any excess "for any other legal purpose commensurate with Chapter 261, Hawaii Revised Statutes," but it qualifies this right of the State by a proviso as follows, "provided that any amount of coverage in excess of the maximum amount required on outstanding bonds in the fiscal year shall be deemed excess revenue within the meaning of Article III hereof." Article III provides for "excess revenue" to be credited back to the airlines. The effect of Article VIII is to prevent the State from accumulating a cash surplus. This is an unwarranted interference with the rights of the State.

The second example is contained in Article VI of Exhibit I. There it provides that the carriers shall have the right to review the six-year capital improvement program adopted by the legislature and to submit recommendations in the formulation and preparation of the new six-year program to be submitted to the governor. There is nothing inherently wrong with this. However, Article VI goes on to say that the carriers may submit their recommendations and views directly to the governor with merely a copy to the director of the department of transportation. This mechanism bypasses the administration responsible for the operations of the airport system.

We believe that a mechanism is necessary for the carriers' voice to be heard in the interest of keeping the costs of both the overseas and the interisland and general aviation programs to the minimum consistent with the needs of the State. We do not, however, believe that such a mechanism should vest in the airlines the power unduly to interfere with the administration of the airport system.

Recommendation

We recommend that the State reshape its financing policy for its airport system along the lines recommended in this chapter. Legislative enunciation of the new approach is recommended. Legislation should clearlv provide for self-sufficiency of the overseas airport program, subsidy for the interisland and general aviation program, and the generation of surplus.

APPENDICES

Allocation of Revenues and Expenses To the Airport Programs

Table 6.1 in chapter 6 summarizes the results of an analysis in which revenues and expenses of the airport system were allocated to the various programs. This appendix explains the basis on which the revenues and expenses for the years 1971–1976 were allocated to the following three programs: (1) overseas (OS); (2) interisland and general aviation (IG); and (3) general support (GS). The results of the allocations to the programs are estimations based on fiscal records at the airports division. Fiscal records are not maintained according to the programs identified above. By way of overview, the following approach was used.

First, total revenues and expenses as reported by the airport accountant in the audited statements of the airport system[1] were used as control totals.

Second, the annual audited statements allocate revenues and expenses to Honolulu International Airport (HIA), General Lyman Field (GLF), and other airports. All revenues and expenses allocated to airports other than HIA and GLF were assigned in their entirety to the IG program. The revenues and expenses of these other airports represent approximately 5 and 16 percent of total revenues and expenses, respectively. This left HIA and GLF–and the major portion of revenues and expenses–to deal with.

Third, the basis for allocating expenses and revenues at HIA was developed. This entailed, in essence, an effort to segregate the costs and revenues received from the interisland carriers and the interisland terminal. Allocation of revenues and expenses at HIA was made easier by the fact that the overseas and interisland facilities are separate and distinct. However, the airport does not attempt to maintain separate records for each facility so estimation was necessary. Revenues and expenses at HIA represent approximately 89 and 78 percent of the airport system's total revenues and expenses.

Fourth, at GLF the overseas and interisland carriers use a common facility. Because of this, it was necessary to develop special procedures, tailored to the circumstances of GLF, for allocating revenues and expenses to individual programs.

The Detailed Estimates

The detail contained in the airport's accounting system made it possible to allocate a substantial portion of all revenues and expenses to the OS and IG programs. Some expense items represent general overhead expense of running the entire airport system (rather than any single airport within the system), or common expense items, such as runway lights and

[1] Coopers & Lybrand, certified public accountants, *State of Hawaii, Department of Transportation, Airports Division, Accountants Report,* fiscal years 1971–76.

access roads at HIA. These expenses are properly allocated to the GS program. The nonallocation of certain expense items to the OS or IG programs should not be viewed as representing a failing or inaccuracy of the airport's accounting system.

The airport's accounting system has remained consistent for the six years (1971–1976) covered here. In those instances where it was necessary to make arbitrary allocations of certain items, the same rule or procedure was used throughout. Summaries of program revenues and expenses are provided in table A.1. The following sections provide a detailed explanation of how the table was derived.

Allocation of Revenues

As explained above, all revenues which the airport accountant assigned to airports other than HIA and GLF were allocated in their entirety to the IG program. The following sections explain the basis for determining program revenues at HIA and GLF. The airport accounting system records revenues according to the following categories:

- Use charge
- Fuel tax
- Aeronautical rental
- Miscellaneous income
- Investment income
- Concession income
- Non-aeronautical rental

Use charge. The airport use charge is paid directly by airlines, and constitutes direct program revenues. It is credited to the OS or IG programs according to amounts paid by overseas and interisland carriers.

Fuel tax. All fuel taxes are paid by operators of aircraft. Accordingly, all fuel taxes are treated as program revenues. Each year, as part of the use charge computation, the airports division figures the amount to be credited to air operators landing at HIA. The fuel taxes which are creditable against the airport use charge are assigned to the OS or IG programs according to whether overseas or interisland operators paid the tax.

Aeronautical rental. Revenues in this category are received directly from air carriers, general aviation operators, or oil companies located at the airport. Revenues from air carriers and general aviation constitute direct program revenues and are credited directly to the OS or IG program, depending upon their source. Revenues from oil companies represent rental payments on fuel storage facilities located on airport premises. However, they are paid indirectly by consumers of aviation fuel—namely, air carriers and general aviation. Accordingly, receipts from oil companies are treated as program revenues. They are prorated between the OS and IG programs in the same proportion as fuel taxes are allocated to these two programs.

Miscellaneous income. The allocations to the OS and IG programs reflect payments received directly from overseas and interisland air carriers for various services provided by the airport. These payments represent reimbursement for such things as special facilities constructed for the exclusive use of certain carriers by the airport, air conditioning, etc. Receipts from others are credited to GS.

Investment income. Investment income arises primarily from differential timing in the receipt and payment of money for debt service.[2] To the extent that individual programs are charged with debt service (which includes interest on the debt), they are entitled to interest on proceeds received from sale of bonds but not yet expended, or interest on funds that have been set aside to pay the debt when the next installment is due. Because of this correspondence with program expenses, investment income is allocated among programs in the same proportion as debt service.

Concession income. At HIA, concession fees are the largest revenue source. In the past six fiscal years, these revenues have represented over 90 percent of systemwide concession income. Concession fees are primarily based on leases or permits which specify monthly payments or a percentage of gross, whichever is greater. These revenues are derived from retail and service type concessions such as restaurants, inflight kitchens, ground transportation services, parking facilities, gift and specialty shops, lei vendors, and other firms generally located within the airport complex for the convenience of the traveling public.

All concessions located at HIA are assigned to individual programs according to the facility in which they are located. Parking revenues were credited to the GS program since there is no precise basis for allocating the revenues of this common use facility. A portion of the ground transportation fees was assigned to the GS program based on revenues from non-lessee or prearranged ground transportation services. Off-airport inflight kitchen concession revenues were allocated to the GS program from 1973 through 1976. Finally, fees from the duty-free concession were allocated on the basis of the gross receipts of sales realized from concession operations in the overseas terminal and Waikiki, respectively.

Concession income at GLF was assigned in proportion to usage of the airport facility by overseas and interisland passengers.

Non-aeronautical rentals. Revenues from this source represent rental fees from non-airline tenants for space rentals on airport properties. These include, among other things, rental for storage and warehousing, and from tenants holding non-conforming space permits or leases authorized by the department of land and natural resources (DLNR). These revenues were assigned to the OS and IG programs.

Allocation of Expenses

Expenses assigned to airports other than HIA and GLF in the audited statements were assigned entirely to the IG program. The following sections explain the basis for estimating program expenses at HIA and GLF. The airports division accounting system records expenses in the following categories:

[2]Interest income is also earned from the investment of operating revenues which are not immediately required.

- Operating expenses
- Debt service
- Annual reserve required on major maintenance renewal or replacement account
- Airport equipment and motor vehicles

The latter two categories are discussed below under "operating expenses."

Operating expenses. Operating expenses include such costs as salaries and wages, other personal services, material and supplies, travel and subsistence, utilities, rentals, repairs and maintenance, insurance, departmental and divisional overhead expenses, surcharges, and other cost items necessary for operating the airports. Prior to fiscal year 1975, the airports division separated the majority of HIA operating expenses into cost areas such as overseas centers, the interisland facility,and parking. Expenses included under these definitive centers were assigned accordingly to the OS, IG, and GS programs. Where expenses were not clearly defined, allocations to the programs were based on the review of specific expenditures with fiscal personnel of the division. Additionally, departmental expenses and surcharges were assigned in their entirety to the GS program. Statewide expenses such as division expenses were assigned accordingly to the OS, IG, and GS programs on the ratio of all other operating expenses. Defined airport equipment and motor vehicle expense and major maintenance expenses were assigned according to cost center records and the undefined portions were assigned to the GS program.

It should be noted that operating expenses for fiscal years 1975 and 1976 were based on the cost area accounting experience of the previous four fiscal years. This is because from 1975 the expenses at HIA have been based on functional operations rather than on cost centers.

Program expenses at GLF were not defined in cost centers since GLF is a common use facility. The assignment of expenses to each of the programs was based on the review of expenditures in each of the cost categories with fiscal personnel. Where records were not clearly definable, the expenses were assigned in proportion to overseas and interisland passenger usage of the common facility.

Debt service. This cost category includes the principal and interest payments on reimbursable general obligation bonds and airport system revenue bonds and the 35 percent debt service coverage on the airport system revenue bonds as required by the revenue bond covenants. No records are available for a precise basis for allocating these expenses to the OS, IG, or GS programs. The allocations made to the programs are based on the value capital improvements program projects assigned to HIA and GLF. In the opinion of airport personnel, the use of this basis provides a sufficiently close approximation for the allocation of debt service among the programs. Investment income is allocated to each of the programs on the same basis as debt service cost.

Key
OS – Overseas
IG – Interisland & general aviation
GS – General support

Table A.1
Summary of Revenues, Expenses, and Surplus or Deficit
Airports Division, State Department of Transportation
Fiscal Years 1971–1976
(Thousands of Dollars)

Fiscal year	Revenues				Operating expenses				Debt service				Total expenses	Surplus (deficit)
	HIA	GLF	Others	Total	HIA	GLF	Others	Total	HIA	GLF	Others	Total		
1971														
OS	$13,846	$1,195	$ –	$15,041	$ 3,966	$ 219	$ –	$ 4,185	$ 9,360	$ 265	$ –	$ 9,625	$13,810	$1,231
IG	889	455	1,144	2,488	503	282	1,123	1,908	319	287	2,254	2,860	4,768	(2,280)
GS	3,251	–	–	3,251	1,117	125	–	1,242	957	–	–	957	2,199	
Total	$17,986	$1,650	$1,144	$20,780	$ 5,586	$ 626	$1,123	$ 5,335	$10,636	$ 552	$2,254	$13,442	$20,777	
1972														
OS	$16,276	$1,312	$ –	$17,588	$ 5,062	$ 224	$ –	$ 5,286	$11,316	$ 135	$ –	$11,451	$16,737	$ 851
IG	1,057	520	867	2,444	466	285	1,184	1,935	386	147	2,788	3,321	5,256	(2,812)
GS	4,436	6	–	4,352	1,133	97	–	1,230	1,157	–	–	1,157	2,387	
Total	$21,679	$1,838	$ 867	$24,384	$ 6,661	$ 606	$1,184	$ 8,451	$12,859	$ 282	$2,788	$15,929	$24,380	
1973														
OS	$17,766	$1,681	$ –	$19,447	$ 5,827	$ 246	$ –	$ 6,073	$14,472	$ 211	$ –	$14,683	$20,756	$ (1,309)
IG	1,053	817	1,414	3,284	559	319	1,492	2,370	493	229	3,075	3,797	6,167	(2,883)
GS	7,333	42	–	7,375	1,597	100	–	1,697	1,480	–	–	1,480	3,177	
Total	$26,152	$2,540	$1,414	$30,106	$ 7,983	$ 665	$1,492	$10,140	$16,445	$ 440	$3,075	$19,960	$30,100	
1974														
OS	$15,114	$1,491	$ –	$16,605	$ 6,596	$ 336	$ –	$ 6,932	$15,191	$ 268	$ –	$15,459	$22,391	$ (5,786)
IG	1,056	1,132	1,858	4,046	713	434	2,086	3,233	518	291	3,218	4,027	7,260	(3,214)
GS	12,282	–	–	12,282	1,605	115	–	1,720	1,554	–	–	1,554	1,554	
Total	$28,452	$2,623	$1,858	$32,933	$ 8,914	$ 885	$2,086	$11,885	$17,263	$ 559	$3,218	$21,040	$32,925	
1975														
OS	$20,539	$1,436	$ –	$21,975	$ 8,040	$ 348	$ –	$ 8,388	$16,668	$1,092	$ –	$17,760	$26,148	$ (4,173)
IG	1,122	1,141	1,984	4,247	965	449	2,654	4,068	568	1,184	3,733	5,485	9,553	(5,306)
GS	13,025	–	–	13,025	1,715	119	–	1,834	1,705	–	–	1,705	3,539	
Total	$34,686	$2,577	$1,984	$39,247	$10,720	$ 916	$2,654	$14,290	$18,941	$2,276	$3,733	$24,950	$39,240	
1976														
OS	$29,808	$1,321	$ –	$31,129	$10,063	$ 415	$ –	$10,478	$21,832	$1,439	$ –	$23,271	$33,749	$(2,620)
IG	1,325	841	1,926	4,092	1,161	536	3,136	4,833	744	1,558	4,054	6,356	11,189	(7,097)
GS	13,775	–	–	13,775	1,677	142	–	1,819	2,233	–	–	2,233	4,052	
Total	$44,908	$2,162	$1,926	$48,996	$12,901	$1,093	$3,136	$17,130	$24,809	$2,997	$4,054	$31,860	$48,990	

Note: No surplus or deficit is shown for the general support program primarily because the revenues of the program are not derived from the facilities and services rendered by the airport system.

Source: Coopers & Lybrand, certified public accountants, *State of Hawaii, Department of Transportation, Airports Division, Accountants' Report,* fiscal years 1971 through 1976; and fiscal records of the airports division, State department of transportation.

APPENDIX B

Table B.1

Estimated Revenues, Operating Expenses, and Debt Service
Of Ke-ahole, Waimea-Kohala, Kahului, Kaunakakai, Lanai, and Lihue Airports
Fiscal Years 1971 Through 1976
(Thousands of Dollars)

	Fiscal Year Ended June 30						
	1971	1972	1973	1974	1975	1976	Total
Ke-ahole							
Revenues	$ 124	$ 167	$ 292	$ 297	$ 361	$ 383	$ 1,624
Operating expenses	165	188	235	440	590	704	2,322
Surplus (deficit)	(41)	(21)	57	(143)	(229)	(321)	(698)
Debt service	1,594	1,971	2,174	2,275	2,639	2,866	13,519
Kohala							
Revenues	17	16	30	41	49	34	187
Operating expenses	245	44	43	56	52	70	510
Surplus (deficit)	(228)	(28)	(13)	(15)	(3)	(36)	(323)
Debt Service	–	–	–	–	–	–	–
Kahului							
Revenues	398	458	535	722	759	894	3,766
Operating expenses	307	322	413	647	819	1,338	3,846
Surplus (deficit)	91	136	122	75	(60)	(444)	(80)
Debt service	424	524	578	605	702	762	3,595
Molokai (Kaunakakai)							
Revenues	34	41	46	76	69	75	341
Operating expenses	47	44	71	98	95	118	473
Surplus (deficit)	(13)	(3)	(25)	(22)	(26)	(43)	(132)
Debt service	50	61	68	71	82	89	421
Lanai							
Revenues	15	13	18	25	25	28	124
Operating expenses	26	31	40	77	57	64	295
Surplus (deficit)	(11)	(18)	(22)	(52)	(32)	(36)	(171)
Debt service	–	–	–	–	–	–	–
Lihue							
Revenues	223	239	308	451	457	508	2,186
Operating expenses	263	200	267	582	747	863	2,922
Surplus (deficit)	(40)	39	41	(131)	(290)	(355)	(736)
Debt service	165	204	224	235	273	296	1,397

Source: Fiscal records of the airports division, department of transportation, State of Hawaii.

Table C.1

Calculation of Effective Airport Use Charge, 1971–1976

Fiscal year ending June 30	Landing weights (millions of pounds)					
	Overseas flights[1] (1)	Interisland flights[1] (2)	.09 times col. (2) (3)	Chargeable landing weights[2] (4)	Effective use charge paid ($000)[3] (5)	Estimated landing fee/M lb.[4] (6)
1971	9,118	5,887	530	9,648	$ 8,644	$0.896
1972	10,599	6,327	569	11,168	8,852	0.793
1973	10,644	7,044	634	11,278	8,595	0.762
1974	10,549	7,579	682	11,231	3,269	0.291
1975	10,490	7,823	704	11,194	7,822	0.699
1976	10,169	8,068	726	10,895	16,361	1.502

[1]Source: Coopers & Lybrand, CPA, *State of Hawaii, Department of Transportation, Airports Division, Accountants' Report,* fiscal years 1971 through 1976, and fiscal records, airports division, department of transportation, State of Hawaii.

[2]Column (1) plus column (3).

[3]Source: Table 7.1, column (1).

[4]Column (5) divided by column (4).

Development of Projected Financial Experience

This appendix provides detail concerning the projections that are summarized in chapter 7.

Projected Cash Flow Requirements and Revenues

Three projections for fiscal years 1977 through 1982 were constructed. For varying assumptions, these show the revenue that will be required in order for the airports system to meet all debt service, operating expenses, and other cash flow requirements. The three projections are referred to here in terms of their relative financial impact on lessee airlines, which varies from low, to moderate, to high.

By way of overview, the moderate projection was developed by the airports division's consulting engineers.[1] The report containing this projection was subjected to careful review, and we take no exception to it as representing a consistent model containing a reasonable projection of future finances. This projection has been adopted as our moderate projection.[2] The consulting engineer's report does not indicate other outcomes which might arise under plausible assumptions, and we have therefore extended the projections to include a range of such outcomes. In addition, we have also extended the consulting engineer's analysis to show how these outcomes would impact the airport use charge.

The low-impact projection, while slightly optimistic, can easily be justified in light of recent growth rates; it falls far short of being wildly visionary. In the other direction, the high-impact projection is considered a reasonable possibility in light of the uncertainties associated with the revenue which the airport receives from the duty-free concession; but, as will be seen, it is far from a "doomsday" outlook. Thus, while the moderate projection might be regarded as the single "most likely" outcome, all the outcomes spanned by the low and high impact projections are within the range of reasonableness.

The moderate projection. The projection is summarized in table D.1. In order to focus on airline contributions, revenue sources are classified in two major categories. The first category contains all revenues from secondary sources such as concessions, space rental, and miscellaneous income. The second category shows the revenue from landing fees, fuel taxes, and airport use charges, most of which are paid by lessee airlines using airport facilities.

This discussion will not attempt to explain or even list all of the assumptions that were incorporated in this projection by the consulting engineers. In brief, they can be described

[1] Speas-Wemple-Warskow, *Report on Traffic, Revenues and Expenditures for the Airports System of the State of Hawaii,* (Manhasset, New York: June 1975) and included as appendix A in the *Official Statement* accompanying the $20,000,000 *State of Hawaii Airports System Revenue Bonds, Series of 1975,* dated July 1, 1975.

[2] All changes made to update the original projections use the same assumptions of the consulting engineer.

as slightly conservative in terms of past performance and prior growth rates.[3] The highlights as they relate to the subsequent discussion of the low and high impact projections are as follows:

Revenues

- Concession revenues are assumed to grow at 8 percent per year through 1980, and thereafter increase by 5 percent per year.

- Future aeronautical rental revenues reflect periodic rate increases and generally full space rental.

- Except for receipts attributable to the use charge, all other revenues are assumed to remain essentially constant.

Expenses

- Operation and maintenance expenses are assumed to grow at a compound annual rate of 10 percent.

- Administrative expenses are assumed to grow at a compound annual rate of 5 percent.

Based on these and other assumptions, the consulting engineer's projection for fiscal years 1977 through 1982 indicates that the fuel tax and airport use charge will represent between 40 and 43 percent of total revenues. This is a materially greater share of revenues than these two sources have averaged over the past five years.

The low-impact projection. The following assumptions were used to construct the low-impact projection:

- Concession revenues are assumed to grow at a compound annual rate of 15 percent. This growth rate is higher than the rate of growth assumed by the consulting engineer, but it is still far below the percent compound growth rate that was realized between 1971 and 1976.

- Operation and maintenance expenses are assumed to grow at a compound annual rate of 6 percent instead of the 10 percent rate predicted in the consulting engineer's report, thus reducing the cash flow required. This lower rate could be realistic if operating expenses taper off after the major construction phase is completed around 1979.

- All other assumptions are the same as those used in the consulting engineer's report.

[3]The projected use charge that results from the consulting engineer estimates for 1975 and 1976 are $.803 and $1.636, respectively. The effective use charge during these two years was $.699 and $1.502, respectively (these figures are obtained by dividing total use charges by chargeable landing weights).

In light of previous performance over the past six years, these assumptions are by no means "super optimistic." The low-impact projection is summarized in table D.2. If concession revenues and expenses grow in accordance with the assumptions listed above, the fuel tax and airport use charge would decline steadily as a percentage of total revenues (see column 4 in table D.2).

The high-impact projection. The following assumptions were used to arrive at the high-impact projection.

- Future expenses will be as estimated by the consulting engineer; hence the cash flow required is the same as for the moderate-impact projection.

- The duty-free concession will continue as a viable business enterprise, but will pay only the guaranteed minimum levels provided in its ten-year lease which expires December 31, 1980.[4] This assumption could be realized from any number of possible changes by the Japanese government, such as a change in the amount of duty-free goods that can be brought into Japan, or the establishment in Japan of in-bond duty-free shops.

- All other concession revenues will grow at a compound annual rate of 5 percent, rather than at 8 percent through 1980, and then 5 percent in 1981 and 1982.

- All other revenues will materialize at the same levels projected in the moderate-impact projection.

This high impact projection does not in any sense represent a "disaster situation." It merely illustrates what could happen if revenues from the duty-free concession dropped appreciably and other concession revenues grew at a slightly lower rate. In other words, no concessionaire is expected to lose money or go out of business. Except for the duty-free shop, concession revenues continue to grow, not decline. No additional increase in airport expenses over those projected by the consulting engineer is assumed, and the same growth in airport traffic is assumed.

Results of these high-impact assumptions are summarized in table D.3. By 1982, receipts from the fuel tax and airport use charge could rise to as much as 57.2 percent of total revenues (see column 4 in table D.3).

The Financial Impact of Inflation

All three projections are in terms of current dollars. That is, no inflation in the general price level was assumed, and no inflation is reflected in tables D.1 through D.3. Because inflation has become such an all-pervasive phenomenon, however, the impact that inflation would have on these projections should be explicitly noted.

[4]In 1981 and 1982, the guaranteed minimum is assumed to increase by $800,000 per year beyond 1980, which is the same rate by which it increases in the existing contract.

The first point to note is that the debt service portion of future expenses is fixed. Without further inflation, by 1982 debt service requirements (including the .35 coverage on revenue bonds and the fixed-sum deposit to the major maintenance account) will amount to between 60 and 68 percent of total airport expenses. Most of the debt service requirements estimated for 1982 are already funded. Hence for the most part these charges will not increase with any inflation that occurs between 1977 and 1982.

Non-airline revenues, on the other hand, can be expected to grow with inflation. Concessionaires typically pay a percentage of gross revenues to the airport, and revenues from this source will tend to grow with increases in the general price level. The rental rates paid for space controlled by the airport, while fixed for certain periods, are periodically readjusted to reflect "fair market" rates and in a period of general inflation the price of rental space typically rises.

In 1976 concession revenues and aeronautical rentals accounted for over 66 percent of the airport's total revenues. Thus over 66 percent of the airport's revenues can be expected in increase along with a general inflationary trend, whereas only 32 to 40 percent of all expenses are subject to the same inflationary pressures. It is entirely possible, therefore, that continued inflation could cause all revenues except use charges to increase faster than expenses, thereby reducing the gross airport use charge.

Even if inflation should result all other revenues increasing only as fast as total expense, this would still mean that the total dollars required from the airlines would remain fixed. However, if airline fares and airline revenues are keeping pace with the inflation, an airport use charge that remains unchanged would represent a declining burden on the airlines.

To sum up, it is well-known that during inflationary periods those with large fixed debts gain by virtue of being able to repay the indebtedness with inflated dollars. The airports system has such large fixed debts. Under the present lease agreements, however, any such gains from inflation will accrue entirely to the lessee airlines in the form of reduced airport use charges.

Use Charge Per Passenger Landed

In chapter 7, column 2 of tables 7.3 and 7.4 show the airport use charge per arriving passenger. The method of estimating these figures for overseas and interisland passengers is shown in tables D.4 and D.5, respectively.

In table D.4 both the actual and projected landing weight per passenger is seen to decline gradually over time (column 4). This reflects the increasing use of more efficient wide-bodied B-747, DC-10 and L-1011 aircraft. Over 70 percent of all scheduled overseas flights to and from Honolulu are now performed with such aircraft.

Table D.1

Summary of Moderate-Impact Projection
Of Cash Flow Requirements and Revenues and Use Charges
Fiscal Years 1970–71 Through 1981–82

Fiscal year ending June 30	Total cash flow required (1)	Concessions rentals and misc. income[1] (2)	Fuel tax AUC and landing fees[2] (3)	Col. (3) as a % of Col (1) (4)	Estimated chargeable landing weights (1 million lb. units)[3] (5)	Estimated use charges per 1000 lbs. of landing weights[4] (6)
			Actual			
1971	$ 20,777	$ 12,133	$ 8,644	41.6%	9,648	$0.896
1972	24,380	15,528	8,852	36.3	11,168	0.793
1973	30,100	21,505	8,595	28.6	11,278	0.762
1974	32,925	29,656	3,269[5]	9.9	11,231	0.291
1975	39,240	31,418	7,822	19.9	11,194	0.699
1976	48,990	32,629	16,361	33.4	10,895	1.502
Total	$196,412	$142,869	$53,543	27.3%	65,414	$0.819
			Projected			
1977	$56,763	$33,779	$22,984	40.5%	11,220	$2.049
1978	58,980	34,412	24,568	41.7	11,692	2.101
1979	64,101	36,697	27,404	42.8	12,402	2.210
1980	67,229	39,095	28,134	41.9	13,271	2.120
1981	69,361	40,307	29,054	41.9	14,200	2.046
1982	71,733	42,037	29,696	41.4	15,193	1.955

Note: Columns (1), (2), and (3) are in thousands of dollars.

[1] Includes unclaimed or disallowed fuel tax credits.

[2] Total revenues required from commercial air operators.

[3] Overseas landing weights plus 9 percent of interisland landing weights.

[4] Derived by dividing Column (3) by Column (5).

[5] Adjusted revenue requirements (airport accountants' report).

Sources: Consulting engineers' projections in Speas-Wemple-Warskow, *Report on Traffic, Revenues and Expenses for the Airports System of the State of Hawaii* (Manhasset, New York: June 1975) and included as appendix A in the *Official Statement* accompanying the $20,000,000 *State of Hawaii Airports System Revenue Bonds, Series of 1975*, dated July 1, 1975. Also Coopers and Lybrand, CPA, *State of Hawaii, Department of Transportation, Airports Division, Accountants' Report*, fiscal years 1971 through 1976, and fiscal records, airports division, department of transportation, State of Hawaii.

Table D.2

Summary of Low-Impact Projection of
Cash Flow Requirements and Revenues and Use Charges
Fiscal Years 1976 Through 1982

Fiscal year ending June 30	Total cash flow required (1)	Concessions rentals and misc. income (2)	Fuel tax, AUC and landing fees (3)	Col (3) as a % of Col (1) (4)	Estimated chargeable landing weights (1 million lb. units) (5)	Estimated use charges per 1000 lbs. of landing weights (6)
			Actual			
1976	$48,990	$32,629	$16,361	50.1%	10,895	$1.502
			Projected			
1977	$56,220	$35,268	$20,952	37.3%	11,220	$1.867
1978	57,807	37,735	20,072	34.7	11,692	1.717
1979	62,199	42,256	19,943	32.1	12,402	1.608
1980	64,492	47,364	17,128	26.6	13,271	1.291
1981	65,663	53,012	12,651	19.3	14,200	0.810
1982	66,898	59,343	7,555	11.3	15,193	0.497

Notes:
- Sources and footnotes same as table D.1.
- Operation and maintenance expenses are assumed to grow at 6 percent compounded annually instead of at 10 percent.
- Concession revenues are assumed to grow at 15 percent compounded annually, instead of at 8 percent from 1977 through 1980, and at 5 percent in 1981 and 1982.

Table D.3

Summary of High-Impact Projection of
Cash Flow Requirements and Revenues and Use Charges
Fiscal Years 1976 Through 1982

Fiscal year ending June 30	Total cash flow required (1)	Concessions rentals and misc. income (2)	Fuel tax, AUC and landing fees (3)	Col (3) as a % of Col (1) (4)	Estimated chargeable landing weights (1 million lb. units) (5)	Estimated use charges per 1000 lbs. of landing weights (6)
			Actual			
1976	$48,990	$32,629	$16,361	50.1%	10,895	$1.502
			Projected			
1977	$56,763	$26,043	$30,720	54.1%	11,220	$2.738
1978	58,980	25,995	32,985	55.9	11,692	2.821
1979	64,101	27,469	36,632	57.2	12,402	2.953
1980	67,229	28,913	38,316	57.0	13,271	2.887
1981	69,361	30,194	39,167	56.5	14,200	2.758
1982	71,733	31,338	40,395	56.3	15,193	2.659

Notes:

- Sources and footnotes same as in table D.1.
- For fiscal years 1977 through 1980, in-bond (duty-free) revenues are assumed to equal the guaranteed minimum specified in the lease; for fiscal years 1981 and 1982, an $800,000 increase over the 1980 minimum is assumed for each year.
- All other concession revenues are assumed to grow at a compound rate of 5 percent.

Table D.4

Actual and Projected Use Charge per Overseas Passengers Landed

Fiscal Years 1971 through 1982

Fiscal year ending June 30	Arriving, departing, & through passengers (thousands)[1] (1)	Landing weights (millions of pounds)[1] (2)	Aircraft landing weight per arriving, departing, & through passengers (thousands)[2] (3)	Aircraft landing weight per arriving passenger (incl. through passengers) (thousands)[3] (4)	Effective use charge per 1000 pounds[4] (5)	Use charge per arriving passenger[5] (6)	Assumed one-way fare (7)	Use charge as a percent of one-way fare (8)[6]
				Actual				
1971	4,525	9,118	2,015	4,030	$0.896	$3.611	$130	2.78%
1972	5,090	10,599	2,082	4,164	0.793	3.302	130	2.54
1973	5,874	10,644	2,083	4,166	0.762	3.175	130	2.44
1974	6,483	10,549	1,812	3,624	0.291	1.055	135	0.78
1975	6,608	10,490	1,542	3,084	0.699	2.156	140	1.54
1976	7,753	10,169	1,312	2,624	1.502	3.941	145	2.72
				Projected				
1977	7,981	10,438	1,308	2,616	$1.867–2.738	$4.884–7.163	$150	3.26–4.78%
1978	8,580	10,856	1,265	2,530	1.717–2.821	4.344–7.137	158	2.75–4.52
1979	9,224	11,507	1,248	2,496	1.608–2.953	4.014–7.371	165	2.43–4.47
1980	9,916	12,313	1,242	2,484	1.291–2.887	3.207–7.171	174	1.84–4.12
1981	10,660	13,175	1,236	2,472	0.891–2.758	3.203–6.818	182	1.76–3.75
1982	11,460	14,079	1,230	2,460	0.491–2.659	1.208–6.541	191	0.63–3.42

[1] Source: Same as table D.1.

[2] Calculated as follows: Column (2) divided by Column (1).

[3] Calculated as follows: Column (3) times 2.

[4] Source: Tables D.2 and D.3, Column (6). (Fiscal years 1977 through 1982 show the range from low impact to high impact on use charge.)

[5] Calculated as follows: .001 of Column (4) times Column (5). (Fiscal years 1977 through 1982 show the range from low impact to high impact on use charge.)

[6] Calculated as follows: Column (6) divided by Column (7). (Fiscal years 1977 through 1982 show the range from low impact to high impact on use charge.)

Table D.5

Actual and Projected Use Charge per Interisland Passenger Landed
Fiscal Years 1971 through 1982

Fiscal years ending June 30	Arriving & departing passengers (thousands)[1] (1)	Arriving passengers (thousands)[2] (2)	Aircraft landing weights (millions of pounds) (3)	Aircraft landing weight per arriving passenger (pounds)[3] (4)	Effective use charge per thousand pounds[4] (5)	Use charge per arriving passenger[5] (6)	Assumed one-way fare (7)	Use charge as a % of one-way fare[6] (8)
				Actual				
1971	6,373	3,186	5,887	1,848	$0.081	$0.149	$20	0.75%
1972	7,473	3,736	6,327	1,693	0.071	0.120	20	0.60
1973	8,902	4,451	7,044	1,583	0.069	0.109	21	0.52
1974	9,984	4,992	7,578	1,518	0.026	0.040	22	0.18
1975	10,750	5,375	7,823	1,455	0.063	0.092	23	0.39
1976	11,288	5,644	8,068	1,430	0.135	0.193	24	0.79
				Projected				
1977	12,565	6,283	8,685	1,382	$0.168–0.246	$0.232–0.340	$25	0.93–1.36%
1978	13,570	6,785	8,293	1,370	0.155–0.254	0.212–0.348	26	0.82–1.34
1979	14,656	7,328	9,944	1,357	0.145–0.266	0.197–0.361	27	0.73–1.34
1980	15,828	7,914	10,640	1,344	0.116–0.260	0.156–0.349	28	0.56–1.25
1981	17,094	8,547	11,385	1,332	0.080–0.248	0.107–0.330	29	0.37–1.14
1982	18,462	9,231	12,182	1,320	0.044–0.239	0.058–0.316	30	0.19–1.05

[1] Source: Same as table D.1.

[2] Calculated as follows: Column (1) divided by 2.

[3] Calculated as follows: Column (3) divided by Column (2).

[4] Represents 9 percent of the overseas use charge shown in tables D.2 and D.3. (Fiscal years 1977 through 1982 show the range from low and high impact on use charge.)

[5] Calculated as follows: .001 of Column (4) times Column (5). (Fiscal years 1977 through 1982 show the range from low and high impact on use charge.)

[6] Calculated as follows: Column (6) divided by Column (7). (Fiscal years 1977 through 1982 show the range from low and high impact on use charge.)

APPENDIX E

Table E.1

Overseas Program Summary of Cash Flow Requirements, Revenues, and Use Charges

Fiscal Years 1971 through 1982

Fisca year ending June 30	Total cash flow required (1)	Concessions, rentals, misc. income[1] (2)	Fuel tax, AUC, and landing fees[2] (3)	Col. (3) as a percent of Col. (1) (4)	Estimated chargeable landing weights (millions of pounds)[3] (5)	Estimated use charges per 1000 pounds landing weight[4] (6)
			Actual			
1971	$15,205	$ 7,922	$ 7,283	47.9%	9,118	$0.799
1972	18,121	9,840	8,281	45.7	10,599	0.781
1973	22,734	12,055	10,679	47.0	10,644	1.000
1974	24,419	14,769	9,650	39.5	10,549	0.915
1975	28,329	15,770	12,559	44.3	10,490	1.197
1976	36,149	16,557	19,592	54.2	10,169	1.927
			Moderate -Impact Projection			
1977	$42,588	$15,908	$26,680	62.6%	11,220	$2.378
1978	42,560	15,940	26,620	62.5	11,692	2.277
1979	45,833	16,857	28,976	63.2	12,402	2.336
1980	47,545	17,821	29,724	62.5	13,271	2.240
1981	48,925	18,295	30,630	62.6	14,200	2.157
1982	50,025	19,028	30,997	62.0	15,193	2.040
			Low-Impact Projection[5]			
1977	$42,236	$16,455	$25,781	61.0%	11,220	$2.298
1978	41,799	17,161	24,638	58.9	11,692	2.107
1979	44,601	18,901	25,700	57.6	12,402	2.072
1980	45,772	20,862	24,910	54.4	13,271	1.877
1981	46,528	22,847	23,681	50.9	14,200	1.668
1982	46,892	25,393	21,499	45.9	15,193	1.415

(continued)

Table E.1 (continued)

Overseas Program Summary of Cash Flow Requirements, Revenues, and Use Charges
Fiscal Years 1971 through 1982

Fiscal year ending June 30	Total cash flow required (1)	Concessions, rentals, misc. income[1] (2)	Fuel tax, AUC, and landing fees[2] (3)	Col. (3) as a percent of Col. (1) (4)	Estimated chargeable landing weights (millions of pounds)[3] (5)	Estimated use charges per 1000 pounds landing weight[4] (6)
			High-Impact Projection[6]			
1977	$42,588	$14,255	$28,333	66.5%	11,220	$2.525
1978	42,560	14,030	28,530	67.0	11,692	2.440
1979	45,833	14,649	31,184	68.0	12,402	2.514
1980	47,545	15,268	32,277	67.9	13,271	2.432
1981	48,925	15,661	33,264	68.0	14,200	2.343
1982	50,025	16,321	33,704	67.4	15,193	2.218

Note: Columns (1), (2), and (3) are in thousands of dollars.

[1] Includes unclaimed or disallowed fuel tax credits, and allocations of about 96 percent of investment income, 75 percent of parking revenues at HIA, and 33 percent and and 20 percent of duty-free revenues in 1971 through 1973 and 1974 through 1982, respectively.

[2] Total revenues required from overseas commercial air operators.

[3] Overseas landing weights only.

[4] Derived by dividing Col. (3) by Col. (5).

[5] For the low-impact projection: operation and maintenance expenses are assumed to grow at 6 percent compounded annually instead of at 10 percent and concession revenues are assumed to grow at 15 percent rather than at 8 percent from 1977 through 1980 and at 5 percent in 1981 and 1982.

[6] For the high-impact projection: in-bond (duty free) revenues are assumed to equal 20 percent of the guranteed minimum specified in the lease for 1977 through 1982; all other concession revenues are assumed to grow at a compound rate of 5 percent.

Sources: Consulting engineers' projections in Speas-Wemple-Warskow, *Report on Traffic, Revenues and Expenses for the Airports System of the State of Hawaii* (Manhasset, New York: June 1975) and included as appendix A in the *Official Statement* accompanying the $20,000,000 *State of Hawaii Airports System Revenue Bonds, Series of 1975,* dated July 1, 1975. Also Coopers and Lybrand, CPA, *State of Hawaii, Department of Transportation, Airports Division, Accountants' Report,* fiscal years 1971 through 1976,and fiscal records of the airports division, department of transportation, State of Hawaii.

Table E.2

Interisland Program Summary of Cash Flow Requirements, Revenues, and Use Charges Based on 50 Percent of Total Cash Flow Requirements

Fiscal Years 1971 through 1982

Fiscal year ending June 30	Cash flow requirements[1] (1)	Concessions, rentals, misc. income[2] (2)	Fuel tax AUC, and landing fees[3] (3)	Col. (3) as a % of Col. (1) (4)	Estimated chargeable landing weights (millions of pounds)[4] (5)	Estimated use charges per 1000 pounds landing weight[5] (6)
			Actual			
1971	$2,472	$2,036	$ 436	17.6%	5,887	$0.074
1972	2,762	2,417	345	12.5	6,327	0.055
1973	3,243	3,306	[63]	-1.9	7,044	[0.009]
1974	3,746	3,926	[180]	-4.8	7,578	[0.024]
1975	4,847	4,247	600	12.4	7,832	0.077
1976	5,690	4,083	1,607	28.2	8,068	0.199
			Moderate-Impact Projection			
1977	$6,289	$4,724	$1,565	24.9%	8,685	$0.180
1978	7,341	4,325	3,016	41.1	9,293	0.325
1979	8,189	4,571	3,618	44.2	9,944	0.364
1980	8,812	4,796	4,016	45.6	10,640	0.377
1981	9,095	4,726	4,369	48.0	11,385	0.384
1982	9,627	4,854	4,773	49.6	12,182	0.392
			Low-Impact Projection[6]			
1977	$6,217	$4,799	$1,418	22.8%	8,685	$0.163
1978	7,184	4,494	2,690	37.4	9,293	0.290
1979	7,936	4,892	3,044	38.4	9,944	0.306
1980	8,447	5,302	3,145	37.2	10,640	0.296
1981	8,603	5,519	3,084	35.8	11,385	0.271
1982	8,984	5,988	2,996	33.3	12,182	0.246

(continued)

Table E.2 (continued)

Interisland Program Summary of Cash Flow Requirements, Revenues, and Use Charges Based on 50 Percent of Total Cash Flow Requirements

Fiscal Years 1971 through 1982

Fiscal year ending June 30	Cash flow requirements[1] (1)	Concessions, rentals, misc. income[2] (2)	Fuel tax AUC, and landing fees[3] (3)	Col. (3) as a % of Col. (1) (4)	Estimated chargeable landing weights (millions of pounds)[4] (5)	Estimated use charges per 1000 pounds landing weight[5] (6)
			High-Impact Projection[7]			
1977	$6,289	$4,649	$1,640	26.1%	8,685	$0.189
1978	7,341	4,164	3,177	43.3	9,293	0.342
1979	8,189	4,347	3,842	46.9	9,944	0.386
1980	8,812	4,502	4,310	48.9	10,640	0.405
1981	9,095	4,417	4,678	51.4	11,385	0.411
1982	9,627	4,530	5,097	52.9	12,182	0.418

Note: Columns (1), (2), and (3) are in thousands of dollars.

[1] Represents 50 percent of IG program cash flow requirements.

[2] Includes unclaimed or disallowed fuel tax credit, about 4 percent of investment income, and 25 percent of parking revenues at HIA.

[3] Total revenues required from interisland commercial air operators.

[4] Interisland landing weights only.

[5] Derived by dividing Column (3) by Column (5).

[6] For the low-impact projection: operations & maintenance expenses are assumed to grow at 6 percent compounded annually instead of at 10 percent and concession revenues are assumed to grow at 15 percent compounded annually instead of at about 8 percent.

[7] For the high-impact projection: concession revenues are assumed to grow at a compounded annual rate of 5 percent instead of at about 8 percent.

Sources: Same as for table E.1.

Table E.3

Interisland Program Summary of Cash Flow Requirements, Revenues, and Use Charges Based on 60 Percent of Total Cash Flow Requirements

Fiscal Years 1971 through 1982

Fiscal year ending June 30	Cash flow required[1] (1)	Concessions, rentals, misc. income[2] (2)	Fuel tax, AUC, and landing fees[3] (3)	Col. (3) as a % of Col. (1) (4)	Estimated chargeable landing weights (millions of pounds)[4] (5)	Estimated use charges per 1000 pounds landing weight[5] (6)
			Actual			
1971	$ 2,966	$2,036	$ 930	31.4%	5,887	$0.158
1972	3,314	2,417	897	27.1	6,327	0.142
1973	3,891	3,306	585	15.0	7,044	0.083
1974	4,495	3,926	569	12.7	7,578	0.075
1975	5,816	4,247	1,569	27.0	7,832	0.200
1976	6,828	4,083	2,745	40.2	8,068	0.340
			Moderate-Impact Projection			
1977	$ 7,547	$4,724	$2,823	37.4%	8,685	$0.325
1978	8,809	4,325	4,484	50.9	9,293	0.483
1979	9,826	4,571	5,255	53.5	9,944	0.529
1980	10,574	4,796	5,778	54.6	10,640	0.543
1981	10,913	4,726	6,187	56.7	11,385	0.543
1982	11,552	4,854	6,698	58.0	12,182	0.550
			Low-Impact Projection[6]			
1977	$ 7,460	$4,799	$2,661	35.7%	8,685	$0.306
1978	8,621	4,494	4,127	47.9	9,293	0.444
1979	9,522	4,892	4,630	48.6	9,944	0.466
1980	10,137	5,302	4,835	47.7	10,640	0.454
1981	10,324	5,519	4,805	46.5	11,385	0.422
1982	10,780	5,988	4,792	44.5	12,182	0.393

(continued)

Table E.3 (continued)

Interisland Program Summary of Cash Flow Requirements, Revenues, and Use Charges Based on 60 Percent of Total Cash Flow Requirements Fiscal Years 1971 through 1982

Fiscal year ending June 30	Cash flow required[1] (1)	Concessions, rentals, misc. income[2] (2)	Fuel tax, AUC, and landing fees[3] (3)	Col. (3) as a % of Col. (1) (4)	Estimated chargeable landing weights (millions of pounds)[4] (5)	Estimated use charges per 1000 pounds landing weight[5] (6)
			High-Impact Projection[7]			
1977	$ 7,547	$4,649	$2,898	38.4%	8,685	$0.334
1978	8,809	4,164	4,645	52.7	9,293	0.500
1979	9,826	4,347	5,479	55.8	9,944	0.551
1980	10,574	4,502	6,072	57.4	10,640	0.571
1981	10,913	4,417	6,496	59.5	11,385	0.571
1982	11,552	4,530	7,022	60.8	12,182	0.576

Note: Columns (1), (2), and (3) are in thousands of dollars.

[1] Represents 60 percent of IG program cash flow requirements.

[2] Includes unclaimed or disallowed fuel tax credit, about 4 percent of investment income, and 25 percent of parking revenues at HIA.

[3] Total revenues required from interisland commercial air operators.

[4] Interisland landing weights only.

[5] Derived by dividing Column (3) by Column (5).

[6] For the low-impact projection: operation and maintenance expenses are assumed to grow at 6 percent compounded annually instead of at 10 percent and concession revenues are assumed to grow at 15 percent compounded annually instead of at about 8 percent.

[7] For the high-impact projection: concession revenues are assumed to grow at a compounded annual rate of 5 percent instead of at about 8 percent.

Sources: Same as for table E.1.

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