CBO PAPER

FINANCING SMALL COMMERCIAL-SERVICE AIRPORTS: FEDERAL POLICIES AND OPTIONS

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NOTE

Numbers in the text and tables may not add up to totals because of rounding.

PREFACE

The Congress is considering bills to reauthorize the Federal Aviation Administration (FAA) and its program of grants to airports, known as the Airport Improvement Program (AIP). In March 1999, the Congress passed legislation extending the program through May 1999. The Congressional Budget Office (CBO) prepared this paper, which examines alternative sources of funding for small airports and options for modifying the AIP, at the request of the House Committee on the Budget. In accordance with CBO's mandate to provide objective and impartial analysis, the paper makes no recommendations.

Elizabeth Pinkston of CBO's Natural Resources and Commerce Division wrote the paper under the direction of Jan Paul Acton and Elliot Schwartz, formerly of CBO. Marvin Phaup, of CBO's Special Studies Division, and James Blum, formerly of CBO, provided extensive advice on the financial concepts presented in Chapter II. David Moore, Peter Fontaine, Victoria Heid Hall, and Paul Van de Water, all of CBO, reviewed a draft of the paper, and Eric Guille provided technical advice on the statistical programs used to analyze the data.

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SUMMARY

The federal government plays a major role in aviation in the United States. The Federal Aviation Administration (FAA) operates the air traffic control system and oversees safety and security through certifications, inspections, and regulations for airlines, airports, pilots, aircraft manufacturers, and other providers of aviation services. In addition, the FAA provides financial aid to airports in the form of grants from the Airport Improvement Program (AIP). The federal government's involvement in aviation stems from the many benefits—safety, security, and mobility throughout the airport and airway system—that accrue to the general public as well as to the providers and users of air transportation.

Since 1982, the FAA and its programs have generally been authorized for periods of two to five years. The last major legislation, in 1996, authorized the FAA through September 1998. In October 1998, the 105th Congress passed legislation to extend the FAA's authorization through March 1999.

In the 106th Congress, the House Committee on Transportation and Infrastructure and the Senate Committee on Commerce, Science, and Transportation have approved bills that would reauthorize the FAA and modify the AIP. Lacking time for consideration by the full House and Senate—and for reconciling substantial differences between the bills as approved—the Congress in March 1999 extended the FAA's authorization through the end of May 1999.

The House bill, the Aviation Investment and Reform Act for the 21st Century (H.R. 1000), would reauthorize the FAA for six years (through September 2004) at substantially higher annual funding levels and would amend several provisions of current law that govern AIP grants. The Senate bill, the Air Transportation Improvement Act (S. 82), would reauthorize the FAA through September 2000. The Administration has also sent a proposal to the Congress; introduced as the Federal Aviation Administration Authorization Act of 1999 (S. 545), it would authorize the FAA through September 2004.

In 1997, federal grants to airports totaled nearly $1.5 billion, of which about 41 percent went to larger airports and 59 percent to smaller ones. As the Congress considers legislation to reauthorize the AIP, some policymakers have questioned whether the limited amount of federal funding available could be distributed in a way that would enhance the performance of the national aviation system. Many experts believe that large airports could succeed without federal grants if certain constraints

—in particular, limits on passenger facility charges (PFCs)—were removed. With the FAA's permission, airports may impose PFCs of up to $3 per boarding passenger. Smaller airports, however, may have more difficulty financing capital investment than larger airports; therefore, many policymakers are concerned about the effects on smaller airports of changing the grant program.

In this paper, "larger" airports refer to those classified by statute as large and medium hubs, the 68 airports that collectively handled 87.5 percent of passenger boardings in 1995. "Smaller" airports refer to commercial-service airports with fewer than 1.5 million passenger boardings a year. That category comprises small primary hub airports, primary nonhub airports, and nonprimary commercial-service airports. (The analysis in Chapter II excludes nonprimary airports because of a lack of data.) General aviation airports are excluded from the analysis.

A review of financial reports of airports receiving federal grants in 1996 and 1997 indicates that smaller airports have greatly varying financial conditions. Some had strong financial results in 1996 and 1997; others had weak results. About 66 percent of small hub airports and 57 percent of nonhubs with passenger boardings of more than 75,000 a year had operating surpluses, but only 25.5 percent of nonhubs with fewer than 75,000 passenger boardings a year had operating surpluses. The different financial conditions of smaller airports suggest that generalizing about those airports' finances may be unproductive and that broad federal policies should be considered carefully to avoid unintended consequences.

THE AIRPORT IMPROVEMENT PROGRAM

The FAA has designated about 3,300 airports in the United States (including U.S. possessions) as eligible for AIP grants; they are considered part of the National Plan of Integrated Airport Systems (NPIAS). Both commercial-service and noncommercial general aviation airports are eligible for AIP grants.

The law provides for both formula grants and discretionary grants. From 1982 to 1997, the FAA awarded about $10.7 billion (51.9 percent of the total) in formula grants and $9.9 billion (48.1 percent) in discretionary grants. Airports must provide matching funds to federal grants. In general, the federal government's share of each grant is 75 percent for large and medium hubs and 90 percent for smaller airports.

The formula grants, known as apportionments, are based on several factors. For primary airports (those with at least 10,000 passenger boardings a year), the formula is based on the number of passenger boardings at the airport: airports receive $7.80 for each of the first 50,000, $5.20 for each of the next 50,000, $2.60 for each of the next 400,000, $0.65 for each of the next 500,000, and $0.50 for each

additional passenger boarding in excess of 1 million. For cargo airports, formulas are based on the weight of shipments.

For airports with fewer than 10,000 passenger boardings a year, formula funding is apportioned to states, territories, and possessions according to the population and land area of the jurisdiction. Airports in Alaska, however, are entitled to receive at least as much money as they received in 1980.

Funds remaining after the FAA distributes formula grants flow into the discretionary account. Several rules govern the distribution of discretionary funds, including set-asides for noise abatement, for promoting civilian use of former military airports, and for nonprimary commercial-service, general aviation, and reliever airports.

Although the amount of AIP funding authorized for 1998 was $2.347 billion, the amount available for obligation was limited to $1.7 billion. (The Congress also rescinded some contract authority from previous years, resulting in actual spending of $1.51 billion in 1998.) The Congress has generally placed limitations on obligations—in appropriations or other legislation— that have kept actual spending below the amounts set in authorizing legislation. From 1982 to 1997, large and medium hubs together received 43.5 percent of AIP funds. Smaller commercial-service (small hub, primary nonhub, and nonprimary commercial-service) airports collectively received 30.5 percent, and general aviation (including reliever) airports received 22.8 percent.

In 1997, the FAA made a total of 1,066 AIP grants ranging in size from $750,000 to $46 million but averaging less than $1.4 million. For large and medium hubs, the average grant was $4.05 million, and for smaller airports, about $1 million.

The Airport and Airway Trust Fund finances AIP grants through taxes on users of the aviation system. Those taxes consist of the airline passenger ticket tax, a flight-segment tax, a tax on international arrivals and departures, a tax on cargo waybills, and an aviation fuel tax. The trust fund also finances capital investments in the air traffic control system and a portion of the system's operations. (The general fund finances the rest of the cost of operating the air traffic control system.)

AIRPORT FINANCES FOR THE 1996-1997 PERIOD

In general, financial data for airports in 1996 and 1997 support the conventional wisdom that large airports are better off financially than smaller airports. Larger

airports, which have considerable capacity to generate funds for investment, use revenues from PFCs and bond proceeds as their main sources of investment funds.

Federal grants are by far the largest source of capital for smaller airports. Some of those airports, however, also seem able to raise funds from their own sources to finance capital investments. An increasing number are turning to PFCs to support investment or debt repayment or to provide funds to meet their matching share of federal grants, and some have successfully tapped the bond market.

INCREASING INVESTMENT FUNDS FOR SMALLER AIRPORTS

The sources of funding for capital investment that airports are now tapping—PFCs, bond proceeds, and grants from the federal, state, and local governments—represent all the potential providers of funds: users, investors, and taxpayers. To increase revenues, airports will need to raise the amount of funds they receive from some or all of those sources.

Passenger Facility Charges

In 1990, the Congress authorized the Secretary of Transportation to allow airports to impose PFCs of up to $3 on each passenger boarding an airliner at an airport. PFC proceeds are to be used for airport-related capital projects.

One way of increasing revenues is for airports not currently charging PFCs to start charging them and for airports charging them to increase them. Of the latter, all but one are already charging the maximum amount permitted under current law.

After the Congress authorized PFCs in 1990, most large and medium hub airports quickly adopted them. The early conventional wisdom was that larger airports would find PFCs especially useful but that smaller airports would not find them as useful. In the past three years, however, many smaller airports have started to impose PFCs. As of September 30, 1997, 59 percent of primary nonhub airports (those with 10,000 to about 282,000 passenger boardings a year) and 9 percent of nonprimary commercial-service airports (those with fewer than 10,000 passenger boardings a year) were collecting PFCs. Many of those airports used PFC revenues as matches for AIP grants. The Administration has proposed raising the cap on PFCs to $5, and legislation approved by the House Committee on Transportation and Infrastructure would raise the cap to $6.

Bonds

Bond proceeds have been the main source of capital funding for creditworthy airports. Most large and medium hub airports have turned to the bond market to help finance their capital spending. Many smaller commercial airports have also succeeded in issuing bonds. Some of those airports mimic larger airports that issue bonds backed by revenues from user charges such as landing fees. Other smaller airports find that potential lenders insist on additional backing from tax revenues; in those cases, the airports typically ask a local government body with the power to impose taxes to issue general obligation bonds on the airport's behalf.

Despite airports' overall ability to borrow funds for investment, credit assistance might be useful in some cases. If, for example, a lack of complete information led bond-rating agencies to assign a lower credit rating to an airport than it merited, assistance in buying bond insurance or the provision of additional reserve funds could enable the airport to borrow funds for a worthwhile project. Credit-assistance measures would have to be carefully directed, however, to avoid simply substituting federal aid for capital from nonfederal sources. In any event, credit assistance is generally unnecessary. Still, no overriding reasons are apparent for not providing it in the few circumstances where it might expedite a project—assuming it required no additional outlays from the AIP.

Private Equity Participation

The private sector may also provide funds for airport investments. Regarding airport financing, private investment means different things to different people. For example, airport capital projects and operations already involve a substantial amount of private equity. Airlines invest in terminal and maintenance facilities, and other private businesses operating at airports also make capital investments. In addition, many airports contract out some of their operations to private firms.

A more extreme form of private investment in airports would be ownership of airports. Airports tend to have a local monopoly, and U.S. public policy has generally favored government regulation of public utility monopolies to protect the public interest. So privately owned airports would probably need to be regulated; however, regulation can lead to inefficiencies. Nonetheless, advocates of privatization note that private, for-profit concerns generally have greater incentives to reduce costs and operate efficiently than do government agencies.

Modifying the Federal Grant Program

Although the AIP plays a significant role in the financing of smaller airports within the confines of current funding, several options exist for modifying the program in ways to make more total funding available for smaller airports.

Shifting Funds from Large and Medium Hubs to Smaller Airports. One option is to phase out AIP grants to large and medium hubs and to redirect the funds to smaller airports. To mitigate the effect on larger airports, that option would also increase or eliminate the cap on PFCs.

The option would have several distributional consequences mainly because passengers help finance AIP grants through the passenger ticket tax. Since 90 percent of passengers use large and medium hubs, they contribute most of the revenues. For their taxes to go to smaller airports that they do not use may seem unfair. Most of the tax revenues, however, go toward covering the costs of the air traffic control system, which serves all commercial airline passengers.

Phasing in the option might be less disruptive than immediately ending grants to larger airports. It would give airports time to revise (and possibly postpone) capital spending plans, to build up capital reserves by increasing PFCs and other user fees, and to work with participants in the bond market to address any problems associated with the cutoff of one source of airport funding.

Directing Federal Funds to Airports Meeting Certain Criteria. Although similar to the first option, the second option would try to target airports, regardless of size, that need assistance in meeting federal requirements and goals. Compared with the first option, it would help larger airports that qualified for federal aid but would provide less funding for smaller airports with strong financial conditions.

Unless carefully crafted, the second option could create undesirable incentives by rewarding airports that did little to improve their financial condition. To qualify for aid, the federal government might require that an airport show that it was trying to increase revenues (for example, by imposing PFCs, increasing other user fees, or trying to attract more users) and reduce costs. In addition, the funding criteria could favor investments serving the national interest and discourage those aimed solely at local economic development.

Converting the Grant Program to a Loan Program. Another option is to convert all or part of the grant program to a loan program. A loan program could lend money at a market rate or a subsidized rate, and the rate could vary according to the federal government's assessment of the airport's needs, the importance of the project to the national aviation system, and other factors.

Converting the AIP to a State Block-Grant Program. Still another option would convert the AIP to a block-grant program in which federal aid flowed to the states instead of directly to individual airports. This option would enable states to set their own priorities in distributing funds to individual airports. Current law authorizes a nine-state program of block grants to states for nonprimary airports (commercial-service airports with fewer than 10,000 passenger boardings annually and general aviation airports).

Revising Requirements for Federal Aid. Airports receiving federal aid must meet several requirements. Although the requirements are generally intended to protect the national interest and ensure the prudent use of federal funds, they can also impose burdens on aid recipients and make it more difficult or costly for airports to carry out development projects. The following options could make federal aid more useful to airports:

- One option would relax requirements for matching shares. Grant programs generally impose such requirements on the grounds that if recipients have to bear part of the cost of a project or program, they will be more cost-conscious than if they receive "free" money. Evidence about the validity of that idea is inconclusive. Nonetheless, the law specifies the federal government's share of the costs of projects funded with AIP grants—in general, 75 percent for projects at large or medium hubs and 90 percent for projects at smaller airports.

- Another option—an offshoot of the state block-grant program—would allow grants to be used for state credit-enhancement programs. It would permit states to use AIP funds to capitalize revolving funds that would make loans or provide other credit enhancements for airport projects. The funds would be similar to those created to make loans for wastewater treatment and to state infrastructure banks created to finance highway projects.

Finally, other options could provide additional flexibility. Reducing regulations for airport design and construction standards could reduce costs and effectively provide more aid to airports. So could relaxing other restrictions on airports' use of federal aid. But doing that might enable recipients of aid—airports, cities, and states—to use the funds to further local interests at the expense of enhancing the national aviation system. If the Congress allowed airports to increase PFCs and other fees and to use the revenues as they wished, some aid recipients might use their local monopoly power to finance nonaviation activities or to lower local taxes.

Assistance from State and Local Governments

In addition to the funding sources already discussed, airports could look to state and local governments for greater financial assistance. Such assistance could especially appeal to state and local governments wanting to further economic development because air transportation is often an important criterion used by companies in choosing sites for new facilities.

Some state and local governments assist airports by issuing general obligation bonds on airports' behalf. Those bonds tend to get more favorable interest rates and enjoy better access to bond markets than otherwise similar revenue bonds because general obligations are backed by the jurisdiction's power to impose and increase taxes. But in turning to state and local governments for aid, airports compete with a wide range of other projects such as school buildings, prisons, parks, and sports stadiums. That makes obtaining money for airports from state and local governments difficult and uncertain.

CHAPTER I
INTRODUCTION

The federal government has long played a major role in aviation in the United States. In fact, the government has been involved in promoting aviation since before the Wright brothers' successful flight in 1903.[1] Initially, the main motivation for the government's involvement was for military purposes. In 1908, the Army contracted with the Wright brothers for a demonstration aircraft for the Signal Corps. Later, the federal government promoted aviation for delivering the mail. Increased aviation activity by civilians after World War I prompted concerns about safety and eventually led to passage of the Air Commerce Act of 1926, the first example of the government's intervention in civil aviation. Federal grants for airports began after World War II with the passage of the Federal Airport Act of 1946, which established the Federal-Aid Airport Program.

Today, the Federal Aviation Administration (FAA) operates the air traffic control system and oversees safety and security through inspections, certifications, and regulations for airlines, airports, pilots, aircraft manufacturers, and other providers of aviation services. In addition, the FAA provides financial aid to airports in the form of grants from the Airport Improvement Program (AIP). The federal government's involvement in aviation stems from the many benefits—safety, security, and mobility throughout the airport and airway system—that accrue to the general public as well as to the providers and users of air transportation.

Some people question the appropriateness of a large federal role in aviation, particularly regarding financial aid to airports, which could be considered a local or regional concern. That question is beyond the scope of this paper; however, some discussion of the appropriate role of government in providing or subsidizing a service provides a context for discussing the financing of smaller airports.

DETERMINING THE APPROPRIATE ROLE OF GOVERNMENT IN SUBSIDIZING AIRPORTS

This paper assumes that the relationships among governments and airports are given and does not assess the appropriateness of the federal role. Nonetheless, the AIP

1. The federal government provided financial backing for one of the Wright brothers' competitors, Samuel Pierpont Langley, head of the Smithsonian Institution. See Roger E. Bilstein, *Flight in America, 1900-1983: From the Wrights to the Astronauts* (Baltimore: Johns Hopkins University Press, 1984), pp. 9-10.

should be considered in the context of the FAA's long-standing mission to formulate and carry out aviation policies that serve the national interest.

In considering the appropriate role of government in providing or subsidizing a service, asking who gets the benefits and who pays the costs is useful. Do some activities provide benefits that accrue to people beyond those directly involved in a transaction? Such benefits (called "external benefits" or "externalities" as compared with "internal" benefits—those accruing to people directly involved) may justify government's involvement under certain circumstances. For example, if the people benefiting from the externality were willing to pay for it but charging them was infeasible or impracticable, it might be appropriate for government to step in. The appropriate roles for each level of government and for the private sector depend largely on the relative size of external and internal benefits and costs.

Aviation has several externalities. One that looms large is network externality—the notion that as a network expands, its value to users grows disproportionately faster than the actual network. Network externalities play an important role in communications; telephones, for example, became more valuable to their owners as the number of people owning telephones increased. A nationwide system of airports also has network externalities—a traveler wants an airport near both the origin and the destination of a trip. That situation could justify government subsidies to keep at least some small commercial-service airports operating. To determine the most efficient use of resources for building a national system of airports, one would calculate the benefits and costs (to the entire system, not just to the users of a certain airport) of each additional airport and continue to build as long as the marginal benefits exceeded the marginal costs.

Congestion is another externality to consider. At busy airports, an additional aircraft taking off or landing imposes delay costs on the aircraft (and passengers) behind it in the queue. One way of relieving congestion is to impose higher fees for takeoffs and landings at peak hours. Another way—more closely related to the subject of this paper—is to expand capacity, either at the congested airports or at airports designated as "relievers," where aircraft could be diverted to reduce the congestion at other airports. A calculation of the respective costs and benefits of relieving airport congestion would help determine the appropriate level of government involvement.

In addition, safety and security are externalities that support federal involvement in aviation. Protecting the public from threats such as terrorism involves ensuring essentially the same standards of security at small and large airports because they are all linked to the same system.

Noise is an externality but one in which costs, rather than benefits, accrue to people not directly involved in aviation activity. The large airplanes used for most air cargo and passenger traffic produce noise that bothers people living and working near airports. The FAA has tried to balance the competing interests of facilitating interstate commerce and mitigating the negative effects of noise by regulating aircraft engine noise and by granting funds for airports to purchase surrounding land as a buffer zone.

Another externality is the benefits derived by communities served by airports. For example, airports spur local economic development. Some people would argue, however, that in contrast to projects that benefit the nation as a whole, projects that benefit local areas should be paid for by state and local governments, not the federal government.

THE FEDERAL ROLE IN SUPPORTING SMALL AIRPORTS

Grants from the federal government play an important role in helping to finance small airports. From 1982, when the current AIP began, through 1997, the FAA awarded grants totaling $20.5 billion for airports large and small, commercial and general aviation.[2] Of that total, 43.5 percent went to the approximately 70 large and medium hub airports that account for about 90 percent of passenger travel (see Table 1). Most of the remaining amount was distributed among smaller commercial airports—those classified as small hubs, primary nonhub airports, and nonprimary commercial-service airports—and those serving private aircraft. (In this paper, "smaller" airports refer to small primary hub airports, primary nonhub airports, and nonprimary commercial-service airports; "larger" airports refer to large and medium primary hubs.[3] General aviation airports are excluded from most of the analysis. Box 1 details the size and type of the airports as classified by the FAA.[4]) In 1997, grants totaled nearly $1.5 billion, of which 40.7 percent went to larger airports and 58.7 percent to smaller ones.[5]

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2. Federal Aviation Administration, *Report to Congress: Sixteenth Annual Report of Accomplishments Under the Airport Improvement Program, Fiscal Year 1997* (preliminary draft, December 1998), Figure B-2, p. 57.

3. In Chapter II, "smaller" refers only to small hubs and primary nonhub airports because of a lack of data for nonprimary commercial-service airports (which have fewer than 10,000 passenger boardings a year).

4. The descriptions are from Federal Aviation Administration, *National Plan of Integrated Airport Systems (NPIAS) 1993-1997* (April 1995), pp. 2-5.

5. Federal Aviation Administration, *Sixteenth Annual Report*, Table F-1, p. vi. The remaining 0.6 percent went to states and planning agencies.

TABLE 1. AIRPORT IMPROVEMENT PROGRAM GRANTS BY TYPE OF AIRPORT, 1982-1997

Type of Airport	1982-1997 Total Amount (Millions of dollars)	1982-1997 Share of Total (Percent)	1997 Total Amount (Millions of dollars)	1997 Share of Total (Percent)
Larger Airports				
Large primary hubs	5,426.9	26.4	352.0	23.8
Medium primary hubs	3,517.8	17.1	248.1	16.8
Subtotal	8,944.7	43.5	600.1	40.7
Smaller Airports				
Small primary hubs	2,933.3	14.3	224.1	15.2
Primary nonhubs	2,519.2	12.3	258.6	17.5
Nonprimary commercial service	806.3	3.9	71.1	4.8
General aviation				
Relievers	2,021.7	9.8	100.6	6.8
Others	2,674.0	13.0	139.5	9.5
State block grants	504.4	2.5	72.4	4.9
Subtotal	11,458.9	55.8	866.4	58.7
States and Planning Agencies	135.7	0.7	9.4	0.6
Total	20,539.3	100.0	1,475.9	100.0

SOURCE: Congressional Budget Office using data from Federal Aviation Administration, *Report to Congress: Sixteenth Annual Report of Accomplishments Under the Airport Improvement Program, Fiscal Year 1997* (preliminary draft, December 1998), Figure B-2, p. 57.

As the Congress considers legislation to reauthorize the AIP, some policymakers want to reexamine the program to determine whether the limited amount of federal funding available could be redistributed to enhance the performance of the national aviation system.[6] Many experts believe that the larger airports could succeed without federal grants if certain constraints—in particular, limits on the passenger facility charges (PFCs)—were removed. But can smaller airports finance their capital requirements? What policies could help small airports while reducing federal spending?

6. In October 1998, the Congress extended the AIP through March 1999 and postponed making major changes to the program. In March 1999, the program was extended through May 1999.

BOX 1.
AIRPORT SIZE AND TYPE

COMMERCIAL-SERVICE AIRPORTS

Federal law classifies commercial-service airports as airports with scheduled passenger service that have at least 2,500 passenger boardings a year and are owned by nonfederal public entities. Commercial-service airports consist of primary and nonprimary airports.

Primary Airports. The law classifies commercial airports with more than 10,000 passenger boardings per year as primary airports. Those airports are eligible for Airport Improvement Program funds provided by formula. The FAA divides primary airports into two major categories: *hubs*, which provide at least 0.05 percent of annual passenger boardings, and *nonhubs*, which provide less than 0.05 percent of that total. (That use of "hub" is broader than the common use of the term to refer to an airport at which many passengers transfer from one airplane to another to continue their trips.) The law further classifies hubs as large, medium, and small.

- *Large hubs*. Large hubs are airports that account for at least 1 percent of total passenger boardings (at least 5.8 million boardings in 1995). In 1995, the 29 large hubs accounted for 66.3 percent of all passenger boardings. Examples are O'Hare International, Los Angeles International, La Guardia, and John F. Kennedy International.

- *Medium hubs*. Medium hubs are airports that account for between 0.25 percent and 1 percent of total passenger boardings (about 1.5 million to 5.8 million boardings). In 1995, the 39 medium hubs accounted for 21.2 percent of all passenger boardings. Examples are Albuquerque International, Chicago Midway, Port Columbus International, and Anchorage International.

- *Small hubs*. Small hubs are airports that account for between 0.05 percent and 0.25 percent of total passenger boardings (about 300,000 to 1.5 million boardings). In 1995, the 79 small hubs had 8.6 percent of all passenger boardings. Airline operations use less than 25 percent of runway capacity at small hubs; general aviation accounts for the balance of activity at those airports. Examples are Palm Springs Regional, City of Colorado Springs Municipal, Dayton International, Fairbanks International, and Atlantic City International.

- *Nonhubs*. Commercial-service airports that have less than 0.05 percent of total passenger boardings (fewer than about 300,000 boardings) but at least 10,000 boardings annually are classified as nonhubs. In 1995, the 268 airports in the category, on which general aviation heavily relies, accounted for 2.9 percent of all passenger boardings. Examples are Santa Barbara Municipal, Tweed-New Haven, Hilton Head, Purdue University, and Santa Fe County Municipal.

Nonprimary Airports. Airports that have 2,500 to 10,000 passenger boardings a year are classified as nonprimary. The 139 airports in the category are used mainly by general aviation; the airports account for only 1 percent of total passenger boardings. Examples are Merced Municipal (California) and Alamogordo-White Sands Regional (New Mexico).

(Continued)

BOX 1.
CONTINUED

NONCOMMERCIAL AIRPORTS

The FAA classifies noncommercial airports as reliever airports, other general aviation airports, and general aviation airports that do not belong to the National Plan of Integrated Airport Systems (NPIAS).

Relievers. To discourage general aviation from further congesting many large and medium hubs, the FAA has designated certain noncommercial airports in metropolitan areas as reliever airports. The FAA has encouraged the development of such airports to divert general aviation from the hubs. In 1995, the United States had 290 reliever airports.

Other General Aviation. In 1995, the FAA included 2,450 general aviation airports (in addition to relievers) in the NPIAS. In general, airports in this category house at least 10 locally owned aircraft and are at least 30 minutes by ground transportation from the nearest NPIAS airport.

Non-NPIAS General Aviation. Not included in the NPIAS because they do not meet the criteria are more than 1,000 publicly owned, public-use landing areas; more than 1,200 privately owned, public-use airports; and almost 12,000 civil landing areas not open to the general public.

A review of financial reports of airports receiving federal grants in 1996 and 1997 indicates that small airports have greatly varying financial conditions. Some had strong finances in the two-year period; others had weak results. In some cases, an airport's reported finances differed considerably between the two years. Whether that accurately portrays the situation or whether it reflects an aberration or reporting error is unclear. The different financial conditions of small airports suggest that generalizing about those airports' finances may lead to erroneous conclusions and that federal policies should be considered carefully to avoid unintended consequences.

THE STRUCTURE OF THE AIRPORT IMPROVEMENT PROGRAM

The FAA, which administers the AIP, has designated about 3,300 airports in the United States (including U.S. possessions) as eligible for grants; they are considered part of the National Plan of Integrated Airport Systems (NPIAS). Both commercial-service and noncommercial general aviation airports are eligible for AIP grants.

The law provides for both formula grants—based mainly on the number of passenger boardings at an airport (but also, to a lesser extent, on other criteria such

as population and land area)—and discretionary grants. From 1982 to 1997, formula grants accounted for $10.7 billion (about 52 percent of the total), and discretionary grants accounted for $9.9 billion (about 48 percent). The FAA makes most of the grants directly to airports but a few to states, which distribute the funds among their qualifying airports.

Formula Grants

The formula grants, known as apportionments, are divided into four funding categories: primary airports, cargo airports, states, and airports in Alaska.[7]

Primary airports (those with at least 10,000 passenger boardings annually) receive funds according to the following formula:

- $7.80 for each of the first 50,000 passenger boardings in the previous calendar year,
- $5.20 for each of the next 50,000 passenger boardings,
- $2.60 for each of the next 400,000 passenger boardings,
- $0.65 for each of the next 500,000 passenger boardings, and
- $0.50 for each additional passenger boarding in excess of 1 million.

Regardless of the number of passenger boardings, the most funding a primary airport is entitled to annually is $22 million, and the least is $500,000. Large and medium hub airports that impose PFCs—usually $3 per passenger boarding a flight at the airport—forgo up to half of their annual apportionment.

Cargo airports—airports that serve aircraft carrying only cargo with a total weight of more than 100 million pounds a year—are entitled collectively to 2.5 percent of total AIP funds. The amount each airport receives is based on the ratio between the total weight of cargo aircraft landing there and the total weight of cargo aircraft landing at all such airports. No airport may receive more than 8 percent of funds in the cargo category.

States, territories, and possessions are entitled to share 18.5 percent of AIP funds; they distribute the funds to commercial airports with fewer than 10,000

7. The formulas are specified in the Federal Aviation Reauthorization Act of 1996, 49 U.S.C. 47114, 110 Stat. 3217.

passenger boardings per year and to general aviation airports. The states' shares are based on population and land area.[8] In most states, eligible airports apply directly to the FAA for project funding, but some states require airports to apply through a state aviation agency. In addition, nine states participate in the state block-grant program, under which the FAA makes grants to the states and lets the states allocate the funds.

Airports in Alaska are entitled to receive at least as much money as they received in 1980 in addition to their apportionments in the primary, cargo, and state funding categories. That provision is referred to as the Alaska supplemental.

Under the formulas, large and medium hub airports that impose PFCs may have their apportionments reduced up to 50 percent.[9] Three-quarters of the funds not allocated to airports because of that provision is set aside for a small-airport fund; the remaining one-quarter goes to the discretionary account.[10] The small-airport fund distributes two-thirds of its balance to small commercial airports and one-third to general aviation airports. Finally, to ensure that the discretionary fund has enough money to cover previous commitments made to airports in letters of intent, the Congress directed that if discretionary funds fall short of a specified amount, all apportionment categories, except for the Alaska supplemental and set-asides, be reduced by the same percentage to provide sufficient reserves.[11] That provision took effect in 1997, but no reductions were necessary until fiscal year 1999, when the Congress provided funding for only six months (until March 31, 1999). That half-year amount was sufficiently low to trigger a reduction of 27.2 percent among the applicable categories of apportionment funding. The FAA anticipates that once AIP

8. Section 121 of the Federal Aviation Reauthorization Act of 1996, 49 U.S.C. 47114(d)(2), 110 Stat. 3217-3218, sets aside 0.66 percent of the states' apportionment for Guam, American Samoa, the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the Virgin Islands. Half of the remaining funds are allocated among the 50 states, the District of Columbia, and Puerto Rico according to their population; the other half is allocated according to their land area.

9. The airports subject to reductions are those that have at least 0.25 percent of total yearly passenger boardings. Such airports are classified as large or medium hubs. The apportionment for a fiscal year is reduced by 50 percent of the PFC revenues forecast for that year but not by more than 50 percent of the amount of AIP funds calculated under the formula. See the Omnibus Budget Reconciliation Act of 1990, 49 U.S.C. 47114(f), 104 Stat. 1388-362. In 1997, 56 of the 71 large and medium hub airports had their apportionments reduced.

10. The Omnibus Budget Reconciliation Act of 1990, 49 U.S.C. 47116 and 47115(a)(2), 104 Stat. 1388-362.

11. For a limited set of airport projects, the FAA is authorized to issue letters of intent (LOIs), which essentially commit the agency to granting AIP funds for a project in the future. The provision requires that not less than $148 million plus an amount equal to payments from the discretionary funds for LOIs issued before January 1, 1996, remain in discretionary funds after all apportionments and set-asides are made. If less than that amount remains, all apportionments except for the Alaska supplemental and all set-asides are reduced proportionately to meet that requirement. See Federal Aviation Administration, *Sixteenth Annual Report*, p. 15.

funding is authorized for the entire year, such reductions will no longer be necessary, and apportionments will return to their fully funded level.

Changes to the AIP funding formulas have been proposed by both Houses of the Congress and by the Administration.[12] The Aviation Investment and Reform Act for the 21st Century (AIR-21), as approved by the House Committee on Transportation and Infrastructure, would triple the amount of funding for primary airports, set the minimum amount for those airports at $1.5 million, and remove the upper limit on funding.[13] Cargo airports would receive 3 percent of apportionment funding, and the percentage apportioned to states for nonprimary commercial-service and general aviation airports would rise to 20 percent. Each airport in that category would receive the lesser of $200,000 or one-fifth of the NPIAS estimate for five-year development costs. Airports in Alaska would be guaranteed at least three times the amount they were apportioned in 1980.

The bill reported by the Senate Committee on Commerce, Science, and Transportation—the Air Transportation Improvement Act—would set the minimum amount for primary airports at $650,000, increase the share for cargo airports to 3 percent of apportionment funding, and eliminate the 8 percent cap on cargo funds that a single airport may receive.[14]

In addition, both bills approved by committees, as well as the Administration's proposal, would change the percentages of funding set aside for the small-airport fund to 87.5 percent (from 75 percent) and for the discretionary fund to 12.5 percent (from 25 percent).[15] One-seventh of the small-airport fund would be reserved for small hub airports.

12. For a side-by-side comparison of the bills, see Robert S. Kirk, *Airport Improvement Program Reauthorization Legislation in the 106th Congress*, CRS Report for Congress RL30096 (Congressional Research Service, March 16, 1999).

13. Aviation Investment and Reform Act for the 21st Century, H.R. 1000, 106th Cong., 1st sess. (1999).

14. Air Transportation Improvement Act, S. 82, 106th Cong., 1st sess. (1999).

15. The Administration's proposal is the Federal Aviation Administration Authorization Act of 1999, S. 545, 106th Cong., 1st sess. (1999).

Discretionary Grants

Any funds remaining after the distribution of apportionments flow into the discretionary account.[16] Funds from the discretionary account are subject to two set-asides: 31 percent of the funds is reserved for noise-abatement projects, including buying property to serve as a noise buffer and sound-proofing buildings, and 4 percent is to promote civilian use of current or former military airports.[17] The remaining discretionary funds are then combined with 12.5 percent of the formula funding for primary airports that the airports had to forgo because they collected PFCs. Of that money, 75 percent is designated for projects at primary and reliever airports that will enhance capacity, safety, or security or reduce noise. The rest of the funding may be used for any eligible project at any eligible airport. If more than $300 million remains in the discretionary fund after the set-aside funding for noise-abatement projects and the military airport program is distributed, the amount in excess of $300 million is divided equally among the noise set-aside, the military airport set-aside, and a set-aside for nonprimary commercial-service, general aviation, and reliever airports.

Both reauthorization bills approved by Congressional committees would change the amount of set-aside funding. AIR-21 would set aside 34 percent of discretionary funds for noise mitigation, and the Air Transportation Improvement Act would set aside 35 percent. AIR-21 would allow 20 airports to participate in the military airport program, three of which must be general aviation airports. In addition, both AIR-21 and the Air Transportation Improvement Act would remove the $300 million cap on the discretionary fund.

Application Requirements

To receive AIP funds for a project, an airport must apply to the FAA and submit information showing that the project meets the criteria for aid. The law and regulations specify detailed requirements that even apply to funds that an airport is entitled to under the formulas. The FAA has less control, however, over the selection of projects funded by apportionments than by discretionary funds. Nonetheless, the agency has at least two ways to influence which projects are built with apportionment funds. First, many projects use a combination of formula and discretionary funds, and the FAA controls which projects receive discretionary funds. Second, the FAA

16. The distribution of money from the discretionary fund is specified in the Omnibus Budget Reconciliation Act of 1990, 49 U.S.C. 47115-47117, 104 Stat. 1388-362.

17. The set-asides are provided under the Federal Aviation Reauthorization Act of 1996, 49 U.S.C 47117(e), 110 Stat. 3219.

may take into account the way apportionments are used when distributing discretionary funds.[18] An airport that applies for apportionment funds for projects that the FAA deems to be of low priority risks not receiving discretionary funds. Consequently, in practice, the FAA has some leverage over virtually all airport projects that receive federal aid.

Projects eligible for AIP funds include runways, navigational aids, lighting, terminals, and noise-abatement projects.[19] From 1982 through 1997, about 53 percent of AIP grant money—more than $10 billion—went for paving projects such as rehabilitating or constructing runways, taxiways, and aprons.[20] About half of that amount was for runways.

The amount of discretionary funding available is typically insufficient to meet all requests. To evaluate proposed projects and set priorities, the FAA uses a multistep process. The FAA's regional and field offices play an important role in screening airports' proposals and sending recommendations to headquarters, which then tries to choose projects that best advance the national aviation interest within funding levels.

The FAA has increasingly scrutinized projects because funding has not kept pace with development needs. In 1998, the FAA revised its process for choosing projects for discretionary funding using the National Priority System (NPS).[21]

Requirements for Matching Shares

In general, the federal government's share of a project's cost is 75 percent for medium and large hubs (airports with at least 0.25 percent of all passenger boardings) and 90

18. Section 207 of the Air Transportation Improvement Act would require the FAA to reduce the priority ranking of discretionary projects applied for by airports that have used apportionment funds for projects with a lower priority than those for which the discretionary funds are being requested.

19. At hub airports, projects that produce revenues, such as concessions and ticket counters, are generally ineligible for AIP funding. At airports of all sizes, nonpublic areas are ineligible for AIP funding.

20. Federal Aviation Administration, *Sixteenth Annual Report*, Table B-1, p. 59. For a detailed discussion of issues involving runways, see General Accounting Office, *Airfield Pavement: Keeping Nation's Runways in Good Condition Could Require Substantially Higher Spending*, GAO/RCED-98-226 (July 1998), p. 18.

21. The FAA uses the NPS to assist in developing the Airports Capital Improvement Plan as well as to provide a basis for distributing AIP funding according to statutory formulas and set-asides. On August 25, 1997, the FAA issued a *Federal Register* notice, "Revisions to the Airports Capital Improvement Plan (ACIP) National Priority System." On September 30, 1998, the agency issued a Program Guidance Letter that serves as official guidance for applying the concepts of the NPS. The FAA's Office of Airport Planning and Programming provides copies of the guidance to interested parties.

percent for smaller airports.[22] The federal share may be greater for airports in states with large amounts of public and Indian lands.

The proposals under consideration by the Congress would change the federal share of the cost of airport projects. AIR-21 would apply "not more than 90 percent" to the state block-grant program and would increase the federal share to 100 percent for nonprimary airports and primary nonhubs as of 2000. The Air Transportation Improvement Act would change the provision to "not more than 90 percent" for airports smaller than medium hubs. The Administration's proposal would change the federal share for block grants to states to "not more than 90 percent."

THE AMOUNT AND DISTRIBUTION OF AIP FUNDING

Although the amount of AIP funding authorized for 1998 was $2.347 billion, the amount available for obligation was limited to $1.7 billion.[23] For the first six months of fiscal year 1999, the Congress authorized $1.205 billion but set a limit on obligations of $975 million. As shown in Figure 1, the Congress has generally placed limitations on obligations—through appropriations or other legislation—that have kept actual spending below the amounts set in authorizing legislation.

As noted, primary airports received most of the AIP funds (70.1 percent of the total) from 1982 to 1997. They received nearly three-quarters of the apportionment funding, which is made available through formulas, and 65.5 percent of the discretionary funding (see Table 2). Together, large and medium hubs received 44.3 percent of formula funding and 42.7 percent of discretionary funding; small hubs and primary nonhubs received 30.0 percent and 22.7 percent, respectively. Nonprimary commercial-service airports received 1.2 percent of formula funding and 6.9 percent of discretionary funding.

Another way to view the distribution of funding is to consider the relative importance of formula and discretionary funding by size of airport. Between 50 percent and 60 percent of AIP funding for primary airports came from apportionments (see Table 2). Those funds accounted for 80.9 percent of AIP grants to general aviation airports (except relievers) but only 9.2 percent for relievers. Relievers got

22. The Federal Aviation Reauthorization Act of 1996, 49 U.S.C. 47109, 110 Stat. 3227. The federal share for terminal projects at smaller airports is 75 percent. For noise-mitigation projects at large and medium hubs, the federal share is 80 percent. The federal share for projects at airports covered by the pilot program on private ownership is 40 percent.

23. The Congress also rescinded some contract authority from previous years, resulting in actual spending of $1.62 billion in 1998.

90.8 percent of their funds from discretionary grants, reflecting the fact that they had their own discretionary set-aside from 1982 to 1996.

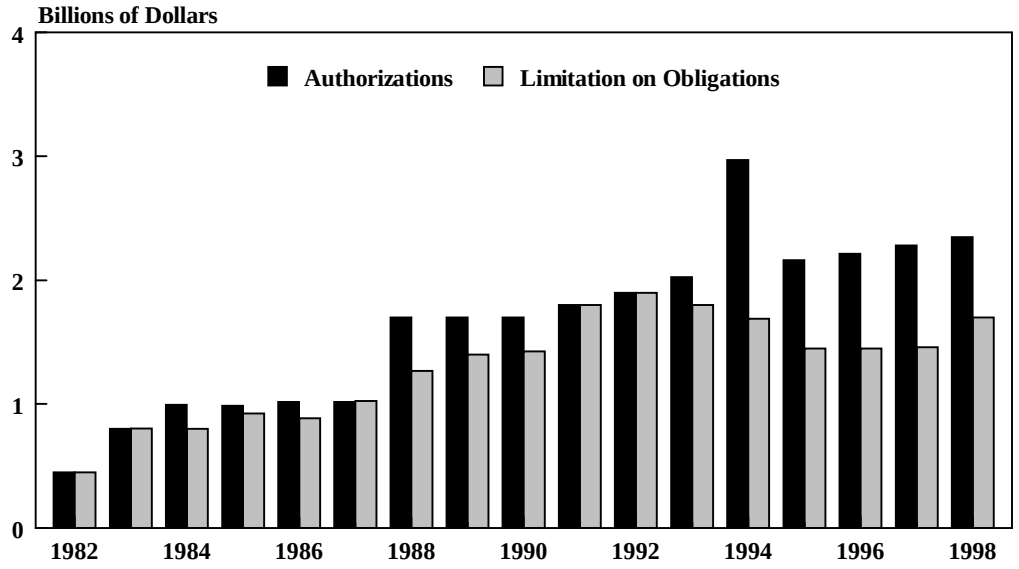
In 1997, the FAA made 1,066 AIP grants; the average grant for all airports was less than $1.4 million (see Table 3). For large and medium hubs, the average grant was $4.1 million. Grants to smaller airports averaged about $1 million apiece.

SOURCES OF FUNDS FOR AIP GRANTS

AIP grants are financed through the Airport and Airway Trust Fund by taxes on users of the aviation system. Those taxes consist of the airline passenger ticket tax, flight-segment tax, frequent-flyer tax, a tax on international arrivals and departures, cargo waybill tax, and an aviation fuel tax.

The airline passenger ticket tax is 8 percent of the value of the ticket in fiscal year 1999. The Taxpayer Relief Act of 1997 provides for a phased reduction of that tax to 7.5 percent in fiscal year 2000 (dropping from 10 percent in 1997). For

FIGURE 1. FUNDING FOR THE AIRPORT IMPROVEMENT PROGRAM
(By calendar year, in billions of dollars)



SOURCE: Congressional Budget Office using data from Federal Aviation Administration, *Report to Congress: Sixteenth Annual Report of Accomplishments Under the Airport Improvement Program, Fiscal Year 1997* (preliminary draft, December 1998), Table B-4, p. 79; and House Committee on Transportation and Infrastructure, *Airport Improvement Program Reauthorization Act of 1998*, H. Rept. 105-639 (July 20, 1998), pp. 27-28.

TABLE 2. AIRPORT IMPROVEMENT PROGRAM GRANTS BY FUNDING CATEGORY, 1982-1997

Funding Category	Apportioned Amount		Discretionary Amount		Total Amount		Share from Apportionment (Percent)
	Millions of Dollars	Percentage of Apportionment	Millions of Dollars	Percentage of Discretionary Amount	Millions of Dollars	Percentage of Total	
Commercial Service							
Primary hubs							
Large	2,910.8	27.3	2,516.1	25.5	5,426.9	26.4	53.6
Medium	1,815.0	17.0	1,702.8	17.2	3,517.8	17.1	51.6
Small	1,719.5	16.1	1,213.8	12.3	2,933.3	14.3	58.6
Primary nonhubs	1,487.4	13.9	1,031.8	10.4	2,519.2	12.3	59.0
Subtotal	7,932.7	74.4	6,464.5	65.5	14,397.2	70.1	55.1
Nonprimary	127.2	1.2	679.1	6.9	806.3	3.9	15.8
General Aviation							
Relievers	187.0	1.8	1,834.7	18.6	2,021.7	9.8	9.2
Others	2,164.2	20.3	509.8	5.2	2,674.0	13.0	80.9
State Block Grants	247.5	2.3	256.9	2.6	504.4	2.5	49.1
System Planning	5.2	0.0	130.5	1.3	135.7	0.7	3.8
All Types	10,663.8	100.0	9,875.5	100.0	20,539.3	100.0	51.9

SOURCE: Congressional Budget Office using data from Federal Aviation Administration, *Report to Congress: Sixteenth Annual Report of Accomplishments Under the Airport Improvement Program, Fiscal Year 1997* (preliminary draft, December 1998), Figure B-2, p. 57.

passengers boarding at rural airports, the 7.5 percent rate applies immediately.[24] In addition, a 7.5 percent frequent-flyer tax is imposed on amounts paid to an air carrier for the right to offer mileage awards (for example, as a promotional activity by a hotel chain, car rental agency, or credit card company) for airline transportation. Revenues from the passenger ticket tax are estimated to be $5.5 billion for 1998 (see Table 4). The newly imposed frequent-flyer tax added $141 million, and revenues from ticket taxes at the special rate for passengers boarding at rural airports contributed $48 million. Together, those taxes accounted for nearly 70 percent of revenues from aviation taxes.

24. For passengers on multiple-segment domestic flights including one segment that does not begin or end at a rural airport, the ticket tax is set at a rate proportional to the number of miles traveled in each segment.

TABLE 3. AIRPORT IMPROVEMENT PROGRAM GRANTS BY TYPE OF AIRPORT, 1997

Type of Airport	Amount (Millions of dollars)	Number of Grants	Share of Total Number (Percent)	Average Grant (Millions of dollars)
Larger Airports				
Large primary hubs	352.0	70	6.6	5.0
Medium primary hubs	248.1	78	7.3	3.2
Subtotal	600.1	148	13.9	4.1
Smaller Airports				
Small primary hubs	224.1	115	10.8	2.0
Primary nonhubs	258.6	298	28.0	0.9
Nonprimary commercial service	71.1	66	6.2	1.1
General aviation				
Relievers	100.6	124	11.6	0.8
Others	139.5	251	23.5	0.6
State block grants	72.4	16	1.5	4.5
Subtotal	866.4	870	81.6	1.0
States and Planning Agencies	9.4	48	4.5	0.2
Total	1,475.9	1,066	100.0	1.4

SOURCE: Congressional Budget Office using data from Federal Aviation Administration, *Report to Congress: Sixteenth Annual Report of Accomplishments Under the Airport Improvement Program, Fiscal Year 1997* (preliminary draft, December 1998), Table F-1, p. vi.

NOTE: The total dollar amount shown exceeds the amount appropriated for 1997 because it includes amounts recovered from grants awarded in previous years for projects that cost less than expected.

The flight-segment tax is $2 per segment in 1999. The Taxpayer Relief Act calls for phasing in the tax, beginning at $1 in 1998 and raising it to $3 in 2002 and beyond. Passengers using rural airports are exempt from the flight-segment tax, which raised $547 million (6.7 percent of revenues from aviation taxes) in 1998, the first year it was in effect.

Each international arrival and departure has a tax of $12.[25] Those taxes produced $948 million in revenues (11.7 percent of the total) in 1998, the first year that the tax was applied to arrivals as well as departures and after it increased from $6 to $12.

25. For Alaska and Hawaii, the tax is $6 and applies only to departures.

Cargo waybills have a 6.25 percent tax. In 1998, the tax provided revenues of $313 million, 3.9 percent of the total.

General aviation gasoline has a tax of 19.3 cents per gallon, general aviation jet fuel has a tax of 21.8 cents per gallon, and fuel used in commercial airline service has a tax of 4.3 cents per gallon. The taxes on general aviation fuel produced $158 million in 1998, 1.9 percent of total revenues. The fuel tax on commercial airlines yielded $501 million, 6.2 percent of revenues from aviation taxes.

Most of the revenues from aviation taxes are used to pay for the operation, maintenance, and capital needs of the air traffic control (ATC) system. In 1998, $1.9 billion was appropriated from the trust fund for facilities and equipment; $199 million for research, engineering, and development; and $1.902 billion for operations of the ATC system (compared with $1.7 billion for the AIP).[26] The FAA also uses money from the general fund of the U.S. Treasury to finance the remaining costs of operating the ATC system and the rest of the agency.

26. House Committee on Transportation and Infrastructure, *Airport Improvement Program Reauthorization Act of 1998*, H. Rept. 105-639 (July 20, 1998), p. 26.

TABLE 4. REVENUES FROM AVIATION TAXES, 1998

Tax	Amount (Millions of dollars)	Share (Percent)
Passenger Ticket	5,455	67.3
Flight Segment	547	6.7
Rural Airports	48	0.6
Frequent Flyer	141	1.7
International Departure and Arrival	948	11.7
Freight Waybill	313	3.9
General Aviation Fuel	158	1.9
Commercial Fuel	501	6.2
Total	8,111	100.0

SOURCE: Congressional Budget Office using data from *Budget of the United States Government, Fiscal Year 2000: Appendix*, p. 745.

CHAPTER II
THE FINANCIAL CONDITION OF AIRPORTS FOR THE 1996-1997 PERIOD

In general, financial data for primary commercial-service airports for 1996 and 1997 support the conventional wisdom that larger airports have a better financial condition and a better ability to finance additional investment than smaller airports. Although all airports have several potential sources of funds for investment, only large and medium hub airports as a group have enough funding, on average, to cover their capital needs as estimated by the Federal Aviation Administration. Therefore, government grants play a lesser role in financing larger airports than they do in financing smaller ones.

DATA USED FOR THIS ANALYSIS

The data used for this analysis derive from the FAA's compilation of filings of Form 5100-125, "Operating and Financial Summary," for 1996 and 1997 by about 400 airports that receive Airport Improvement Program grants.[1] Although the data set contains detailed and comprehensive information about airport finances, it has several limitations as an indicator of the financial condition of airports. (See the appendix for a discussion of the data set and its strengths and weaknesses.) It provides a partial—and useful—picture of airports' operating statistics for two years, but two years' data may not adequately reflect an airport's true financial condition. This paper generally uses an average of the financial statistics for 1996 and 1997; averaging data for a larger number of years would better indicate the financial condition of airports, but those data are unavailable. The analysis in this chapter covers airports in the 50 states. It does not cover airports in Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands, although data on those airports are available.

THE FINANCIAL CONDITION OF AIRPORTS

In general, larger airports are better off financially than smaller ones, although the financial conditions vary widely even among airports of the same type. Some smaller airports manage to run operating surpluses and generate additional cash for investment. For the years 1996 and 1997, large and medium hub airports together

1. Although the FAA's data set includes data for some nonprimary commercial-service airports and general aviation airports, the data were insufficient to serve as a representative sample for this analysis.

(also referred to as "larger" airports in this paper) had an average (mean) operating surplus of $2.6 million, compared with average deficits of $429,000 for small hubs and $110,500 for primary nonhub airports.[2] The operating surpluses or deficits of the 67 large airports ranged from an operating deficit of $82.6 million to an operating surplus of $106.5 million (see Table 5). The operating surpluses or deficits of the 62 small hubs ranged from a deficit of $31.4 million to a surplus of $5.8 million. For the 251 nonhubs, the operating surpluses or deficits ranged from a deficit of $2.9 million to an operating surplus of $3.3 million. Although the means are sensitive to outliers, the medians tell essentially the same story, except in the case of small hubs. The median operating surplus for small hubs was $567,000, which indicates a better financial condition for those hubs than does the mean operating deficit of $429,000.

Forty-two (62.7 percent) of the 67 larger airports in the data set reported an operating surplus in 1996 and 1997. Of the 62 small hub airports, 66.1 percent had an operating surplus; the percentage for all nonhubs was 36.3 percent. Of the 86 larger nonhubs—those with more than 75,000 passenger boardings a year—49, or 57.0 percent, had an operating surplus. Of the 165 smaller nonhubs—those with 75,000 or fewer passenger boardings a year—42, or 25.5 percent, had an operating surplus.

Airport finance specialists generally use the operating ratio—the ratio of operating expenses to operating revenues—as an indicator of an airport's ability to cover its costs and service debt. The operating ratio also enables a comparison of airports of different sizes because, in effect, it measures the operating surplus or deficit relative to revenue.[3] Table 5 shows operating ratios by airport size. An operating ratio of less than one indicates an operating surplus because operating revenues exceed operating expenses. The range of operating ratios widens as airport size decreases: the range is 0.54 to 1.45 for large and medium hubs, 0.52 to 2.10 for small hubs, and a huge 0.38 to 80.53 for nonhubs.

SOURCES OF FUNDS FOR INVESTMENT

Like most enterprises, airports have several potential sources of funds for investment. They include operating surpluses; bond sales; passenger facility charges; grants from the federal, state, and local governments; and property sales.

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2. The FAA's data set excludes debt-service payments from operating expenses and, therefore, from the measure of operating surplus. This paper takes a more traditional approach, which includes debt service in operating expenses. That approach makes operating expenses larger and operating surpluses smaller than they would be if debt-service payments were excluded.

3. Operating surplus/operating revenue = (operating revenue - operating expense)/operating revenue = 1 - (operating expense/operating revenue) = 1 - operating ratio.

TABLE 5. OPERATING SURPLUSES AND RATIOS BY SIZE OF AIRPORT, 1996-1997

	Hubs		Nonhubs		
	Large and Medium	Small	All	Large[a]	Small[b]
Number of Airports	67	62	251	86	165
Number with Operating Surplus	42	41	91	49	42
Percentage with Operating Surplus	62.7	66.1	36.3	57.0	25.5
Operating Surplus or Deficit (-) (Thousands of dollars)					
Mean	2,630.3	-429.0	-110.5	50.7	-194.5
Median	3,132.0	566.6	-97.5	36.9	-133.0
Smallest	-82,609.0	-31,362.3	-2,886.3	-2,886.3	-2,659.2
Largest	106,485.8	5,832.4	3,266.7	3,266.7	417.6
Operating Ratio[c]					
Mean	0.98	1.04	1.09	0.98	1.32
Median	0.95	0.93	1.12	0.98	1.27
Smallest	0.54	0.52	0.38	0.47	0.38
Largest	1.45	2.10	80.53	6.14	80.53

SOURCE: Congressional Budget Office analysis of data from the Federal Aviation Administration's Form 5100-125.

a. Nonhubs with 75,001 to 282,000 passenger boardings per year.

b. Nonhubs with 10,000 to 75,000 passenger boardings per year.

c. Ratio of operating expenses to operating revenues.

Operating Surpluses

Operating surpluses are a traditional source of funds for investment in many industries. As the data show, however, many airports have no money left over after paying their operating expenses.

The sources of operating revenues differ widely among airports of different sizes. At larger airports, terminal area rental charges, landing fees, parking fees, and concessions are the main sources of operating revenues, accounting collectively for nearly 70 percent of those revenues (see Table 6). Small hub airports derive most of

TABLE 6. SOURCES OF OPERATING REVENUE AND CATEGORIES OF OPERATING EXPENSES BY SIZE OF AIRPORT, 1996-1997 (In percent)

	Hubs		Nonhubs		
	Large and Medium	Small	All	Large[a]	Small[b]
Sources of Operating Revenue					
Terminal Area Rental	21.6	16.7	10.9	12.5	7.6
Landing Fees	20.1	14.9	10.7	12.6	6.7
Parking Fees	16.1	20.4	12.6	16.5	4.4
Concessions	11.3	6.2	2.8	3.2	2.0
Rental Car Companies	7.7	14.2	13.3	15.8	8.3
Interest Income	5.4	6.3	4.1	4.7	2.7
Land Rental	4.2	6.3	13.2	10.7	18.3
Cargo and Hangar Rental	3.1	3.2	6.0	3.8	10.6
Fuel-Flowage Fees	1.1	1.6	4.0	2.4	7.2
Fixed-Base Operators	0.5	3.1	8.9	7.2	12.5
Other	8.9	7.1	13.5	10.6	19.7
All Sources	100.0	100.0	100.0	100.0	100.0
Categories of Operating Expenses					
Debt Service	33.5	27.1	9.8	11.4	7.4
Personnel Compensation	21.2	29.8	39.3	38.5	40.7
Services	10.4	9.8	9.2	10.0	8.0
Supplies, Materials, Repairs, Maintenance	8.8	9.4	16.0	15.7	16.3
Reserves Transfers	7.7	4.7	2.6	2.0	3.6
Communication and Utilities	5.5	6.8	8.5	8.1	9.1
Insurance	0.9	1.3	2.6	2.4	2.9
Other	12.0	10.9	12.0	11.9	12.0
All Categories	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office analysis of data from the Federal Aviation Administration's Form 5100-125.

a. Nonhubs with 75,001 to 282,000 passenger boardings per year.

b. Nonhubs with 10,000 to 75,000 passenger boardings per year.

their operating revenues from those same sources, although revenues from rental car companies displace concessions as the fourth largest source of operating revenue. Revenues for nonhubs (which have 10,000 to about 282,000 passenger boardings a year, or from 27 to 773 a day) are less concentrated by source, and fees from land rentals provide more of the operating revenues for nonhubs than they do for larger airports.[4] The sources of operating revenues for small nonhubs—airports with 10,000 to 75,000 passenger boardings per year (or 27 to 205 a day)—differ greatly from those of larger nonhubs. For small nonhubs, revenues from general aviation—such as from fixed-base operators and rentals of land, cargo, and hangars—provide more of the operating revenues. Those airports receive much less revenue from activities associated with serving airlines and passengers such as landing fees (which usually are based on the weight of the aircraft), terminal area rental, and parking fees.

Some airports may be able to increase operating revenues by raising the fees they charge users of airports. In many instances, however, airports have a limited ability to raise fees because of long-term agreements they have with the airlines using them.[5] Nevertheless, long-term agreements benefit airports by demonstrating to the bond market that an airport has revenue commitments for a long time period. Those commitments ensure support for bonds that help finance a variety of capital investments.

Determining whether airports could cut their operating expenses would take a much more detailed analysis than simply reviewing the financial data set. Nevertheless, it is noteworthy that debt service makes up 33.5 percent of the operating expenses for large and medium hubs and 27.1 percent for small hubs (see Table 6). All but two of the large and medium hubs with operating deficits would have had surpluses without their debt-service payments. In addition, excluding debt service from operating expenses would have given 14 small hubs and 30 nonhubs an operating surplus rather than a deficit.

For some purposes, it may be appropriate to exclude some debt service from operating expenses. (In fact, all debt-service data are recorded on Form 5100-125 as a nonoperating expense.) For example, the part of debt service that consists of

4. Although a primary nonhub airport under the FAA's definition could have as many as 300,000 passenger boardings per year, the largest such airport in the data set the Congressional Budget Office used had about 282,000 passenger boardings per year.

5. Airports and airlines have two main types of agreements: compensatory and residual. Under a compensatory system, the airport charges the airlines the cost of serving them; under a residual agreement, the airlines make up the difference between an airport's costs and the amounts it receives from concessionaires, rental car companies, and other users. Airports bear more financial risk under compensatory agreements; airlines bear more risk under residual agreements. Many airports now operate with a combination of compensatory and residual agreements.

repaying the principal can be used as a proxy for depreciation, or capital consumption. If the amount of principal repaid in debt service in any year exceeds the rate at which the capital financed by that debt is consumed, the resulting operating expense would be overstated in that year. Moreover, in considering the ability of an airport to finance additional capital, a relatively large debt-service payment may indicate that the airport has good access to the bond market. If it needs to borrow additional funds for productive investment, it will probably be able to do so.

In sum, although operating surpluses represent a potential source of funds for investment, they, unlike the other funding sources, are a residual or indirect source because they consist of funds left over after other expenses are paid for.

Bond Sales

In the 1996-1997 period, bond proceeds were the main source of funds for investment at large and medium hub airports, accounting for 70.7 percent of those funds (see Table 7). Bond proceeds were also a main source of funds for investment at small hubs, totaling 39.2 percent of those funds. In contrast, bond proceeds accounted for only 11.6 percent of funds for investment at nonhubs.

Passenger Facility Charges

In 1990, the Congress passed legislation authorizing commercial-service airports to impose PFCs of $1, $2, or $3 for each paying passenger boarding a commercial airline flight.[6] Before instituting PFCs, an airport must get permission from the FAA. The airport may use revenues from PFCs only for certain types of capital projects specified in the law.

When the Congress authorized PFCs, many analysts expected that they would prove valuable to larger airports, but their value to smaller airports was less clear. Nonetheless, airports of all sizes have instituted PFCs. Large nonhub airports—those with more than 75,000 passenger boardings a year (about 205 a day)—derived about the same percentage of funds for investment from PFCs (18.1 percent) in 1996 and 1997 as hub airports. Small nonhubs—with 10,000 to 75,000 passenger boardings a year—derived an average of 6.1 percent of investment funds from PFCs. Of course, because revenues from PFCs depend directly on the number of passenger boardings, PFCs yield much higher revenues for larger airports than for smaller ones.

6. Section 9110(2) of the Omnibus Budget Reconciliation Act of 1990, 49 U.S.C. 40117, 104 Stat. 1388-357.

TABLE 7. SOURCES OF FUNDS FOR INVESTMENT BY SIZE OF AIRPORT, 1996-1997 (In percent)

	Hubs		Nonhubs		
Source of Funds	Large and Medium	Small	All	Large[a]	Small[b]
Bonds	70.7	39.2	11.6	11.5	11.8
Passenger Facility Charges	17.4	17.5	12.5	18.1	6.1
Grants	10.7	42.9	74.7	69.1	81.1
Property Sales	1.2	0.4	1.2	1.3	1.1
All Sources	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office analysis of data from the Federal Aviation Administration's Form 5100-125.

a. Nonhubs with 75,001 to 282,000 passenger boardings per year.

b. Nonhubs with 10,000 to 75,000 passenger boardings per year.

Yet even some relatively small nonhub airports impose PFCs and raise enough revenue from them to finance needed capital projects.

Grants

Grants from governments at all levels—but mainly from the federal government—play a much greater role in financing smaller airports than larger ones.[7] In the 1996-1997 period, grants accounted for just over 80 percent of small nonhubs' funds for investment and for nearly 70 percent of such funds for large nonhubs—averaging about 75 percent for all nonhubs. In contrast, government grants accounted for 42.9 percent of investment funds for small hubs and 10.7 percent for large and medium hubs.

7. The data set does not distinguish between grants from the federal government and grants from state and local governments. But the total of grants in the sample roughly corresponds to the amount the federal government provided in AIP grants, so this paper assumes that nearly all of the grant money was from the federal government.

Property Sales

By selling property, airports can raise funds on a one-time basis. A few airports reported proceeds from property sales in 1996 and 1997; however, the sales generated only a small amount of revenue and made up only a small percentage of the funds for investment.

THE ROLE OF GRANTS AND OTHER SOURCES OF FUNDS IN MEETING CAPITAL NEEDS

Estimates of airports' needs for capital development vary depending on who makes the estimates and what the estimates cover. This analysis uses the FAA's 1996 estimates of the cost of airport development projects for 1997 through 2001 that would be eligible for AIP grants. The FAA estimates capital needs as part of its National Plan of Integrated Airport Systems. For airports in the data set analyzed in this chapter, those costs totaled nearly $4.7 billion a year.[8] More than three-quarters of that amount was for development at large and medium hubs.

In addition, the airline industry has estimated capital needs of airports but only for commercial-service airports served by airlines. Moreover, the airport industry has also estimated its needs, but those estimates include capital costs for projects that are not eligible for federal grants as well as for general aviation airports. Recent annual estimates by the airlines, airports, and the FAA are $4 billion, $10 billion, and $6.5 billion, respectively.[9]

One way of showing the role of the main sources of funds for investment is to examine the incremental contribution of each source to meeting capital development costs. Table 8 shows airports' average annual development costs by airport size. In the case of large and medium hubs, for example, average annual development costs are $53.4 million. Applying operating surpluses to meet those costs would enable nine of the 67 airports to cover development costs and would leave an average shortfall in funds of $50.8 million. Using revenues from PFCs would enable 12 additional airports (for a total of 21) to meet capital costs and would reduce the average shortfall to $36.1 million. Property sales produce only a small amount of

8. Excluded from the analysis are primary commercial-service airports for which financial data were missing for either 1996 or 1997, as well as nonprimary commercial-service (fewer than 10,000 passengers a year) and general aviation airports. The analysis divided the FAA's 1997-2001 estimate by five to get an annual average. The FAA released the NPIAS for 1998 to 2002 in March 1999 (available at http://www.faa.gov/arp/npias.htm).

9. For a detailed analysis of the alternative estimates of airport needs, see General Accounting Office, *Airport Development Needs: Estimating Future Costs*, GAO/RCED-97-99 (April 1997).

TABLE 8. CONTRIBUTIONS OF FUNDING SOURCES IN MEETING CAPITAL NEEDS (In millions of dollars)

	Hubs		Nonhubs		
	Large and Medium	Small	All	Large[a]	Small[b]
Number of Airports	67	62	251	86	165
Average Annual Development Cost[c]	53.4	9.1	2.0	3.1	1.5
Average Surplus or Shortfall (-) in Meeting Capital Needs					
Using Only Operating Surplus	-50.8	-9.6	-2.1	-3.0	-1.7
Number of Airports Covering Costs	9	1	6	5	1
Adding Revenue from PFCs	-36.1	-8.3	-2.0	-1.7	-1.6
Number of Airports Covering Costs	21	5	8	7	1
Adding Sales of Property	-35.1	-8.3	-2.0	-2.7	-1.6
Number of Airports Covering Costs	21	5	8	7	1
Adding Proceeds from Bond Sales	24.6	-5.4	-1.9	-2.5	-1.5
Number of Airports Covering Costs	37	11	11	10	1
Adding Grants	33.7	-2.3	-1.1	-1.5	-0.1
Number of Airports Covering Costs	43	22	57	30	27
Total Remaining Surplus or Shortfall (-)[d]					
Excluding Grants	1,651.2	-335.9	-468.5	-218.3	-250.2
Including Grants	2,258.4	-142.2	-280.1	-125.2	-154.9

SOURCE: Congressional Budget Office analysis of data from the Federal Aviation Administration's Form 5100-125.

NOTE: PFCs = passenger facility charges.

a. Nonhubs with 75,001 to 282,000 passenger boardings per year.

b. Nonhubs with 10,000 to 75,000 passenger boardings per year.

c. As estimated by the Federal Aviation Administration.

d. Totals equal averages multiplied by the number of airports in the category.

additional revenue, reducing the average shortfall to $35.1 million. Bond sales generate a substantial amount of revenues for large and medium hubs, enabling 16 more airports (for a total of 37) to cover capital costs and producing an average surplus (over capital costs) of $24.6 million. Grants help six more airports (for a total of 43) to cover capital costs and raise the average surplus to $33.7 million.

Only large and medium hub airports have enough funding to meet capital needs as estimated by the FAA; those airports can cover their capital costs with their own sources, without government grants. Large and medium hubs have a total of nearly $1.7 billion more in revenue from their own sources—operating surpluses, PFCs, property sales, and bond sales—than they need to meet the FAA's estimate of their annual development costs. Nonetheless, an airport's ability to sell bonds depends on a favorable assessment of its overall finances by buyers and insurers of bonds, and whether the airport receives a federal grant will probably affect that assessment. In addition, larger airports may need substantial amounts of capital for investment that is not eligible for federal grants (and thus is excluded from the FAA's estimate of needs) such as investments in certain terminal areas or for other revenue-generating operations. The analysis indicates, however, that grants play a lesser role in financing larger airports than smaller ones.

Finally, Table 8 shows the total surplus or shortfall of capital funds for each type of airport, both with and without grants, and the sums for all types. Collectively, airports had more funds than they needed to meet the FAA's estimates of capital needs even without grants because the large airports in the best financial condition can generate substantial funds for investment. Combining the surpluses of large and medium hubs with the shortfalls of small hubs and nonhubs yields an excess of revenues over capital costs of $846.7 million in the absence of grants. With grants, that excess rises to $1.8 billion.

CHAPTER III

APPROACHES TO INCREASING FUNDS FOR INVESTMENT FOR SMALLER AIRPORTS

Smaller airports can increase their funds for investment in several ways. Some of those ways involve initiatives by the smaller airports; others involve changes to the federal Airport Improvement Program.

Many smaller airports impose passenger facility charges, which can help those airports proceed with their capital development projects. In addition, many smaller airports have succeeded in issuing bonds to fund investment. Airports can benefit from the fact that their bond issues generally qualify as municipal bonds, making their interest exempt from federal income taxes. Furthermore, smaller airports can obtain private funds for investment by encouraging private equity participation. Finally, smaller airports can seek financial assistance from state and local governments for their investments.

Modifying the federal grant program also offers a way for smaller airports to increase funding for investment. Such changes to the program involve shifting funds from large and medium hubs to smaller airports, directing federal funds to airports meeting certain criteria, converting the program to a loan program, and revising the requirements for federal aid.

INCREASING PASSENGER FACILITY CHARGES

In 1990, the Congress authorized the Secretary of Transportation to allow airports to impose fees of up to $3 on each passenger boarding an airline at an airport.[1] The proceeds are to be used for airport-related capital projects.

To increase revenues, airports that do not currently impose PFCs could start charging them, and airports that already impose them could increase them. Of the latter group, all but one are imposing the maximum PFC permitted under current law. The Administration has proposed raising the cap to $5 (with special provisions for hubs dominated by a single airline).[2] That proposal would also require large and medium hub airports that impose PFCs of $4 or $5 to forgo AIP formula funds.

1. The Congress authorized PFCs in section 9110(2) of the Omnibus Budget Reconciliation Act of 1990, 49 U.S.C. 40117, 104 Stat. 1388-357.

2. Section 204 of the Federal Aviation Administration Authorization Act of 1999, S. 545, 106th Cong., 1st sess. (1999).

Legislation approved by the House Committee on Transportation and Infrastructure would allow PFCs of $4, $5, and $6 to finance projects that would significantly improve air safety, increase competition among air carriers, reduce congestion, or mitigate noise and for which AIP funds are not available.[3]

After the Congress authorized PFCs, most larger airports quickly instituted them. By the end of 1993, about half of the large and medium hubs had won approval to impose PFCs. Most analysts believed PFCs would be more useful to larger airports than smaller airports because larger airports have more passenger boardings. After all, multiplying $3 per passenger by the millions of passengers boarding at large hubs each year adds up to substantial sums of money. In contrast, charging the 10,000 to (roughly) 300,000 passengers at primary nonhub airports yields revenues of less than $1 million for each airport, and in many instances, less than $100,000.

In the past three years, however, many smaller airports have started to impose PFCs. As of September 30, 1997, 59 percent of primary nonhub airports and 9 percent of nonprimary commercial-service airports were collecting PFCs.[4] Although smaller airports' revenues from PFCs may seem small compared with the federal budget—or even the total of AIP grants—even revenues of a few hundred thousand dollars can mean proceeding with rebuilding a runway or taxiway rather than postponing it a few years. Because airports may use PFC revenues for the local matching share of AIP grants, PFCs can help airports implement AIP-financed projects sooner than otherwise. PFC revenues can also help support bond issues.

No obvious reason explains why some airports impose PFCs and some do not. In 1997, six airports with fewer than 10,000 passenger boardings a year collected PFCs, including Northwest Alabama Regional Airport in Muscle Shoals and Hattiesburg-Laurel Regional Airport in Mississippi, which had 4,000 and 5,000 passenger boardings, respectively. Yet San Francisco International Airport, with 17 million passenger boardings, imposes no PFCs, and giant Hartsfield Atlanta

3. Aviation Investment and Reform Act for the 21st Century, H.R. 1000, 106th Cong., 1st sess. (1999). Large and medium hubs that charged PFCs of $4 or more would forgo 75 percent of their formula funding from the AIP.

4. Federal Aviation Administration, *Report to Congress: Sixteenth Annual Report of Accomplishments Under the Airport Improvement Program, Fiscal Year 1997* (preliminary draft, December 1998), p. 40. In the data set the Congressional Budget Office examined, PFCs were imposed by 73.3 percent of small hubs, 64.7 percent of primary nonhub airports, and 15.4 percent of nonprimary commercial-service airports. The data set included information only for airports receiving federal grants, and in some cases data for airports receiving grants were missing.

International, with 28 million passenger boardings, just received approval in 1997 to impose PFCs.[5]

Airports in some areas have been slow to institute PFCs. It is unclear whether that is because of state laws that somehow inhibit airports' flexibility, political considerations (such as promises of no new taxes or fees), or perhaps a shortage of resources for researching and analyzing the merits of PFCs or for handling the application process. If the costs of applying to the FAA for permission to impose the fee and complying with FAA requirements deter some airports from imposing PFCs, the FAA could consider relaxing those requirements, especially for very small airports.

Competitive factors may also play a role in an airport's decision to impose or increase PFCs. If no other airport in a state or metropolitan area imposes PFCs, an airport may not want to do so for fear of losing some of its passengers—or even its airlines—to neighboring airports. The FAA has noted that applications for permission to impose PFCs have sometimes come in clusters from airports within a state or region. That observation could support the idea of airports' competing with each other or the explanation that airport managers may learn about the opportunities PFCs offer and about how to implement them through conferences attended by officials from airports in the region. Such gatherings provide a chance for managers to discuss the advantages and disadvantages of imposing fees and to learn from the experiences of others. By now, however, most airport managers have had an opportunity to learn about and consider instituting PFCs.

Managers of airports in vacation spots might not want to increase PFCs for fear of making travel to those cities more expensive than that to rival cities, driving away cost-conscious vacationers. Business travelers would probably be less sensitive than leisure travelers to changes in PFCs. Whether the airlines or their passengers end up bearing the burden of PFCs depends on the sensitivity of prices for flights to other cities from the airport in question.

In an examination of how airports could meet their capital needs, the National Civil Aviation Review Commission (NCARC) determined that PFCs had been effective in raising funds and recommended that the $3 ceiling on PFCs be increased.[6] Airport operators have also asked the Congress to lift the ceiling. Airlines have generally opposed raising the cap on PFCs because passengers view the charges as part of the ticket cost and might cut back on travel. Seeking a way to

5. Ibid., pp. 39 and 81.

6. National Civil Aviation Review Commission, *Avoiding Aviation Gridlock and Reducing the Accident Rate: A Consensus for Change* (December 1997), p. II-44.

resolve disagreements about PFCs between airports and airlines, the NCARC recommended the establishment of a negotiation process to be used by airports and the tenant airlines when an airport proposes a PFC in excess of $3.

BORROWING MORE FUNDS FOR INVESTMENT

Bond proceeds have been the main source of capital funding for larger airports. The NCARC reported that "airport revenue bonds accounted for $3.5 billion a year in 'new money' and an additional $1.6 billion a year in 'refunding' or debt restructuring designed to enable future borrowing or to reduce airport-related costs to users."[7] That amount represents a substantial share of total estimates of airport capital needs, which range from about $4 billion to $10 billion annually.[8]

Airports' Experience in Issuing Bonds

Most large and medium hub airports have long-standing experience in issuing bonds to finance their capital investments. Many smaller airports have also succeeded in issuing bonds for that purpose. Some smaller airports mimic their larger counterparts in issuing revenue bonds—bonds backed by revenues from user charges. Others find that potential lenders insist on additional backing from tax revenues; in those cases, the airports typically ask a local governmental body to issue general obligation bonds—bonds backed by the government's power to impose taxes—on the airport's behalf. Table 9 shows the number of revenue and general obligation bonds issued by airports of different sizes between 1982 and 1996.

Airports can benefit from the fact that their bond issues generally qualify as municipal bonds, making their interest exempt from federal income taxes. As a result, airports can borrow at lower interest rates than if the bonds were subject to federal taxes. Because investors will purchase bonds that yield the highest returns after taxes, bonds issued by airports can attract buyers. An FAA study found that "the federal tax exemption shaves almost two full percentage points off interest costs for airport borrowers of all sizes, an estimated saving of nearly $1 billion a year for airports over the period 1985 to 1993."[9] The same report cited several factors that

7. Ibid., p. II-43.

8. General Accounting Office, *Airport Development Needs: Estimating Future Costs*, GAO/RCED-97-99 (April 1997). The NCARC estimates the cost of those needs to be $4.5 billion to $7 billion annually.

9. Federal Aviation Administration, *Innovative Approaches for Using Federal Funds to Finance Airport Development*, Report of the Secretary of Transportation to the U.S. Congress Pursuant to Section 520 of the Federal Aviation Administration Authorization Act of 1994, P.L. 103-305 (March 1996), p. ii.

TABLE 9. BOND ISSUES BY TYPE OF BOND AND AIRPORT, 1982-1996

Type of Airport	General Obligation		Revenue		Total	
	Number	Percent	Number	Percent	Number	Percent
Hub						
Large primary	21	7.6	256	92.4	277	100.0
Medium primary	26	13.1	172	86.9	198	100.0
Small primary	51	31.7	110	68.3	161	100.0
Primary Nonhub	62	49.2	64	50.8	126	100.0
Nonprimary						
Commercial Service	16	76.2	5	23.8	21	100.0
General Aviation	93	58.5	66	41.5	159	100.0
Total	269	28.6	673	71.4	942	100.0

SOURCE: Congressional Budget Office analysis of data developed by the General Accounting Office.

enhance the ability of airports to issue bonds: financial strength, as demonstrated by key financial indicators of the ability to repay debt; regular participation in the bond market, which creates a track record and reduces uncertainty for investors and bond-rating agencies; and sound financial management and control systems. The study found that airports could generally borrow at interest rates below the average for municipal bonds.

The most noteworthy of the report's findings from the standpoint of financing small airports is that "small airports consistently draw interest costs below the average for municipal bonds in general . . . and below the interest costs incurred by larger airports."[10] That finding could result from several factors. First, small airports are more likely than large ones to issue general obligation (rather than revenue) bonds, and general obligation bonds tend to carry lower interest rates than revenue bonds because the former are backed by the taxing powers of a government unit. But small airports may get lower interest rates even on revenue bonds. That is because small airports tend to serve passengers whose origin or destination is that airport, in contrast to larger airports that serve many passengers making connections to other points. Second, lenders generally consider the passenger base at airports where passengers typically begin or end their trips to be more stable than at airports where passengers typically make connections because the latter group of passengers could choose other airlines that connect through different airports. Third, in some cases,

10. Ibid., p. 2-5.

an airline has abandoned a hub, reducing connecting passenger traffic and therefore revenues to the airport. Finally, the report states that smaller bond issues "are naturally less risky" than larger ones, and "the average sized bond issue among small airports over the 1985 to 1995 period was less than one-quarter the average sized large airport bond issue."[11] The report also noted that no airport bond has ever defaulted.

Revenues from PFCs have enhanced the ability of airports to borrow funds. In the eight-year period since the Congress first authorized PFCs, lenders have become increasingly willing to rely on PFCs as an important source of revenues for repayment. Lenders' early uncertainty about how much money PFCs could raise and about whether the FAA would maintain stable rules for airports' use of PFC revenues has given way to general acceptance of the idea that PFCs provide a reliable and sizable source of revenues for airports.

Options for Enhancing the Ability of Airports to Borrow Funds

Although most large airports and many smaller ones have apparently had adequate access to the bond market, an airport may have circumstances that require it to seek assistance in borrowing funds. Such assistance entails making lending more attractive to lenders, including reducing the risk of default and providing greater returns for a given level of risk. It can also include making government funds available for borrowing.

Despite the overall success of large airports—and many smaller ones—in issuing bonds, the Congress and others have asked from time to time whether airports need assistance in borrowing funds. Section 520 of the Federal Aviation Administration Authorization Act of 1994 required a study of "innovative approaches for using federal funds to finance airport development as a means of supplementing financing available under the Airport Improvement Program." The act directed that the study review mechanisms that would produce greater investments in airport development per dollar of federal expenditure, federal credit assistance to airport sponsors, and ways of lowering the cost of financing airport development.

In response, the FAA examined several ways to enhance the ability of airports to borrow funds.[12] The study ranked the options, as follows, according to their effectiveness in reducing the cost of capital and increasing the amount of borrowing:

11. Ibid.

12. Ibid., p. 3-18.

- Instituting federal guarantees of airport loans,
- Allowing AIP funds to be used for commercial bond insurance,
- Establishing a federal loan fund for airports, and
- Using AIP grants to fund debt repayment reserves of airport revenue bond issues.

Although other options exist, those listed represent the main types of credit-assistance options and are those in which policymakers have expressed the greatest interest.

Instituting Federal Guarantees of Airport Loans. This measure would authorize the Secretary of Transportation to guarantee the payment of principal and interest on debt issued by airports for projects eligible for AIP funds. The federal guarantee would render the bonds as risk-free as U.S. Treasury securities, making them attractive to investors and reducing interest costs to airports. The bonds would be especially attractive to taxpayers subject to high marginal tax rates because the interest on the bonds as envisioned by the FAA study would be exempt from federal income taxes. The loss of tax revenues, however, explains the federal government's long-standing policy against guaranteeing tax-exempt debt. Doing so would make municipal bonds more attractive to investors than Treasury bonds because they would offer higher after-tax returns for essentially the same risk.

Allowing AIP Funds to Be Used for Commercial Bond Insurance. This measure would broaden the uses of AIP funds. Issuers of bonds can buy insurance that guarantees repayment of principal and interest. When bonds are insured, they carry the rating of the company insuring them rather than that of the borrower. In deciding whether obtaining insurance is worthwhile, borrowers must compare the interest costs they would incur given their own credit rating with the interest costs associated with the higher rating of an insurer. If the savings from buying insurance exceed the costs of doing so, borrowers are better off buying it.

Allowing AIP funds to be used for bond insurance for an eligible project could be justified as simply helping to cover—and possibly to reduce—the cost of completing that project. If AIP funds were used for bond insurance, however, investors might mistakenly think that the federal government would bail them out if the bond defaulted. To avoid that, the rules governing the bond issue would have to be clear.

Establishing a Federal Loan Fund for Airports. Under this measure, the federal government would establish a loan fund from which airports could borrow for

eligible projects. A loan program could enable funds to finance more projects than a grant program of the same size if it was structured so that repayments could be used to make additional loans over an extended period. Nonetheless, if the federal government lent money at subsidized rates or to airports with higher risks of default, eventually additional funds would probably be needed to recapitalize the fund.

Unlike a grant program, in which the federal budget includes the full amount of the grants, a loan program requires the budget to include only the subsidy cost of the loans. The Federal Credit Reform Act of 1990 requires that loan or loan guarantee programs include interest rate subsidies and default risk in calculating those costs.

Using AIP Grants to Fund Debt Repayment Reserves of Airport Revenue Bond Issues. Like the measure allowing AIP funds to be used for commercial bond insurance, this measure would broaden the uses of AIP grants, allowing them to be used for a credit-enhancing purpose. Debt-service reserves reduce risks to lenders by ensuring that interest will be paid in a timely way, even if the borrower's revenues temporarily fall short of expectations. Using AIP funds for such a purpose could be justified as reducing the overall costs of an AIP-eligible project. The FAA's study expressed concern that that use of AIP funds might jeopardize the tax-exempt status of the debt issue but suggested that the funding could be structured to avoid that problem.

Credit-Assistance Projects Under the Innovative Financing Demonstration Program

The FAA's study contributed to the Administration's proposals for reauthorizing the AIP in 1996. The Administration proposed giving the FAA the authority to test and evaluate credit-assistance proposals using AIP funds. In response, the Congress authorized the innovative financing demonstration program.

Section 148 of the Federal Aviation Reauthorization Act of 1996 established the program, under which the Secretary of Transportation could approve up to 10 projects that could use innovative financing techniques.[13] The legislation specified that the term "innovative financing techniques" be limited to payment of interest, commercial bond insurance and other credit-enhancement activities associated with airport bonds for eligible airport development, and flexible nonfederal matching requirements. Before passing stopgap legislation in October 1998 to reauthorize the AIP through March 1999, both the Senate and the House had passed bills that would

13. 110 Stat. 3223. The Congress did not earmark specific funding for the program, so the FAA had to carve out money from overall AIP funding.

codify the innovative financing techniques and expand the number of eligible projects to 20. The Senate's bill in the 106th Congress to reauthorize the FAA contains that provision and specifically prohibits a federal guarantee of bonds issued under the program.[14] The House reauthorization bill would allow 25 airports that are smaller than medium hubs to participate in the innovative financing program. That bill also specifically prohibits federal guarantees of bonds. The Administration has proposed expanding the program by five airports each year (during the authorization period). The Administration would limit the program to smaller airports and add a revolving fund for state block grants.

The program's first five projects, selected in 1997, used flexible matching shares (which are discussed below) and not credit assistance. For the next five projects, the FAA encouraged applicants to include an element of credit assistance in their proposals. In August 1998, the FAA selected for the program five projects that involved credit assistance.[15] The total amount of AIP funds for those five projects is just $8.8 million, a small fraction of total AIP funds for the year. Although one might question whether the costs of administering such a small program make it worthwhile, the costs probably do not much exceed those for administering outright grants (in contrast to credit assistance) for projects, which average less than $1.5 million.[16]

The fact that several airports wanted to participate in the demonstration program suggests that they found federal credit assistance to be valuable in helping to finance their capital investment. Extending the program to additional airports could help even more airports without increasing federal spending. At one airport, the program encouraged a private nonaeronautical company that would benefit from the investment to contribute some of its own capital to expedite the project. In that case, the federal credit assistance succeeded in leveraging private capital that might not have been available otherwise. Under current law, the innovative financing demonstration program is the only way the FAA could pay costs related to borrowing; that is prohibited for regular AIP grants.

Conclusions About Credit Assistance

Overall, many airports have succeeded in floating bonds at interest costs they find reasonable and sustainable (and generally below those of comparable private issuers

14. Section 202 of the Air Transportation Improvement Act, S. 82, 106th Cong., 1st sess. (1999).

15. Federal Aviation Administration, "FAA Announces Additional Innovative Financing Projects" (press release APA 108-98, Washington, D.C., September 11, 1998).

16. Federal Aviation Administration, *Sixteenth Annual Report*, Table B-2, p. 75.

that do not have the tax-exempt status of airport bonds). The NCARC, which was created by the 1996 aviation reauthorization act and charged with reviewing safety and financing issues, concluded that the proposals for credit assistance—such as revolving loan programs, loan guarantees, and credit enhancements—"offer, at best, marginal and limited opportunities to leverage federal funds or to increase total airport capital development spending. This is because the essential elements of innovative financing have long been institutionalized at large, medium and small airports capable of borrowing."[17] Moreover, the report notes that "airport revenue bonds are the single most important financing tool available to large and medium airports" and that "preservation and potential enhancement of the tax-exempt status of this financing tool is essential to meeting the capital demands" of those airports.[18]

When the Congress called for the study of innovative financing in 1994, PFCs had been allowed for only four years; thus, their powerful cash-raising ability had not yet been proved. By the time the study was published in 1996, however, PFCs had emerged as an important source of funding, probably with more potential for raising funds than the innovative options discussed in the study. The FAA has tried to make PFC-secured debt more attractive to bond buyers by offering assurances that it has no intention of revoking permission to impose PFCs. Several airports have issued PFC-backed debt with such assurances, and at least one airport has successfully floated PFC-backed bonds even without them. Therefore, the success and proliferation of PFCs have reduced the importance of credit assistance.

Even with the overall ability of airports to borrow funds for investment, credit assistance might be useful in certain limited cases. The 1996 study concluded that if the innovative financing measures it reviewed—basically, credit-assistance programs—were adopted to augment the current AIP, they would "need to be carefully targeted in order to avoid the substitution of federal dollars for capital dollars available from non-federal sources."[19] The study suggested that small airports might receive special consideration because of "growing state and local fiscal restraint in addition to limited access in the capital markets."[20] It noted, however, that some large and medium hubs also face constraints in borrowing, although those constraints usually stem from the weak financial condition of the airlines serving them. The

17. National Civil Aviation Review Commission, *Avoiding Aviation Gridlock and Reducing the Accident Rate*, p. II-44.

18. Ibid.

19. Federal Aviation Administration, *Innovative Approaches for Using Federal Funds to Finance Airport Development*, p. 5-1.

20. Ibid.

report added that if AIP funding was significantly reduced, then large as well as small airports might need innovative financing for capital development.

Although credit assistance is probably not needed in most cases, it might make a difference for some airport development projects. If, for example, lack of complete information led bond-rating agencies to assign a lower credit rating to an airport than it merited, then assistance in buying bond insurance or providing additional reserve funds could improve the airport's ability to borrow for a worthwhile project. In such cases, no overriding reasons exist not to use credit assistance, assuming that it requires no additional outlays from the AIP.

ENCOURAGING PRIVATE EQUITY PARTICIPATION

Besides bond sales, another way to obtain private funds for investment in airports is by encouraging private equity participation. As a policy option, however, private equity investment is not as well developed as bond sales and means different things to different people. For example, many people would argue that substantial private equity is already available for airport investment and operations. Airlines make investments in terminals, hangars, and cargo and maintenance facilities, and other private businesses operating at airports also make capital investments. In addition, many airports contract out some of their operations to private firms. According to the General Accounting Office (GAO), employees of private companies—airlines, concessionaires, and contractors—account for 90 percent of all employees at the nation's largest airports.[21] In those cases, airports can structure contracts to provide incentives for contractors to operate efficiently.

Private ownership of airports, however, presents some public policy problems.[22] Airports tend to have a local monopoly, and U.S. public policy has generally favored government ownership or regulation of public utility monopolies to protect the public interest.

The federal government has a large stake in airports and much say in how they operate. In addition to providing financial aid in grants and tax exemptions, the federal government regulates many aspects of airport operations to promote aviation safety, security, and capacity and to ensure prudent use of federal funds. Privatizing an airport would require establishing a new relationship between the federal

21. General Accounting Office, *Airport Privatization: Issues Related to the Sale or Lease of U.S. Commercial Airports*, GAO/RCED-97-3 (November 1996), p. 3.

22. For a more detailed discussion of airport privatization, see General Accounting Office, *Airport Privatization*.

government and the airport owner and operator. Among the issues to be addressed would be ensuring safety—for instance, by imposing uniform standards—and fairness, especially regarding nondiscriminatory access to airlines and reasonable rates and charges. Such provisions are currently conditions of federal aid.

Occasionally, however, some public airport owners (generally local authorities or municipalities) and private parties express interest in privatization. Advocates of privatization claim several advantages. They note that private, for-profit concerns generally have greater incentives to reduce costs and operate efficiently than do government agencies. Moreover, in buying an airport, private investors would theoretically supply their own capital, which would free up public funds for other uses.

Transferring an airport to the private sector, however, may not produce the revenues anticipated by the public owner. Although the law is not entirely clear, the FAA has interpreted the statutory requirement that airport revenues be used only for the costs of operations and investment at the airport to include the proceeds from its sale or lease. That interpretation suggests that revenues may not be diverted to nonairport uses. If that is the correct interpretation, then a local government would not have much incentive to sell because it could not use the proceeds for other public purposes.

GAO has found 10 examples of attempts by state and local government officials to sell or lease airports between 1985 and 1996.[23] None of the efforts resulted in a sale. Several ended with private management contracts. In one unusual case, Atlantic City leased its airport to a private company for several years but later sold the terminal to a newly created public transportation authority. GAO's investigation could not determine why the FAA seemingly applied different rules to that case than to similar proposals.[24]

Even if the FAA's interpretation of the law regarding use of airport revenues is incorrect, uncertainty about the correct interpretation poses an obstacle to privatizing airports. In response to expressions of interest in airport privatization and to the question about the law, the Congress established a pilot program on private ownership of airports in 1996.[25] Under that program, the FAA has the authority to exempt up to five airports from several legal provisions that have obstructed the selling or leasing of an airport to a private interest. In particular, the FAA may

23. Ibid., p. 35.

24. Ibid.

25. Section 149 of the Federal Aviation Reauthorization Act of 1996, 49 U.S.C. 47134, 110 Stat. 3213.

exempt a public agency that currently owns or operates an airport from all or part of statutory and regulatory requirements to use airport revenues for airport-related purposes, to pay back a portion of federal grants upon the sale of the airport, and to return airport property deeded by the federal government upon transfer of the airport. The FAA may also exempt the private purchaser or lessee from the requirement to use all airport revenues for airport-related purposes to the extent necessary to permit the purchaser or lessee to earn compensation from the airport's operations.[26]

In September 1997, the FAA issued a notice setting forth the procedures for applying to participate in the airport privatization pilot program.[27] Two airports have submitted applications, and several others have also expressed interest. The state of New York has proposed leasing Stewart International Airport for 99 years to a private group with experience managing airports. The FAA has approved the preliminary application—the first step in a two-step process—and the airport has submitted a final application for the FAA's review. Upon completion of a 60-day public-comment period and the FAA's review, the agency will consider whether and how to exempt the airport from the rules governing use of airport revenues and other requirements.

The second proposal involves converting Brown Field in San Diego, a general aviation airport, to an air cargo facility. The FAA is considering the airport's preliminary application to enter into a long-term lease with a private manager.

Assessing the pilot program now would be premature. The legislation authorizing the program requires that the FAA report to the Congress within two years after approving the first application. Although several parties have expressed interest in participating, whether they will actually do so remains to be seen.

In considering privatization, several critical issues should be examined. Perhaps most important is how to address the potential problem of monopoly behavior. An airport with a local monopoly on air travel may be tempted to overcharge airlines and passengers. Another question is how airport bond issues will be treated under tax law. Would new issues qualify for the tax exemption on interest? And what about outstanding bonds? Would bond owners suddenly find that the interest was no longer exempt from federal income taxes? If so, they would suffer sizable capital losses. Another question is whether private airports would be eligible for federal grants and under what conditions.

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26. Federal Aviation Administration, "Airport Privatization Pilot Program: Application Procedures," *Federal Register*, vol. 62, no. 179 (September 16, 1997), pp. 48693-48708.

27. Ibid.

In sum, several issues must be addressed to protect the interests of the public, including taxpayers, airline passengers, and airlines. The interests of a private, for-profit owner might conflict with the interests of the public, and government regulation might be needed to create incentives for private owners to behave in a socially desirable way and not to exploit monopoly power.

MODIFYING THE FEDERAL GRANT PROGRAM

The AIP plays a significant role in funding airports, especially smaller airports. AIP grants have constituted about one-quarter of airports' capital spending in the 1990s. In 1996, small airports obtained more than half of their capital funding from AIP grants.[28]

Most members of the aviation industry support increasing the overall amount of AIP funding. The NCARC recommended increasing funding to $2 billion a year for the next five years and providing more funding for smaller airports.[29] The commission viewed AIP grants as "essential for capital development at smaller airports as they have less capability to draw in a meaningful way from other sources of capital funds."[30] The AIP could be changed to make more funds available for smaller airports without increasing funds for the program. Ways to do that involve shifting funds from large and medium hubs to smaller airports, directing funds to airports meeting certain criteria, converting the grant program to a loan program or to a state block-grant program, and revising the requirements for federal aid.

Shifting Funds from Large and Medium Hubs to Smaller Airports

One option for changing the program is to phase out AIP grants to large and medium hubs and to redirect the funds to smaller airports. To mitigate its effect on larger airports, the option could also eliminate the cap on PFCs.[31] Most large and medium hubs have shown that they can use PFCs and bond issues to raise enough revenue to finance their capital investments. Those airports would probably be able to continue

28. General Accounting Office, *DOT's Budget: Management and Performance Issues Facing the Department in Fiscal Year 1999*, GAO/T-RCED/AIMD-98-76 (February 12, 1998), p. 22.

29. National Civil Aviation Review Commission, *Avoiding Aviation Gridlock and Reducing the Accident Rate*, p. II-41.

30. Ibid.

31. A variation of this option would increase, but not eliminate, the cap. As noted, reauthorization proposals by the House and the Administration would raise the cap to $6 and $5, respectively.

to use those sources of funds in the absence of federal aid, although the anticipation of federal grants may have increased the attractiveness of some bond issues by strengthening certain airports' overall revenue expectations.

The option would have several distributional consequences mainly because passengers help finance AIP grants through the passenger ticket tax. Since 90 percent of passengers use large and medium hubs, they contribute most of the revenues. For their taxes to go to smaller airports that they do not use may seem unfair. But taxes, unlike user fees, often involve redistributing resources, and localities' claim on federal taxes is limited. Moreover, most of the federal aviation tax revenues go toward covering the costs of the air traffic control system, which serves all commercial airline passengers.

Another consideration for the option is that many of the large and medium hubs would increase PFCs, which might cause fares to rise at those airports. Whether the airlines would ultimately bear the burden of increased PFCs or whether they would pass that burden on to passengers depends on the sensitivity of demand for air transportation to changes in price. The sensitivity—or elasticity—of demand differs for business and vacation travelers, as shown by the variety of airfares paid by passengers on any given flight.

Some observers think that phasing out the larger airports from the AIP would lessen political support for the program: larger airports and their passengers having nothing to gain from the AIP might push to eliminate it. Nonetheless, many passengers at larger airports also travel to and from smaller airports at least on occasion, and they may be willing to subsidize smaller airports to enhance safety and preserve service at those airports. The option has another possible drawback: without AIP grants as a mechanism for the federal government to influence airport policies, airports might not make the kinds of investment and operating decisions that promote the national interest.

As outlined here, the option would have no direct effect on the federal budget. Variations on the option, however, would affect the budget. One variation would be to reduce AIP grants either to the level now provided to smaller airports or to some amount between that and the current level. Another variation would be to eliminate the apportionments based on formulas but to retain the FAA's authority to make discretionary grants to larger airports if needed for improving airport safety and security or reducing noise. The Administration's proposal for reauthorization contains two related provisions. First, large and medium hub airports that imposed PFCs of $4 or $5 would forgo all of their formula funding. Second, AIP funding at large and medium hubs would be reserved for projects to reduce noise, increase airfield capacity, plan for airport development, and meet federal mandates.

Phasing in the option would probably disrupt airport plans less than immediately ending the grants to larger airports. It would give airports time to revise (and possibly postpone) capital spending plans, accumulate capital reserves by increasing PFCs and other user fees, and work with participants in the bond market to address any problems arising from the cutoff of AIP funding.

Directing Federal Funds to Airports Meeting Certain Criteria

Although similar to the first option, the second option would try to target airports, regardless of size, that need assistance. Compared with the first option, it would help larger airports that qualified for federal aid but would probably make less money available to smaller airports with a healthy financial condition.

Unless carefully crafted, however, the second option could create undesirable incentives by rewarding airports that did little to improve their financial condition. To qualify for aid, the federal government might require that an airport show that it was trying to increase revenues (by imposing PFCs or using other measures) and reduce costs. In addition, the criteria for funding could be designed to favor investments serving the national interest and to discourage those aimed solely at local economic development.

Converting the Grant Program to a Loan Program

A third option would convert all or part of the grant program to a loan program. Rather than making outright grants to airports, a loan fund would provide loans that would have to be repaid. A loan program could lend money at a market rate or a subsidized rate, and the rate could vary according to the federal government's assessment of the airport's needs, the importance of the project to the national aviation system, and other factors. The option could be phased in over a period of years to lessen disruptions. It could be combined with increasing or eliminating the cap on PFCs to help airports finance loan repayments.

Converting the AIP to a State Block-Grant Program

This option would convert the program to one in which federal aid flowed to the states instead of directly to individual airports. Aid could be provided to the states entirely by formula—according to factors such as population, land area, number of airline passengers, and amount of general aviation activity—or part of it could be discretionary.

The option would give states the authority to decide how to distribute funds to individual airports. State governments could then allocate the money according to their own priorities, balancing the needs of their airports—and of the communities they serve—throughout the state. State governments have a better understanding of their own needs than the federal government does. Alternatively, state governments could adopt formulas of their own to allocate the grants, or they could use a combination of formula and discretionary grants.

Of course, one reason for federal involvement in airport financing is that the benefits and costs of airports cross state lines. Some major metropolitan airports serve passengers from two or more states. Cincinnati/Northern Kentucky International Airport, for example, is located in Covington, Kentucky, but the origin or destination of many of its passengers is Ohio.

An abrupt shift from the current program to a state block-grant program could present problems in the market for airport bonds. The current AIP system of formulas gives bond buyers some assurances about the revenues an airport can expect in the future—revenues that contribute to the financial health of the airport and reduce the probability of bonds defaulting. Phasing in a block-grant program, perhaps providing for a continuation of formula funding for a certain period, could mitigate that problem. Of course, the states would also benefit from maintaining the attractiveness of bonds for their airports, so they would probably devise ways within their own funding programs to provide the stability that bond buyers require.

One way of phasing in a state block-grant program would entail gradually expanding the FAA's authority to make block grants to states. Under current law, nine states are authorized to participate in that program, under which the states, rather than the FAA, administer AIP grants at nonprimary airports. Those airports include general aviation airports and nonprimary commercial-service airports in the National Plan of Integrated Airport Systems. The FAA makes grants directly to the states, which then decide which projects to fund. (See Box 2 for details about the state block-grant program for airports.)

The block-grant program could be expanded in several ways. One is to allow all states, not just nine, to participate in the program. Another way is to broaden block-grant authority to include primary commercial airports, not just general aviation and nonprimary commercial-service airports, as eligible recipients of the funding.

BOX 2.
EVOLUTION OF THE STATE BLOCK-GRANT PROGRAM FOR AIRPORTS

The Airport and Airway Safety and Capacity Expansion Act of 1987 established the state block-grant program as a pilot program.[1] Initially, the program was to run from October 1, 1989, to September 30, 1991. Legislation enacted in 1990 and 1992 extended the pilot program.[2] In 1996, the Congress repealed the expiration date, providing a "permanent" authorization, and removed "pilot" from the original designation as the state block-grant pilot program.[3]

At first, the Congress authorized the Federal Aviation Administration (FAA) to select three states to participate. The FAA chose Illinois, Missouri, and North Carolina for the program. In 1992, after the Congress authorized the FAA to select four additional states, the agency added Michigan, New Jersey, Texas, and Wisconsin. Building on the program's success, the Congress allowed expansion to eight states in 1997 and nine states thereafter.[4] The FAA selected Pennsylvania in 1997 and Tennessee in 1998.

In 1997, the FAA provided block grants totaling $72.4 million, of which $17.5 million was discretionary.[5] Since the beginning of the program, the FAA has provided block grants totaling $504.3 million, of which $256.9 million was discretionary.[6]

1. 49 U.S.C. 47128, 101 Stat. 1507.

2. The Omnibus Budget Reconciliation Act of 1990, 49 U.S.C. 47128, 104 Stat. 1388-364; and the Airport and Airway Safety, Capacity, Noise Improvement, and Intermodal Transportation Act of 1992, 49 U.S.C. 47128, 106 Stat. 4881.

3. Title I, sec. 147(c)(1)(C) of the Federal Aviation Reauthorization Act of 1996, 49 U.S.C. 47128, 110 Stat. 3223.

4. Ibid.

5. Federal Aviation Administration, *Sixteenth Annual Report* (preliminary draft, December 1998), p. 21.

6. Ibid.

Rather than increase the amount of funding for airports, the state block-grant program gives states greater flexibility in using funds, unlike the traditional AIP approach in which the FAA generally makes grants directly to airports. That gives states more power to set priorities, although the states must still follow the ground rules established by statute and by the FAA for the eligibility of projects, and the states' priority systems must conform with the National Priority System.[32] The FAA has proposed flexible matching shares for program participants.

32. Federal Aviation Reauthorization Act of 1996, 49 U.S.C. 47128(c), 110 Stat. 3223.

The National Association of State Aviation Officials (NASAO) considers the state block-grant program "a great success" and would like to see it expanded to all qualified states.[33] The NASAO cites the ease of applying for a state block grant, compared with the amount of paperwork required when airports apply separately for AIP funding.[34] In addition, to qualify for funding under the state block-grant program, an airport project must satisfy criteria intending to ensure that it meets the needs of the national airport system.

Although some states could make effective use of an expanded block-grant program, others might prefer the more traditional approach—especially states with relatively small aviation offices. Still, allowing states some choice in the form of grants they receive could improve the effectiveness of those funds.

Revising Requirements for Federal Aid

Airports receiving federal aid must meet several requirements. Although the requirements are generally intended to protect the federal interest and ensure the prudent use of federal funds, they can also impose burdens on aid recipients and make it more difficult or costly for airports to carry out development projects. Several options for revising those requirements could make federal aid more useful to airports.

Relaxing Requirements for Matching Shares. The law specifies the federal government's share of the costs of projects funded with AIP grants: 75 percent for projects at large or medium hubs and 90 percent for projects at smaller airports.[35] Those provisions have been interpreted to mean that a larger airport must pay exactly 25 percent and a smaller airport must pay 10 percent of the cost of a project, not one cent more. In some cases, however, airports that want to contribute more money to expedite a project can avoid the restriction by defining the project's scope in a creative way. For example, a project to extend a runway by 2,000 feet could be defined as two projects: a 1,000-foot extension for which federal funding provides 90 percent of the cost and for which a local match provides 10 percent and a 1,000-foot extension funded entirely by the airport. Or, the runway could be funded with

33. Statement of Robert W. Kunkel, Chairman, National Association of State Aviation Officials, and Director, Wisconsin Bureau of Aeronautics, before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, March 19, 1998, p. 3.

34. Ibid., p. 4.

35. Section 149(c) of the Federal Aviation Reauthorization Act of 1996, 49 U.S.C. 47109, 110 Stat. 3282. For certain types of projects, the law specifies other percentages for the government's share.

AIP money and the lighting system by the airport. Such schemes raise questions about the usefulness of the requirement for matching funds.

In 1996, the Congress gave the FAA the authority to test the use of a flexible local matching share as part of the innovative financing demonstration program. The first five projects chosen for the program all involved local matching shares greater than the amount usually permitted.

The Senate's reauthorization bill would change the federal share of AIP funds for airports other than large and medium hubs to "not more than 90 percent" (from 90 percent). The House bill would make the federal share "not more than 90 percent" for states participating in the state block-grant program. Beginning in 2000, it would make the federal share 100 percent for primary nonhub airports and nonprimary commercial-service airports. The Administration's proposal for relaxing requirements for matching shares would make that change for state block grants and would extend the use of flexible matches to all airports in 2002.

If an airport wants a project badly enough to pay a larger share of the bill, that indicates the value of the project to the airport. Such a situation appears to pose no harm to the national interest. In the projects chosen for the demonstration program, the flexible matching share enabled airports to expedite the projects they wanted. Without the flexible match, the airports would have had to wait until more federal funds were available. A flexible matching share requires no more federal spending than does the current program, and it could result in less federal spending, as airports assume a greater share of costs.

The NASAO has declared the innovative financing demonstration program a success and urged that it be expanded to all states and made permanent.[36] The association maintains that if an airport wants to speed up a project by paying more than its 10 percent share, it should be allowed to. Under an innovative financing program for highways, the flexible-match provision was the one that state officials found most valuable.[37] In that program too, states found that paying a higher share of the cost allowed them to complete sooner the projects they wanted.

Allowing Grants to Be Used for State Credit-Enhancement Programs. Another option—an offshoot of the state block-grant program—would allow states to use AIP funds to capitalize revolving funds that would make loans or provide other credit enhancements for airport projects. The funds would be similar to those created to make loans for wastewater treatment and to state infrastructure banks created to

36. Statement of Robert W. Kunkel, March 19, 1998, pp. 4-5.

37. Congressional Budget Office, *Innovative Financing of Highways*, CBO Study (January 1998).

finance highway projects.[38] The NASAO has expressed support for the option and has noted that Florida has used a state revolving loan fund for airport capital projects and acquisition for more than a decade.[39]

Providing Additional Flexibility. Reducing regulations for airport design and construction standards could reduce costs and effectively provide more aid to airports. So could relaxing other restrictions on airports' use of federal aid. But doing that might enable recipients of aid—airports, cities, and states—to use the funds to further local interests at the expense of enhancing the national aviation system. If municipal airports were allowed to increase PFCs and other fees and to use the revenues as they wished, they might use their local monopoly power to divert funds from aviation to other purposes such as fire and police protection or road or transit systems. Some policy analysts argue that such a scenario is entirely appropriate—it simply involves using municipal resources in a way that the city deems best. Airlines and other policy analysts, however, question the fairness of using revenues from airline passengers and other aviation system users to pay for municipal services.

Any relaxing of restrictions would have implications for federal, state, and local governments. State and local governments may view airport development as an important tool for economic development; the federal government is more concerned about improving safety and security and providing for interstate commerce. The challenge for the federal government is to structure a policy that offers incentives for state and local governments to address national aviation interests.

OBTAINING ASSISTANCE FROM STATE AND LOCAL GOVERNMENTS

In addition to the funding options already discussed, airports could look to state and local governments for greater financial assistance. Such assistance could especially interest state and local governments wanting to further economic development because air transportation is often an important criterion used by companies in choosing sites for new facilities.

Some state and local governments assist airports by issuing general obligation bonds on their behalf. Those bonds tend to get more favorable interest rates and enjoy better access to bond markets than revenue bonds because they are backed by the jurisdiction's power to impose and increase taxes. In turning to state and local governments for aid, however, airports must compete with a wide range of other

38. For a discussion of state infrastructure banks for highways, see Congressional Budget Office, *Innovative Financing of Highways.*

39. Statement of Robert W. Kunkel, March 19, 1998, p. 5.

projects such as school buildings, prisons, parks, and sports stadiums. That may pose a greater challenge to airports in obtaining funds.

APPENDIX
THE DATA SET AND ITS STRENGTHS AND WEAKNESSES

The financial data used for this paper derive from the Federal Aviation Administration's (FAA's) compilation of airports' filings on Form 5100-125, "Operating and Financial Summary" for fiscal years 1996 and 1997. Airports supply detailed data about their sources of revenue and items of expenditure on Form 5100-125. The classification of airports by size used in this paper comes from the FAA's National Plan of Integrated Airport Systems data for 1996.

The data set includes information for 478 commercial-service airports, but the number of airports used in the statistical analysis is only 380, for several reasons. In some cases, airports reported data that were consolidated and covered more than one airport. The Congressional Budget Office (CBO) adjusted the number of airports accordingly in calculating the means of financial data. Some airports provided data for just one year; therefore, CBO excluded those airports from calculations involving two-year averages. Finally, the paper covers airports only in the 50 states; it excludes airports in Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands.

The results reported in this paper should be interpreted with caution because, for many reasons, they may not adequately reflect the true condition of airport finances. First, the data cover just two years—too short a period in which to smooth out the effects of fluctuations in local economies or unusual circumstances such as strikes by airline or airport employees. Second, the financial statistics may include the effects of one-time events that distort the picture. Third, the data do not include balance-sheet information. That is, they lack information about the airports' assets, liabilities, or indebtedness (except what can be inferred from interest payments and bond proceeds) that would be useful in determining the airports' long-term financial health. Examining balance sheets, as well as several years' data on income and expenses, would reveal a more accurate picture.

The data may be less reliable and comprehensive than they could be because they are from the first two years that the FAA required airports to complete Form 5100-125. Not all of the airports required to file the form did so in a timely manner, and some data were still missing at the time of CBO's analysis. Although the FAA was lenient about airports' completing the form in the first year, the agency has tightened its procedures and obtained more timely and more complete filings for the second year (fiscal year 1997).

Moreover, an airport might be classified as one size in one year and as another size in another year; therefore, the number of airports of each type may fluctuate somewhat from year to year. That situation may also affect the totals of revenues, expenditures, and other data by size of airport. For that reason, this paper reports medians (which are less susceptible to extreme values than means), in addition to other statistics.

Furthermore, a relatively small number of nonprimary commercial-service airports reported financial data. They may not adequately represent the commercial-service airports that did not file financial reports.

Finally, the absence of data for general aviation airports poses a problem, especially for obtaining an accurate view of the 290 airports designated by the FAA as relievers. Those are noncommercial airports in metropolitan areas that the agency hopes will divert general aviation from congested hubs.