An airport seeking to expand its facilities, or a governmental entity seeking to build a new airport, must raise sufficient capital to finance such infrastructure development from public or private sources, or a combination of both.

*Capital costs* consist of the component costs (e.g., labor, materials and equipment) of construction of the airport and its component parts.
Sources of Capital

Sources of capital for airport development include:

- governmental or international organization loans and grants,
- commercial loans from financial institutions,
- equity or debt (typically, bonds) from commercial capital markets, including private investors, banks investment houses, or fund pools, and
- the extension of credit from contractors and suppliers.

Airports must also evaluate the amount of foreign capital needed, for debt often will be needed to repaid in that foreign currency, and therefore subject to both competitive internal needs for foreign currency, and currency valuations, favorable and unfavorable.

Funds come from a variety of public (including Federal) and private (including general obligation and revenue bonds [GARBs]) sources.

Commercial loans typically incur the highest interest rates, though such rates may be reduced by governmental loan guarantees.

Existing airports also may have retained earnings building in a capital development account.
Capital Available to Developing States

- Foreign governments may be willing to provide capital to airport projects in less developed nations, out of a sense of altruism, or with the purpose of promoting trade and commercial relations between the two nations, or exporting technology and equipment from firms domiciled in the lender nation. Some nations have developed economic and social development programs in various parts of the world, providing loans on preferential terms, or supplies, equipment and technology. Examples include the following:
  - Belgium - Administration generale de la Cooperation au Developpement
  - Canada - Canadian International Development Agency
  - Czechoslovakia - Ministry of Foreign Affairs
  - Denmark - Danish International Development Agency
  - France - Caisse centrale de Cooperation economique
  - Germany - Ministry of Economic Cooperation
  - Italy - Department of Cooperation
  - Japan - Overseas Economic Co-operation Fund
  - Netherlands - Foreign Ministry
  - Norway - Norwegian Agency for International Development
  - Russian Federation - Ministry of External Economic Relations
  - Spain - Cooperacion Internacional
  - Sweden - Swedish International Development Administration
  - United Kingdom - Overseas Development Administration
  - United States - U.S. Agency for International Development
Specialized export-promoting agencies (e.g., the Export Development Corporation of Canada, the Export Credits Guarantee Department of the United Kingdom, or the Export-Import Banks of Japan and the United States, COFACE of France, HERMES of Germany, and the Export Credits Guarantee Department of the United Kingdom) may also be able to make direct loans or guarantee private loans, or insure the risk assumed by its domestic firms providing goods and services for airport development.
Other Sources of Foreign Capital

Several international bank and fund organizations have been established to aid developing nations by assisting in financing and execution of projects, particularly infrastructure projects, which foster economic development. These include the following:

- International Bank for Reconstruction and Development and its affiliates, the International Development Association, and the International Finance Corporation
- African Development Bank
- Asian Development Bank
- Caribbean Development Bank
- Inter-American Development Bank
- European Union European Development Fund
- Japan Overseas Economic Cooperation Fund
- Organization of Petroleum Exporting Countries Fund for International Development
- Arab Bank for Economic Development in Africa
- Islamic Development Bank
- Saudi Fund For Development
- Abu Dhabi Fund for Arab Economic Development
- Kuwait Fund for Arab Economic Development
- Arab Fund for Economic and Social Development
Other Sources of Foreign Capital

The United Nations Development Programme [UNDP] provides developing nations with expertise in planning and executing airport projects, including feasibility and cost-benefit analyses, master planning, and construction. Funding for minor equipment may also be obtained from UNDP, though the principal role of the agency is to provide expertise rather than capital.

In each instance, a loan or grant will be made to a governmental agency, or to a private entity having the support and guarantee of the government. Hence, the government must designate the project as a high priority for development in order to receive such assistance.
Once built, an airport must earn sufficient revenue to pay its operating expenses and retire its debt.

Such *operating costs* include expense items as interest and depreciation or amortization on debt, taxes, and maintenance and administrative costs, including salaries, power, and repairs.

Revenue comes from a number of sources, including rents, aeronautical fees, concessions and parking.
Air side revenue streams include landing fees, fuel taxes, and maintenance and cargo facility leases.

Land side revenue streams include terminal rents and gate leases, concessions, parking fees, and various taxes, such as, in the United States, Passenger Facility Charges.

In addition to government grants and subsidies, the airport turns to its tenants -- the airlines, concessionaires, parking -- and the passengers they serve to finance its maintenance and operating costs, and debt service. Airports derive revenue streams from rents, charges and fees imposed upon airlines, various concessionaires, such as car rental companies, restaurants, newsstands, taxi and van services, catering and baggage services, fuel providers, and parking.

Airport concessionaires (such as restaurants, news stands, auto rental companies) typically pay rent for the space they occupy, while some pay a gross-receipts fee. These revenues, in turn, finance operating and maintenance expenses, principal and interest debt service, and various "pay as you go" infrastructure, such as terminal or runway expansions or improvements.
Airline Rents and Charges

- Airlines pay rental charges for the space they occupy at ticket counters, gates, baggage handling, maintenance, and catering facilities, and also pay takeoff and landing fees, parking fees, and fuel fees.

- Two methodologies dominate computation of airline fees and charges under airport use agreements – the residual method, and the compensatory method.
Residual Agreements

- In a *residual agreement*, the signatory airlines accept the financial risk, and guarantee to provide the airport with sufficient revenue to cover its operating and debt-service costs.
- Under this approach, the airport deducts an agreed amount of non-airline (concession) revenue from its expenses, leaving the airlines responsible for the remaining (residual) amount. Airline rates then are set accordingly.
- Airlines bear the risk that their fees will be increased should concession revenue fall short.
- In the U.S., airports using residual methodology typically give airlines majority-in-interest power to veto new major capital expenditures.
- Airlines typically stand behind the revenue bonds with "use and lease agreements", pledging to make up the difference in revenue shortfalls by paying higher landing fees. The *quid-pro-quo* for the residual funding agreement historically has been a long-lease term for gates, and a "majority-in-interest clause" giving airlines a say (often an effective veto) over airport expansion, and a return of excess revenue collected, often in the form of lower landing fees.
Compensatory agreements usually exist at mature airports that have achieved successful revenue generation, whereby the airport undertakes the risk of meeting its costs.

Under the compensatory method, an airport is divided into various cost centers (such as airfield, terminals, parking areas), and airlines pay a share of those costs, based on the amount of space they occupy (at, for example, ticket counters, gates, and baggage sorting and catering facilities), landing and departing aircraft, and other measures of airline use.

The airport retains concession revenue for discretionary capital improvement projects.
In the United States, funding for airport capital infrastructure, such as runways, taxiways, and terminals, has come from two primary sources:

1. Federal ticket taxes (or Airport Improvement Program [AIP] funds) from the Airport Trust Fund collected on every airline ticket purchased in the U.S.; and

2. Tax-free General Airport Revenue Bonds [GARBs] issued by municipalities.

Early airport construction was financed by *general obligation bonds* backed by the "full faith and credit" of a governmental unit and secured by taxes collected by it. The industry was in its infancy, and airports were not capable of generating sufficient revenue to finance infrastructure costs.

Since World War II, GARBs have replaced general obligation bonds as the preferred means of financing new airport construction, expansion or improvement.

GARBs typically run for a 25-30 year term (as opposed to general obligation bonds which run for 10-15 years) and usually pay higher interest than general obligation bonds.
Another private sector funding mechanism is the Build-Operate-Transfer [BOT] approach, whereby the contractor commits to financing, construction, operations and maintenance for a specified number of years (known as the "free use period"), after which it transfers the facility over to the government.
Privatization

- The United Kingdom became the first major entrant into the land of airport privatization, with its sale of British Airports Authority [BAA] which controls seven major airports, including London's Heathrow, Gatwick and Stansted in 1987, in a $2.5 billion public share offering.

- The government continued to provide oversight of airline access, airport charges, safety, security and environmental protection, and veto power over airport investment or divestiture.
Governments which have privatized airports have adopted one of four regulatory approaches:

1. Rate of return regulation (e.g., Spain, France, Greece and the Netherlands);
2. Rate of return price caps (e.g., the United Kingdom);
3. Aeronautical price caps (e.g., Australia, Austria, Denmark and Mexico); and
4. Limited governmental oversight (e.g., Canada, New Zealand, and the United States).
## STRENGTHS AND WEAKNESSES OF AIRPORT REGULATORY APPROACHES

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The Chicago Convention

- The Chicago Convention provides that among the principal purposes of ICAO is to "avoid discrimination between contracting States."
- More specifically, Article 15 of the Chicago Convention requires that "every airport in a contracting State which is open to public use by its national aircraft shall likewise . . . be open under uniform conditions to the aircraft of all the other contracting States" and that airport and air navigation charges imposed on foreign aircraft shall be no higher than those imposed upon domestic aircraft.
- Though a State may recover its costs by assessing fees for air navigation, it may not charge a fee solely for the privilege of flying into, out of, or over its territory. All charges should be published and communicated to ICAO.
- Airport and air navigation charges and fees may be reviewed by the ICAO Council upon complaint of a contracting State.
ICAO Recommendations

- ICAO has expressed a general principle in favor of assessing fees in a manner in which "users shall ultimately bear their full and fair share of the cost of providing the airport."
- Cost should include the full economic cost, including depreciation and interest, but allowing for all revenue, aeronautical and non-aeronautical. In setting the fees, airlines are not to be charged for facilities and services they do not use, or otherwise not properly allocable to them.
- Landing charges should be based on aircraft maximum permissible take-off weight. ICAO has also approved a cost-based formula based on separate en-route/in-flight and terminal/approach charges, adjusted for aircraft weight and distance flown. Others have suggested additional factors should be considered, such as the time of day, level of airport congestion, and airspace utilized.
- Two types of charges -- security charges and noise-related charges -- should be designed to recover no more than the relevant costs of providing security and noise-abatement equipment and services. In contrast, other charges may produce sufficient revenue to exceed direct and indirect costs by a reasonable margin.
- Of course, airport and air navigation fees and charges may not discriminate between domestic and foreign carriers.
Finance Methodologies

- In covering operating costs, airports tend to use one of three approaches:
- The most popular is the *Residual Cost*, or "cash register," approach, which seeks to balance total costs with total revenue. Once the airport's costs have been determined, non-airline revenue is subtracted from total expenditures to determine what additional revenue is needed to break even. Airline specific fees are then set to make up the remaining deficit.
- A second approach is the *Cost of Service*, or "multiple cost center" method. The airport is divided into cost centers, and fees and charges for each cost center is set at a level to cover the costs allocated to it.
- A third method is the *Public Subsidy* approach, under which the difference between cost and revenue is subsidized by the airport or the government.
Once an airport is operating, it must generate sufficient revenue to retire debt and cover operating expenses. Airports generate revenue from landing fees and terminal leases, concessions (e.g., parking fees), departure taxes and passenger facility charges, and other sources (e.g., advertising and fuel sales).

Airport operating revenue funds the airport's operating expenses, debt service, and sometimes non-operating expenses, such as capital development (under a "pay-as-you-go" financing scheme).
Revenue Categories

- Airport revenue falls into two broad categories -- revenue derived from air traffic operations, and revenue derived from ancillary (non-aeronautical) operations.

- *Air traffic operations* are a major revenue stream. These include aircraft landing and parking charges, passenger and cargo charges, and leases of airline hangars and gates.

- *Ancillary*, or *non-aeronautical activities* include concession fees (e.g., rentals and profit-sharing arrangements with concessionaires such as restaurants and shops), revenue derived from rental of land, premises and equipment (e.g., hotels, and airline cargo space, kitchens and office space rent), income derived from the airport's shops and services (e.g., baggage handling, and parking), and various fees charged to the public.

- According to ACI, 54% of airport revenue worldwide comes from aeronautical sources (such as landing fees, aircraft parking, lighting and airbridge charges), and 46% is derived from non-aeronautical sources (such as concessions, parking, rental car facilities, and advertising).
Setting Concession Charges

- Concession fees may be variable or fixed.
- Variable fees are usually stated as a percentage of sales, or less commonly (because of difficulties of monitoring and auditing profit), a percentage of net profit.
- Some airports impose an increasing percentage as the volume of business increases.
- Most airport that use variable fees also stipulate a minimum payment.
- Fixed concession fees are usually applied to those activities likely to yield only modest profits (e.g., barber, book, flower, newspaper, photo slot-machines, and taxis).
- Some airports divide space into different zones, charging higher fees for more desirable locations.
Each airport should establish appropriate financial accounting and control practices (in accordance with recognized accounting rules, standards or conventions) not only to ensure that its economic resources are properly and lawfully deployed, but to give management essential data to operate the airport, and existing or potential lenders a basis on which to make their investment. Financial accounting refers to the system in which income and expenses are recorded to present a comprehensive financial picture.

Typically, the airport will periodically (monthly, quarterly and annually) produce a profit and loss statement and a balance sheet. The profit and loss statement summarized the revenue and expenses over the period, with the difference being the profit or loss.

The balance sheet summarizes the assets and liabilities, with the difference being an increase or decrease in the airport’s net worth over the period.

The airport should also produce a periodic budget, with a subsequent explanation of positive or negative variances from budget.
Contents of a Balance Sheet

**Assets**
- Current assets
  - Cash
  - Short-term investments
  - Receivable
  - Inventory
  - Prepaid expenses
  - Deferred charges
  - Other current assets
  **Total current Assets**
- Long-term assets
- Fixed assets (balance cost)
- Long-term investments
- Intangible assets (balance cost)
  **Total long-term Assets**
**TOTAL Assets**

**Equity And Liabilities**

**Current Liabilities**
- Trade accounts payable
- Short-term liabilities
- Taxes payable
- Accrued liabilities
  **Total current liabilities**
- Long-term liabilities
- Long-term liabilities on credit
- Total long-term liabilities
  **Total Owner Equity**
- Owner Equity
- Joint-stock Equity
- Additional paid in capital
- Retained Earnings uncovered loss
  **TOTAL Owner Equity AND Liabilities**
Financial Control

- *Financial control* refers to the system of monitoring financial performance to ensure that expenses comport with plan, and income flows correspond to budget.

- Financial control is a three-step process: (1) comparing actual income and expenses with plan; (2) determining whether income or expense variances from plan are a problem of the budget, management of the airport, or external factors; and (3) what corrective action should be, and can be, taken.

- Careful accounting and control can also thwart fraud or embezzlement, assuring that the public's resources are well spent. Internal and external auditing should be performed to assure that the financial data is accurate, and to identify waste and embezzlement. Law enforcement should be vigorously pursued against corruption.
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