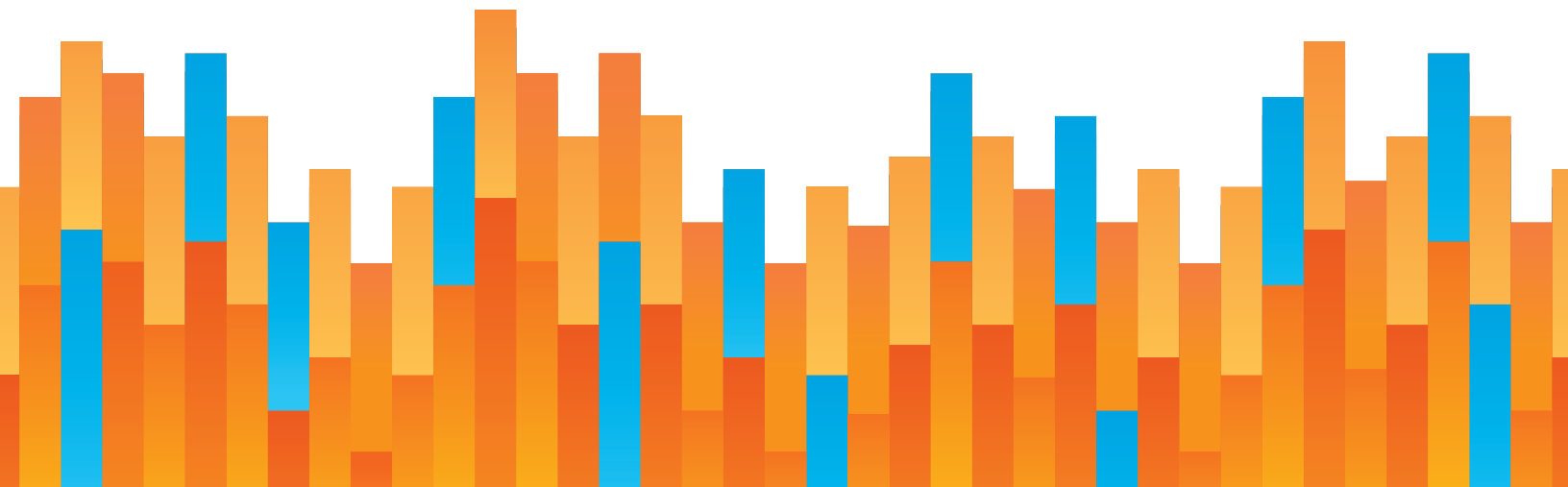




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ANNUAL PRIVATIZATION REPORT: AIR TRANSPORTATION

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May 2018





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PART 1

AIRPORT PRIVATIZATION

1.1

OVERVIEW

The global shift of airports from government enterprises to partial or full private management and operation began in 1987, with the full privatization of the British Airports Authority via an initial public offering (IPO) of shares. That stimulated a global trend of airports being shifted, in whole or in part, to the private sector. In 2016 Airports Council International-Europe released a report that found that over 40% of European airports have at least some private shareholders, and that these airports handle three out of every four passengers.¹

Sale (either of the whole or part) has been the primary mode of airport privatization in Europe. Elsewhere, most airport privatization takes the form of a long-term lease or concession. This is the case in Australia and in Latin America and the Caribbean, as well as airports involved in the U.S. Airport Privatization Pilot Program. Some of the larger privatized airports have acquired full or partial ownership of other airports, becoming global airport companies. Today's airport investors include pension funds, infrastructure investment funds, and sovereign wealth funds, in addition to global airport companies.

Table 1 lists the world's largest commercial airport companies. It is excerpted from a table of all the world's largest (by revenue) airport groups as of 2016 (the most recent year for

¹ Jankovec, Olivier. "The Ownership of Europe's Airports." Airports Council International-Europe. March 2016.

which data were available at the time of this writing). Some of these airport companies also manage overseas airports, on a contract basis, without obtaining an ownership share. Several smaller airport companies had 2016 revenues below the threshold for inclusion in the top 100, so are not included in the table. Examples include London City Airport and Vantage Airport Group. Total 2016 revenue for the 40 airport companies in Table 1 was \$39.1 billion, which is 46.6% of the revenue of the entire top 100 airport groups. About two dozen of these airport companies are listed on global stock exchanges.

TABLE 1: LARGEST INVESTOR-OWNED AIRPORT COMPANIES, 2016

Airport Company	Global Rank	Main Airport(s)	2016 Revenue (\$M)	Privatization Status	Skytrax 2017 Rank
Aena Aeropuertos	1	Madrid	\$4,160	Partial	31
Heathrow Airport Holdings	2	London Heathrow	\$3,763	Full	8
Aeroports de Paris	3	DeGaulle	\$3,250	Partial	33
Fraport	4	Frankfurt	\$2,852	Partial	12
New Kansai Int'l. Airport Co.	12	Kansai, Osaka	\$1,664	Full	9
Airports of Thailand	15	Bangkok	\$1,495	Partial	36
Beijing Capital International	16	Beijing	\$1,311	Partial	16
Aeroporti di Roma	17	Rome	\$1,290	Full	
TAV Airports	21	Istanbul, Ankara	\$1,217	Full	
Manchester Airports Group	23	Manchester, London Stansted	\$1,090	Partial	
GMR Airports	24	New Delhi, Hyderabad	\$1,048	Partial	66
Flughafen Zürich	26	Zürich	\$1,025	Full	7
Sydney Airport Group	27	Sydney	\$1,013	Full	23
Malaysia Airport Holdings	28	Kuala Lumpur	\$1,009	Partial	24
Gatwick Airport	30	London Gatwick	\$942	Full	45
Guangzhou Baiyun	31	Guangzhou	\$926	Partial	85
Flughafen Wien	36	Vienna	\$818	Full	29
SEA Group	39	Milan	\$772	Partial	
Aeroportos de Portugal	40	Lisbon	\$767	Full	57
Aeropuertos Argentina	44	Buenos Aires	\$691	Full	
Copenhagen Airports	45	Copenhagen	\$655	Partial	18
Australia Pacific Airports	46	Melbourne	\$626	Full	25
Airports Co. South Africa	47	Cape Town	\$617	Partial	22
GAP Grupo Aeroportuario del Pacifico	50	Guadalajara	\$594	Full	
Brussels Airport	51	Brussels	\$591	Full	83
ASUR Aeropuertos Del Sureste	53	Cancun	\$521	Full	
Düsseldorf Airport	54	Düsseldorf	\$513	Partial	39
Brisbane Airport	59	Brisbane	\$468	Partial	17
Athens Int'l. Airport	65	Athens	\$446	Partial	60
Auckland Int'l. Airport	68	Auckland	\$384	Partial	21
Perth Airport	73	Perth	\$356	Full	
Budapest Airport	76	Budapest	\$350	Full	
Operadora Mexicana de Aeropuertos	83	Acapulco	\$278	Full	
Aeroports de la Cote d'Azur	84	Nice	\$275	Partial	84
Hamburg Airport	85	Hamburg	\$269	Partial	40

Airport Company	Global Rank	Main Airport(s)	2016 Revenue (\$M)	Privatization Status	Skytrax 2017 Rank
AGS Airports	86	Glasgow	\$264	Full	
Edinburgh Airport	91	Edinburgh	\$220	Full	
SAVE Group	94	Venice	\$208	Partial	
Aeroports de Lyon	97	Lyon	\$190	Partial	
Birmingham Airport Holdings	98	Birmingham	\$189	Partial	

*Source: "Airport Group Financials," *Flight Airline Business*, November 2017

Table 1 shows that the world's five largest airport groups—AENA Aeropuertos, Heathrow Airport Holdings, Aeroports de Paris, Fraport, and New Kansai—are all investor-owned companies with annual gross revenues totaling \$15.7 billion. Nine other privatized airport groups are in the billion-dollar range of annual revenues. Interestingly, however, Airports of Thailand, ranked sixth in revenues for 2016, had reached the highest market value of all listed airport groups as of January 2018, with a valuation of \$31 billion. That slightly bested the previously most-valuable company, Aena, ranked first in terms of 2016 revenue in our table.

Table 1 also shows which of the flagship airports of these 40 companies made it into the 2017 Skytrax survey to identify "the world's top 100 airports." As can be seen, 25 of the 40 (62%) were ranked among the top 100, based on surveys of airline passengers. Only 14 U.S. airports made the 2017 top-100 list, with only five in the top 50: Cincinnati, Denver, San Francisco, Atlanta, and Dallas/Ft. Worth.

1.2

AIRPORT INDUSTRY CHANGES

There were a number of changes in who owns what within the airport industry in 2017. These transactions indicate the lively market that exists for ownership stakes in already-privatized airports.

- Mexican airport owner/operator ASUR joined with Canada's Public Sector Pension Board (PSP Investments) to buy out the interest of Oaktree Capital Management in the 40-year concession for Puerto Rico's San Juan International Airport. ASUR now owns 60% of the concession and PSP the other 40%. Oaktree received \$430 million for its stake in the concession.

- Italian toll road owner/operator Atlantia bought a 29.3% stake in the Bologna Airport concession company, paying \$194 million. Atlantia is now Bologna's second-largest shareholder, after the Bologna Chamber of Commerce, which owns 37.5%.
- Meridiam, Aeroports de Paris, and Asma Capital Partners purchased the concession company for Queen Alia International Airport in Jordan from a consortium of other investors.
- Fraport sold 10% of its concession to upgrade and manage 14 regional airports in Greece. The buyer was Marguerite Fund, which invests in infrastructure on behalf of European development banks.
- Macquarie's European Infrastructure Fund 3 sold its 55.5% interest in Copenhagen Airports to Dutch pension fund ATP in September 2017; the price was \$1.57 billion. The Danish government retains ownership of 39.2%.
- Auckland International Airport Ltd. announced in January 2018 that it plans to offer its 24.6% investment in North Queensland Airports to NQA's other investors for A\$370 million. Two of those investors—Perron Investments and The Infrastructure Fund—have agreed to accept the entire stake.
- Two European infrastructure funds—Deutsche AM and Infravia—acquired a 60.7% interest in SAVE, which owns four Italian airports, including Venice, and one in Belgium. In October 2017, Atlantia began selling its 22.1% interest in SAVE.
- Atlantia also purchased an additional 1.3% stake in Aeroporti di Roma, bringing its ownership share to over 99%, with the remainder owned by the city government of Rome.
- Ontario Teachers' Pension Plan sold 14.4% of its interest in the UK's Birmingham Airport and 30% of Bristol Airport. Two Australian pension funds were the buyers—T Corp from New South Wales and Sunsuper Superannuation Fund.
- French fund manager Ardian is exploring the sale of its 49% stake in London Luton Airport, and has appointed HSBC as its advisor. Aena owns the other 51% of the Luton concession, which runs until 2031.

As illustrated in the above examples, pension funds continue to find privatized airports to be worthwhile investments. A 2015 article in *The Economist* remains a classic explanation of why this is the case:

What sets airports apart from most investments in infrastructure is their dual income stream: they bring in money both on the aeronautical side (landing fees, contracts with carriers) and from passengers (parking, shopping, hotels). . . . “We love them because they pay a steady income for our retirees, protect against inflation, and are a diversifier,” says Andrew Claerhout of the Ontario Teachers’ Pension Plan (OTPP), which is an investor in four European airports including Birmingham and Copenhagen. . . . When an airport has been in public hands the non-aeronautical parts of the business have often been especially neglected. Buyers often invest in good parking (i.e., under a roof and close by), which can become one of the biggest sources of income. . . . Ensuring the airport is not dominated by a single carrier is another golden rule, as this makes it vulnerable to strikes and bankruptcy. Buying a stake in an airport of which the government owns a controlling share is risky, as public and private interests are not always aligned.²

Julio Garcia, head of North America infrastructure at Australian pension fund IFM Investors explained why IFM prefers to invest in entire airports, as opposed to components such as a new terminal:

What’s less attractive is investing in only one part of the airport, because you don’t have the ability to master plan. The ability to do this over a very long time, not simply through the length of a political cycle, allows you to provide a much better facility. . . . The idea is to have an operator step into the role that is currently being provided by government. A comprehensive approach facilitates planning for growth. . . . If you’re only managing a single terminal, it’s hard to think about the growth of the city or how the entire airport needs to grow, both the land-side and the air-side aspects.³

1.3 GLOBAL AIRPORT PRIVATIZATIONS IN 2017–2018

In contrast to recent years, there were no blockbuster airport privatizations during the past year. Rather, there was a continuous “deal flow” as smaller airports continued to be privatized.

² “Investing in Airports: Flying High.” *The Economist*. June 6, 2015.

³ O’Dea, Christopher. “Infrastructure Airports: Not Cleared for Landing.” *IPE Real Estate*. May/June 2017.

EUROPE

Bulgaria

With consulting assistance from the International Finance Corporation, the government embarked on a second attempt to privatize Sofia Airport, with the aim of getting significant modernization financed and managed. A previous attempt was judged financially unattractive to potential bidders. IFC has noted that its mandate might include other airports in addition to Sofia.

France

The reformist Macron government plans additional privatizations, including a possible majority stake in partially investor-owned Aeroports de Paris. In early 2018, the Chief Commercial Officer of low-cost airline Ryanair urged the French government to privatize the two main commercial airports of Paris—Charles de Gaulle and Orly—as separate companies, so that they could compete with one another, as the now-separate London airports (Heathrow, Gatwick, and Stansted) do. In March 2018, Reuters reported that the French government was preparing to sell its entire 50.6% stake in Aeroports de Paris on the stock market. At that time, the stake had a market value of €8 billion.

Germany

In its second attempt to privatize Frankfurt Hahn Airport, the sale of a majority interest took place in 2017 as China's HNA Airport Group purchased an 82.5% stake for €15.1 million. The airport is Frankfurt's secondary airport, located 75 miles west of the city. The remaining 17.5% interest is owned by the state of Hesse.

Greece

The Greek government accepted a bid of €480 million from a consortium of Indian firm GMR Infrastructure and Athens-based GEK Terna to build a new airport serving Heraklion on Crete. The concession is for 35 years. Also in mid-2017, the Greek government accepted a proposal from the developer/operator Athens International Airport to extend its concession for 20 more years. The company agreed to make €2.35 billion worth of improvements to the airport during this period.

Italy

Italian infrastructure fund F2i SGR has acquired a majority stake in the Alghero Riviera del Corallo airport in Sardinia. The fund also owns stakes in the airports of Bologna, Milan, Naples, and Turin.

Lithuania

A 22-month engagement by InterVistas continues to explore the potential privatization of the three commercial airports: Kaunas, Palanga, and Vilnius.

Serbia

Europe's largest airport privatization was announced in early January, 2018, when Vinci Airports was revealed to be the winning bidder for the Nikola Tesla Airport in Belgrade. Under a \$1.7 billion, 25-year concession agreement, Vinci Airports will invest \$1.2 billion in expanding and modernizing the terminal and upgrading the runways, while paying the government \$500 million. Vinci Airports operates 35 airports worldwide, including 12 in France, 10 in Portugal, Santiago in Chile, and both Kansai and Osaka in Japan.

Spain

The new Regio de Murcia International Airport, though completed several years ago, has not been able to open due to airspace conflicts with another airport, which should be resolved in 2018. In late 2017, the Spanish government announced that Aena had won the 25-year concession to operate and manage the airport.

MIDDLE EAST*Saudi Arabia*

The Civil Aviation Authority announced a contract with KPMG to advise it on the sale of a minority stake in Riyadh Airport, the country's second-largest. Goldman Sachs was selected as financial manager for the transaction, which is intended to be the first of a series that may encompass all 27 Saudi airports. Earlier in 2017, the government awarded P3 concessions for the airports Taf, Hail, and Abdulaziz. Munich Airports and TAV Airports Holding won these initial concessions

ASIA

India

The government has approved development of a second airport for New Delhi. The \$2 billion, four-runway airport will be located in Uttar Pradesh about 45 miles from the existing Indira Gandhi International Airport, which is expected to reach capacity by 2024. To be called Noida International Airport, the new facility will be developed as a long-term P3 concession, selected via a competitive process. And in January 2018, a joint venture of GVK Power & Infrastructure and state-owned City & Industrial Development signed a concession agreement for a second airport for Mumbai. The \$2.4 billion project will have an initial capacity of 10 million annual passengers, expandable to 60 million. The DBFOM concession is for 30 years, with a possible 10-year extension.

Japan

In July 2017, Vinci Airports, Orix Corporation, and Kansai Airports won a 42-year P3 concession for Kobe Airport. This consortium announced plans to operate Kobe, Kansai, and Osaka Airports as a single business. In August, the government announced plans to privatize seven airports in Hokkaido in northern Japan. Later in the year, it announced that three pre-qualified bids had been received for Fukuoka Airport. And at year-end, it announced that the next airport to be privatized will be Hiroshima.

LATIN AMERICA AND THE CARIBBEAN

Brazil

The region's leading airport privatizer acknowledged in 2017 that several of the companies that had invested in its original round of concessions faced financial difficulties. National airports regulator ANAC encouraged buyouts of those companies' airport shares by stronger investors, and by year-end several such transactions had taken place. Vinci Airports and Mubadala Development Company agreed to acquire the shares owned by Invepar and OAS in Sao Paulo's busiest airport, Guarulhos International. And HNA Infrastructure and Changi Airport Group agreed to replace Odebrecht in the concession of the Rio de Janeiro Airport.

Chile

The consortium of Aeroports de Paris (45%), Vinci Airports (40%), and Astaldi (15%) is under way on its \$900 million project to modernize Santiago International Airport by expanding the existing terminal, adding a new international terminal, and expanding parking facilities, taxiways, and aircraft parking. The consortium's winning bid offered the government 77.5% of airport revenue. The concession term began in October 2017 (the expiration of the previous concession), at which point the consortium took over operation of the existing terminals and adjacent areas.

Colombia

The National Infrastructure Agency plans to add a second airport for the capital city of Bogotá, to be procured via a long-term P3 concession. El Dorado 2 will be located 10 miles from the existing El Dorado Airport and connected with it via a rail line. The second airport's terminal will be designed to handle 7.5 million annual passengers. The procurement process is expected to be launched sometime in 2018. The existing El Dorado Airport is operated under a 20-year P3 concession led by Flughafen Zürich.

Honduras

The government awarded a \$140 million, 30-year concession to Germany's Flughafen München to develop and operate a new international airport in conjunction with a local investor group, Inversiones EMCO. The project will convert part of a U.S. military airport, Palmerola, into the new civilian airport by building a passenger terminal and adding a runway. Once the new airport is completed, the existing Tocontin Airport serving Tegucigalpa will be shut down. That airport is notorious among pilots for its short runway and encircling mountains.

Jamaica

The government is trying again to privatize the country's second-largest airport, Norman Manley International in the capital city of Kingston. The airport needs both a new terminal and an upgraded main runway. In 2015, none of the five prequalified bidders ended up submitting a proposal; the same result occurred in spring 2017. After that, the Development Bank of Jamaica and the International Finance Corporation began work on

restructuring the project to make it more attractive to potential concessionaires. A bidder's conference in September drew eight teams and included a tour of the airport.

Paraguay

In 2016 three teams submitted bids for a 30-year concession to upgrade the terminal and runways at the airport in Asunción, the capital city. The teams were led by CEDICOR, Sacyr, and Vinci. Sacyr was the announced winner, but in 2017 before the concession agreement could be finalized, Paraguay's comptroller declared the competition null and void, because the Ministry of Public Works had skipped the step of a Request for Qualifications. The Ministry has appealed, on grounds that Paraguay's P3 law makes an RFQ stage optional.

Peru

In 2014 the government of Peru selected a preferred bidder for a 40-year, \$635 million concession to design, build, finance, operate, and maintain a replacement airport for the tourist city of Cuzco, which is, for most tourists, the jumping-off point for visits to the historic Inca ruins of Machu Picchu. The winner was a joint venture of Argentina's Corporación America and Andino Investment Holdings. But after several years of negotiation, in mid-2017, the Ministry of Transport and Communications announced that the concession had been "mutually terminated," prior to the start of construction. An attempt to work out a construction contract failed, and in February 2018 the government announced that construction will begin in August, under a conventional construction contract.

CANADA AND THE NORTH ATLANTIC

Canada

In 2016 Canada's federal government seriously considered an asset recycling program, under which major revenue-producing infrastructure assets would be sold or leased long term, with the proceeds used to upgrade other infrastructure. Much discussion and debate centered on the country's largest airports, which are still owned by the federal government but operated by local nonprofit airport authorities. But the majority of those airport authorities felt threatened by the idea (even though it would have freed the airports from having to make onerous annual lease payments to the federal government). By spring 2017,

the idea seemed to have lost support within the federal government, and little has been heard of it since then.

Bermuda

In 2017 the government of Bermuda entered into a concession to finance, develop, and operate the planned new \$274 million passenger terminal for Bermuda's airport, under a 30-year concession. The concession company, Bermuda Skyport Corporation, consists of Canadian Commercial Corporation and subcontractor Aecon. Skyport will also operate the airport for the full term of the concession.

1.4

U.S. AIRPORT PRIVATIZATION

Airport privatization on the global model has never taken off in the United States. Experts have offered various explanations for this. One factor is that U.S. public-sector airports have access to tax-exempt revenue bonds, unlike their counterparts in other countries. Investor-owned companies generally do not have access to these lower-interest-rate bonds. Another factor is that all passenger airports receive federal grants under the Airport Improvement Program (AIP). As a condition of receiving the grants, airports must agree to a number of "grant assurances," including that they will not make a profit from airport operations or transfer any airport revenues to the government that owns the airport. Yet another factor is that the traditional U.S. airport's business model featured very long-term leases that gave the "anchor-tenant" airlines considerable control over terminals, gates, and potential expansion.

FEDERAL PILOT PROGRAM

Congress enacted an Airport Privatization Pilot Program in 1996 to test the idea that private capital and management could improve U.S. airports. It created a limited set of exceptions to the AIP grant assurances, which would otherwise make long-term lease or sale of airports impossible. There are 10 slots in the program, which airport sponsors can apply for permission to use. Only one slot can be used for a "large hub" airport, as defined by the Federal Aviation Administration. Another slot is reserved for a non-commercial "general aviation" airport.

The only airport currently privatized under the program is Luis Muñoz Marín International Airport in San Juan, Puerto Rico. Mexican airport company ASUR and Highstar Capital submitted the winning proposal in 2012, and the deal was finalized in early 2013. Under the 40-year lease agreement, the consortium (called Aerostar) made an up-front payment of \$615 million and agreed to invest \$1.4 billion in the airport over the term of the lease. Aerostar will also share airport revenue with the government, estimated at \$552 million over the term of the lease. During 2014 and 2015, Aerostar made major renovations to the airport's two aging terminals, including new retail stores and restaurants, new automated baggage scanners, and other improvements. An article by *New York Times* science correspondent John Tierney summarized the positive transformation of the airport under its new owner/operators.⁴

Chicago tried twice to lease its Midway Airport via the Pilot Program, but both efforts failed—the first became impossible to finance during the global financial crisis of 2007–2008, and the second ended up with only one bidder, which was deemed not politically acceptable.

Today there are three more slots occupied by would-be privatizers. In Hendry County, Florida, just south of Lake Okeechobee, a company seeks to convert the county's under-utilized general aviation airport into a large cargo reliever airport for Miami International. The initial focus is on perishable cargo from Latin America, plus aircraft maintenance, repair, and overhaul. The plan has local political support, and the company has won a contract to operate and manage Airglades while its application to purchase the airport is reviewed by the FAA. A major milestone occurred in October 2017 when the FAA approved the environmental review's Finding of No Significant Impact (FONSI) and granted a Record of Decision for the project. Still to come is final FAA approval and financing of the airport purchase.

Another slot is held by Westchester County, New York, for its airport in White Plains which has both airline and general aviation activity. In November 2016, the county government's chief executive announced a preliminary deal with Oaktree Capital Management for a 40-year lease of Westchester County Airport. The airport/airline relationship broadly followed the principles used in the San Juan P3 agreement, and was agreed to by the principal carriers using the airport: American, JetBlue, and United. The FAA approved the county's preliminary application to the Pilot Program in December 2016.

⁴ Tierney, John. "Making New York's Airports Great Again." *City Journal*. January 2017.

The county legislature objected to the lack of a competitive selection process and hired Frasca & Associates to devise and manage a competition process for the airport's privatization. The RFP was released in April, with proposals due by July. The county received three proposals from qualified teams, and in November selected the proposal from Macquarie as the winner. With a change of administration at year-end, however, the new team set about reviewing the proposal before entering into negotiations. It will also have to be submitted to the county legislature for approval. Macquarie's letter of credit expired in February 2018, but it appears that county officials are waiting until a vacant seat in the county legislature is filled before negotiating the lease.

The latest slot in the program is held by the City of St. Louis for a possible P3 lease of Lambert St. Louis International Airport. The city government has contracted with financial and legal advisors amid some degree of political controversy. If this deal goes through, it would be the largest U.S. privatization to date, since the airport has about 75% more annual passengers as San Juan. The two largest airlines serving St. Louis are Southwest and American, both of which have approved previous privatization plans (Chicago Midway for Southwest and both San Juan and Westchester for American).

Another possible applicant for a slot is Nashville, TN. In May 2017, Oaktree Capital Management made a presentation to Mayor Megan Barry about a potential long-term lease of the airport. The mayor and some other city officials are interested in the asset recycling concept, under which most or all of the long-term lease payment would be made up-front, with the net proceeds available to invest in other infrastructure. The mayor is committed to building a \$5.4 billion rail transit line, for which a tax increase proposal will be on the May 2018 ballot. If that measure fails, speculation is that the city will then apply for a slot in the Airport Privatization Pilot Program.

In February 2018, the White House issued its 53-page "Legislative Outline for Rebuilding Infrastructure in America." In its section on airports, it proposed a significant liberalization of the Pilot Program. Specifically, it would remove the limit of 10 airports, as well as the restriction that only one airport could be a large hub. It also would replace the double 65% airline approval requirement with a simple majority vote. This would no longer be a "pilot" program, since it would be available to any and all airports whose current owner wished to lease them. In the financing section of the plan, change-of-use provisions concerning tax-exempt bonds would permit existing bonds to be taken over by the consortium leasing the airport, rather than having to be replaced by taxable bonds.

AIRPORT FACILITY PUBLIC PRIVATE PARTNERSHIPS (P3S)

There has been an upswing in projects that make use of a public-private partnership structure to design, build, finance, operate, and maintain specific components of a U.S. airport. These include new terminals and other facilities, including in one case an automated people mover. The Port Authority of New York & New Jersey (PANYNJ) pioneered this concept in the late 1990s for the new Terminal 4 at Kennedy International Airport. The secondary airport serving Orlando—Orlando Sanford—also used this model for both its domestic and international terminals.

The Port Authority is making use of this model again, for a replacement for the aging, under-sized central Terminal B at LaGuardia Airport. In May 2015 it selected a consortium headed by Vantage Airport Group, Skanska, and Meridiam as the winning bidder. The consortium will invest \$2.5 billion (of debt and equity) in the project, with the PANYNJ putting another billion into parking structures and adjacent improvements. Financial close was reached in mid-2016, with \$2.35 billion in tax-exempt bonds and about \$200 million in equity. The PA itself is also providing \$1.2 billion to pay for a grandiose entry hall added to the project by Gov. Andrew Cuomo, in addition to paying for the new parking structure. Construction is under way.

In January 2017, Gov. Cuomo announced a \$10 billion upgrade program for Kennedy International Airport, to be financed largely with private capital using a P3 approach similar to that of the LaGuardia project. Since JFK's terminals are all controlled by an airline or groups of airlines, they are taking the lead on DBFOM terminal revamps. After over a year with few developments, in March 2018 JetBlue announced the shortlisted bidders for the redevelopment of Terminals 5, 6, and 7; they include Ferrovial Airports and Oaktree Capital.

Los Angeles World Airports is under way on its \$5 billion Landside Access Modernization Program for LAX, involving both a consolidated rental car center and an automated people mover (APM) linking it to the central terminal area. Both of those projects are being pursued as DBFOM P3 projects. The APM project's winning bidder was announced early in 2018—a team headed by ACS and Dragados will design, build, finance, operate, and maintain the \$1.95 billion APM. Commercial close is expected in April 2018 and financial close in June. The APM is scheduled to open in 2023.

Denver is using a similar DBFOM concession to develop a major redesign and expansion of its land-side terminal, now called the Great Hall. Its winning bidder, Ferrovial Airports, was

selected in 2017 and the deal reached financial close in December 2017. The concession term is 30 years following completion of the reconstruction. Ferrovial will share revenue from the terminal with the airport on an 80/20 basis. The deal was financed with developer equity and short-term bonds, with the latter to be replaced by long-term tax-exempt private activity bonds after construction is completed. Fitch rated the initial bonds BBB.

Austin has used the same process for the redevelopment of its unused South Terminal. The idea was to make it a no-frills home for ultra-low-cost carriers, with airline use payments at half the level charged in the main terminal. Oaktree Capital Management won the bidding, and created LoneStar Airport Holdings as the project-specific concession company. LoneStar designed and completed the \$12.5 million renovation and will operate and maintain it for 30 years. The terminal opened in April 2017 with Allegiant and Texas Sky as its first two airlines.

In Kansas City, MO, a new \$1 billion terminal is intended to replace three individual terminals. In spring 2017, engineering firm Burns & McDonnell (headquartered in Kansas City) made an unsolicited proposal to finance and build the new terminal. But after several other firms protested a sole-source approach, the city invited competitive proposals, and received four. After much debate, the winner appears to be local firm Edgemoor, with which the city council in January 2018 signed a memorandum of understanding to negotiate a construction contract. Though there had been talk of a DBFOM approach, the new Kansas City International terminal will likely be procured conventionally.

P3 Airports Outside the Pilot Program

Propeller Airports, whose P3 proposal to add a passenger terminal to Briscoe Field in the Atlanta metro area was defeated in 2012 by NIMBY opposition, tried again in 2013 with a proposal to develop passenger service at the relatively new Paulding Northwest Atlanta Airport. It would have been a P3 between Propeller and Paulding County. As with Briscoe Field, Delta Airlines and powerful Atlanta politicians mobilized against the plan in order to protect Atlanta Hartsfield-Jackson Airport from competition. Allegiant Airlines had expressed interest in serving the airport, but so far political opposition has still blocked the project.

Propeller has had much better luck at Paine Field in Everett, a suburb north of Seattle. Airport. Snohomish County officials want to attract airline service to provide an alternative to the metro area's sole commercial airport, SeaTac. Propeller won local and FAA approvals

in 2016 and 2017, and in early 2018 it began construction of the new terminal. With the project in full swing, three airlines have announced plans to begin commercial flights once the terminal is completed late in 2018: Alaska, Southwest, and United. Under the P3 agreement, Propeller is paying for the terminal's construction and will operate it for 30 years.

The proposed third Chicago airport at Peotone, 40 miles south of the Loop, was planned as a P3 in which the state DOT owns the land and is responsible for the airside (runways, taxiways, control tower) while the private sector finances, develops, and operates the landside (terminal, parking, etc.). In 2013 the Illinois Legislature enacted a bill authorizing a 75-year DBFOM concession for the airport. Illinois DOT has purchased nearly all the needed land, including a 288-acre general aviation airport adjacent to the land the agency had already acquired. In March 2017 IDOT put out a Request for Information to private-sector firms and received six responses, according to the *Chicago Tribune*. But the identity of the firms and their level of interest have not been disclosed. Since IDOT has said it is not interested in building the airport with public money, its fate rests on whether there is sufficient private-sector interest to go forward. That decision is likely to be made in 2018.

The Gary, Indiana airport several years ago was renamed Gary/Chicago Airport, hoping to become Chicago's third airport. Having lost its only airline, Allegiant, in 2013, city officials embarked on a P3 approach in the hope that professional airport-development expertise and management could transform the airport. In 2014 the Gary Airport Authority finalized a deal with Aviation Facilities Company (AFCO) as its preferred developer. Under a 40-year contract AFCO will invest \$100 million in the airport. The company's subsidiary, AvPorts, has a 10-year contract to manage the airport, with six possible five-year renewals. In 2017 the airport hired a construction management firm to oversee construction of a Customs & Border Protection facility at the airport.

In December 2016 an innovative privately developed airport terminal opened in San Diego County, just across the border from the Tijuana International Airport. The \$120 million Cross Border Xpress provides an easier way for U.S. air travelers to reach that airport, checking in on the U.S. side and paying a \$12 toll to walk across a bridge to the airport. The company has paid for U.S. customs and immigration facilities on the U.S. side. The property includes land on which the company has approval for a 340-room hotel, shopping center, rental car facility, and gas station. In early 2018, *Air Transport World* honored Cross Border Xpress as winner of its annual Passenger Experience Achievement Award.

Finally, privately developed Branson Airport, in Branson, MO, has experienced something of a comeback, after having lost scheduled airline service several years ago. The airport, 10 miles south of country music city Branson, now has scheduled service to and from Austin on Via Airlines and to and from Denver on Frontier Airlines.

PART 2

U.S. AIRPORT SECURITY

The private sector is involved in two aspects of airport security: marketing the Transportation Security Administration's PreCheck trusted traveler program and operating passenger and baggage screening under TSA's Screening Partnership Program.

2.1

PRECHECK PROGRAM MARKETING

In mid-2017, TSA announced that PreCheck enrollment had reached more than five million air travelers. Under its contract with Morpho Detection, the company had set up enrollment centers in 390 locations, though only 44 of those are at airports. Many more than five million people are candidates for PreCheck, but because Morpho's vetting methods require that it obtain fingerprints and submit them to the FBI, applicants must appear in person, in a rather time-consuming process.

In 2017 the Senate Commerce Committee approved a bill that would authorize TSA to try again with its twice-aborted efforts to contract with big-data companies to use TSA-approved algorithms to vet PreCheck applicants without requiring fingerprints. This "third-party PreCheck recruitment" offers the possibility of mass-marketing PreCheck to companies, membership organizations, etc. Previous TSA efforts led to serious interest by companies, and testing of their algorithms by TSA. But objections by privacy groups and

litigation by Morpho stymied the award of any contracts. The 2017 Senate bill also set a goal for TSA of 15 million PreCheck members by FY 2020.

With a new Administration in place, including new leadership at DHS and TSA in 2017, TSA announced that it plans to solicit bids for third-party recruitment for Universal Enrollment Services, including PreCheck. It hopes to attract two or more contractors who can “provide innovative enrollment and identity solutions that deliver secure, streamlined, and effective enrollment services.” A TSA spokesperson told *Politico* that TSA is looking for “multiple private-sector capabilities.” Morpho’s sole-source contract expires in September 2018.

A coalition of eight travel industry groups, including the Global Business Travel Association and the U.S. Travel Association, sent a letter to Senate leadership urging passage of the Senate bill, which also has the support of Airports Council International-North America.

2.2

OUTSOURCED AIRPORT SCREENING

When the 2001 legislation creating TSA was enacted, it included two exceptions to the “complete federal takeover” of airport screening by TSA. First, a pilot program allowed five airports, spanning the range of sizes, to opt out and contract with TSA-approved security contractors. Second, after TSA was fully in place providing screening at approximately 450 commercial-service airports nationwide, all other airports would have the option to apply to TSA for permission to switch to a TSA-selected security contractor.

The original five airports are San Francisco International, Kansas City International, Greater Rochester Airport, Jackson Hole Airport, and Tupelo Airport. All five have been satisfied with private-contractor screening and continue as members of what TSA now calls its Screening Partnership Program (SPP). As of early 2018, there are 22 SPP airports in the program, which means 17 others have replaced TSA screening with contract screening. The most recent addition, in 2017, was Atlantic City International.

Early in 2018, the board of Orlando International Airport announced that it is once again considering applying to TSA to participate in SPP. The airport is known for long waiting lines at its two checkpoints. By the Feb. 22, 2018 meeting of the airport board, large numbers of TSA screeners had mobilized in opposition to the idea, and several board members said they were not convinced such a change was needed. The board voted to

defer an application for SPP for two months, with senior staff directed to pursue with TSA prospective meaningful improvements in current screening operations.

2.3

AIRPORT EMPLOYEE SCREENING

Congress continues to discuss the potential benefits of requiring higher security for airport workers, following instances of airport employees being involved in shipping contraband on commercial planes and in some cases stealing from passengers' checked luggage. On April 26, 2017, the House voted unanimously in favor of a bill that would increase vetting and security badge requirements for airport workers and contractors with access to secure areas. It would also require a study on the feasibility and cost of full screening of all such workers before they could enter secure areas.

Two major U.S. airports where employee incidents had occurred—Miami and Orlando—implemented 100% employee screening in 2014. All other airports continued to rely only on the required FBI background checks at the time of hiring plus random screening thereafter.

After Atlanta's Hartsfield-Jackson International Airport endured two employee-security exposés in a four-month span (December 2014 and March 2015), its officials also decided to move to 100% employee screening. Like Miami (MIA) and Orlando, Atlanta did not ask TSA to provide it. Instead, they turned to a private security company. According a 2015 *Wall Street Journal* report, MIA's employee screening contract was costing it \$3.1 million per year, while Orlando's came in at \$3.5 million. Atlanta's new contract, begun in summer 2015, cost \$5.5 million. By contrast, the *Wall Street Journal* article cited a study done for the TSA last decade estimating that 100% screening at all TSA-served airports would cost the agency (or the airports) between \$5.7 billion and \$14.9 billion per year.⁵ Doing a rough extrapolation of the Atlanta, Miami, and Orlando figures to all 450 TSA-served airports, the estimated annual cost of 100% employee screening *by contractors* would be about \$135 million—a far cry from the \$6 billion–\$15 billion estimate provided by TSA.

⁵ Carey, Susan. "Airport Security Gap: The Workers." *The Wall Street Journal*. Jan. 28, 2015.

PART 3

AIR TRAFFIC CONTROL CORPORATIONS

In 1987 New Zealand became the first country to “corporatize” its air traffic control system. Since then, nearly 60 other countries have followed suit. While the models differ from country to country, nearly all have the following features:

- The ATC system is separated from the transportation agency and reorganized under corporate law.
- Funding is derived directly from the users of the airspace under that country’s jurisdiction, via fees and charges for terminal-area, en-route, and overflight services. The International Civil Aviation Organization (ICAO) provides guidelines for ATC fees and charges.
- In most cases, no tax funding is involved, though in some cases governments pay the corporation to provide services in remote areas.
- The revenue stream is bondable, to finance large-scale capital projects, similar to the way U.S airport projects are financed.
- The corporation reports to a board of directors, rather than to a legislative body.
- Safety regulation is provided by a government agency, at arm’s length from the ATC corporation.

These ATC corporations can take several different forms. The most common is a government corporation, in which the national government is generally the sole shareholder (and therefore appoints its board members). In Canada, the corporation (Nav Canada) was chartered as a non-profit, non-share corporation governed by a board consisting of aviation stakeholders—a kind of user co-op. And in the U.K., the corporation (NATS) was set up as a public-private partnership in which U.K. airlines owned 46%, employees 5%, and the government 49%. Subsequently, the airline group sold a large fraction of its shares to a U.K. pension fund.

The global trade association for air navigation service providers (ANSPs) is the Civil Air Navigation Services Organization (CANSO). It represents ANSPs in international discussions on aviation policy, just as IATA represents international airlines and ACI represents airports. As of March 2018, CANSO had 84 full members (ANSPs) and 80 associate members (aerospace companies). Nearly 60 of the full members are self-supporting ATC corporations, including those of Australia, New Zealand, Thailand, India, Canada, the U.K., Germany, Italy, Austria, Switzerland, Portugal, Spain, and South Africa. Governmental ANSPs include Cyprus, Luxembourg, Greece, the Maldives, and the FAA's Air Traffic Organization, which is part of the FAA. Those ANSPs may or may not be housed within a government's transportation agency.

3.1

GLOBAL ATC TRENDS

Several significant organizational changes have taken place among ANSPs between 2016 and early 2018. The biggest change was the world's first privatization of an ANSP via an initial public offering of shares. In July 2016, the Italian government listed 49% of the shares of ENAV on the Milan stock exchange, and the company was valued at approximately \$2 billion. Because ENAV, like all ANSPs, operates largely as a monopoly, the government will exercise economic regulation of ENAV's rates and charges.

In 2017, the Norwegian government separated the airports and air traffic control functions of Avinor, with the ATC function to be spun off as an independent company. The government is also planning to emulate the U.K. in permitting competition for airport control tower services. Hence, putting the ANSP and the airports at arm's length will promote transparency when it comes to control tower competitions.

And in early 2018, the Irish government announced plans to remove the air safety regulatory function from the Irish Aviation Authority. That would make IAA purely an ANSP. The safety regulatory duties will be moved to the country's Commission for Aviation Regulation. Separating the provision of ATC services from aviation safety regulation has been a recommended policy by the International Civil Aviation Organization (ICAO) since 2001.

3.2

U.S. AIR TRAFFIC CONTROL

The partial shut-down of the federal government in spring 2013—with furloughs of controllers and the near shut-down of 149 smaller control towers—led many aviation stakeholders to conclude that the traditional FAA model—safety regulation and ATC provision in a single agency, funded by taxes instead of ATC fees as in the rest of the world, no access to the capital markets, and ongoing micromanagement by both the Congress and the executive branch—was broken and needed to be replaced.

ATC reform working groups convened independently by the Business Roundtable and the Eno Center for Transportation both concluded that the ATC function should be removed from FAA and reconstituted as a nonprofit corporation, paid for directly by its users, and governed by a board representing all major aviation stakeholders. The BRT group cited Nav Canada as the best model, while the Eno group proposed either a nonprofit government corporation (such as Germany's DFS) or a nonprofit private corporation (such as Nav Canada).

ATC reform was subsequently embraced by the airline trade group, Airlines for America (A4A), by the air traffic controllers' union (NATCA), by several pilots' unions, and by a long list of former federal aviation and transportation officials. They found a congressional champion in Rep. Bill Shuster (R, PA), chairman of the House Transportation & Infrastructure (T&I) Committee. After hearings in 2015, Shuster introduced a bill in early 2016 that would create a nonprofit ATC corporation similar to Nav Canada. It was approved by that committee on a largely party-line vote, with most Democrats opposed. Congress could not agree on an overall FAA reform bill in 2016, and with a congressional election in November 2016, a new Congress taking their seats in early 2017 meant that new bills were required.

There had been significant opposition in 2016 from groups representing private pilots (AOPA), business jets (NBAA), and cities with small airports. The first two feared the imposition of ATC user fees that would increase their cost of flying, while the latter mostly feared that airline interests on the ATC corporation board might short-change ATC service to small airports. Major changes were introduced in the ATC provisions from the 2016 bill, including adding both airports and regional airlines (which serve small airports) to the stakeholders nominating board members, a complete ban on ATC user fees for all operators of non-commercial aircraft, and protections against loss of ATC services in any airspace and for any category of users, to be enforced by the secretary of transportation. The revised bill was passed by the House T&I Committee in June 2017. The previous month, the White House held a special event supporting ATC corporatization, at which former DOT Secretaries James Burnley, Elizabeth Dole, and Mary Peters joined current DOT Secretary Elaine Chao and President Donald Trump in support of ATC corporatization.

To most people's surprise, despite giving the private plane and small-airport people basically everything they had asked for, the AOPA/NBAA coalition declared all-out war on Shuster's 2017 bill. The reform coalition lobbied hard in summer and fall 2017, and Shuster promised to bring the Committee's FAA bill to the House floor for a vote. Given battles over Obamacare and tax reform in autumn 2017, there was no time for the FAA bill, so with FAA authorization set to expire on Sep. 30th, both houses voted for a six-month extension. In February 2018, the word was passed to reform supporters that the FAA bill would reach the House floor for a vote in March. But at the end of February, Shuster's office announced that the ATC section of the bill would be withdrawn, and the House would vote instead for another extension. *Politico* reported that the reason for the withdrawal was the abrupt termination of White House support.⁶

And that leaves the United States standing alone as the only developed nation that does not charge airspace users directly for ATC services, and one of the few that has not separated the provision of ATC services from aviation safety regulation, per ICAO policy. It also leaves the outlook for future corporatization looking dim. Chairman Shuster had previously announced that he would retire when his current term ends at the end of 2018. There is political speculation that the Republicans may lose their majority in the House in the November 2018 elections. If that happens, the likely new chairman of the T&I Committee would be Rep. Peter DeFazio (D, OR), a strong opponent of ATC corporatization.

⁶ Gardner, Lauren and Kathryn A. Wolfe. "How the White House Grounded Shuster's FAA Bill," *Politico*, April 2, 2018.

Many knowledgeable aviation people are convinced that the United States will eventually corporatize ATC. But the odds of this happening in the next few years look far worse than they did in 2017, because once the pending FAA reauthorization bill is passed, it will likely be three to five years before the next such bill is due. It is very unlikely that corporatization would be considered outside of an FAA reauthorization bill.

ABOUT THE AUTHOR

Robert W. Poole, Jr. is director of transportation policy and the Searle Freedom Trust Transportation Fellow at Reason Foundation, a public policy think tank based in Los Angeles and Washington, DC.

In aviation security, Poole advised the White House and House Republican leaders on what became the Aviation & Transportation Security Act of 2001, enacted in response to the 9/11 attacks. He has authored a number of Reason policy studies on aviation security and is the author of a paper on risk-based aviation security for the OECD's International Transport Forum.

He was among the first to propose the commercialization of the U.S. air traffic control system, and his work in this field has helped shape proposals for a U.S. ATC corporation. A version of his nonprofit corporation concept was implemented in Canada in 1996. He has advised the Office of the Secretary of Transportation, the White House Office of Policy Development, the National Performance Review, the National Economic Council, and the National Civil Aviation Review Commission on ATC commercialization. He is a member of the Air Traffic Control Association and of the GAO's National Aviation Studies Advisory Panel.

Poole's Reason studies helped launch a national debate on airport privatization in the United States. He advised both the FAA and local officials during the 1989–90 controversy over the proposed privatization of Albany (NY) Airport. His policy research on this issue

helped inspire the privatization of Indianapolis airport management under Mayor Steve Goldsmith and Congress' 1996 enactment of the current Airport Privatization Pilot Program.

Poole has testified on airports, aviation security, and air traffic control on a number of occasions before House and Senate aviation and homeland security subcommittees, and he has spoken on these subjects before numerous conferences over the past decade. He has also done consulting work on several airport privatization feasibility studies.

Poole also edits monthly Reason Foundation e-newsletters on airport and air traffic control policy issues. He received his B.S. and M.S. in mechanical engineering at MIT and did graduate work in operations research at NYU.

