GLOBAL LISTED INFRASTRUCTURE ORGANISATION

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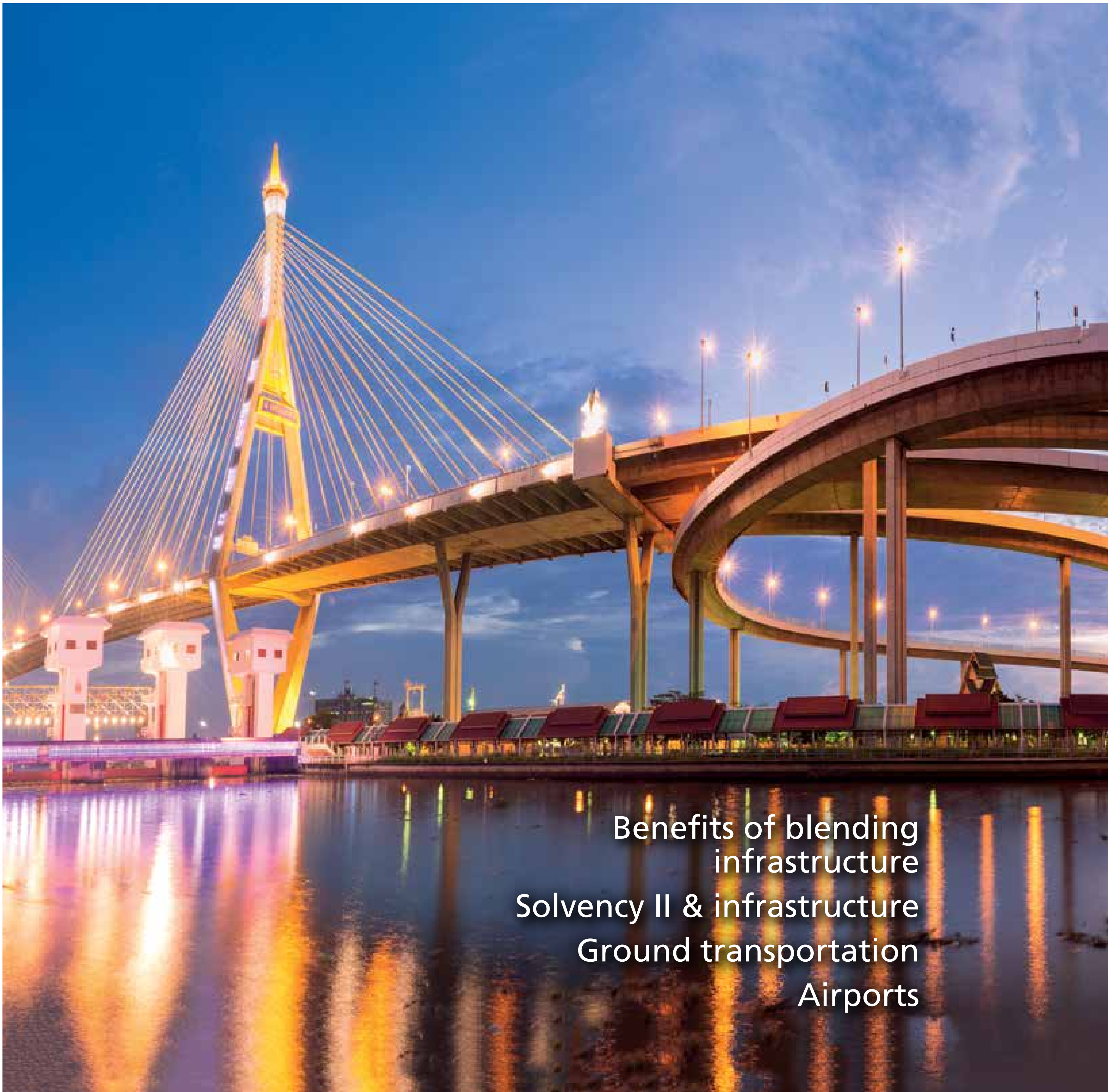


Listed airports - a flight to quality

Airports are stable providers of infrastructure assets, even in the sometimes turbulent aviation industry. Listed companies are increasingly demonstrating their potential way beyond a core travel function.

When looking at the top 50, 29% of passengers pass through airports owned by listed companies.

While there is a natural link between airports and airlines, each relying on one another to operate efficiently, they are clearly based on different business models. According to the ACI[1], mid-term and long-term planning for airlines is in the 12 months and 3-5 years range respectively. Airlines need to be able to be flexible and move quickly to respond to changes in traffic flows, by leasing or retiring capacity.

Airports, on the other hand, must make long-term planning decisions to safeguard capacity. Mid-term planning is five years, and long-term planning 20-25 years according to the ACI.

In recent decades, many airports have transformed from their functional role as Government infrastructure asset providers into more sophisticated, customer focused, business-oriented service providers covering a range of operations and activities. This change has been driven by customers and stakeholders alike, as they demand more from airports. Moreover, in recent years airports have played a critical role in keeping air traffic affordable by stabilising operating costs for airlines. The ACI estimates that airports have held user charges at a stable 4% of airline operating costs for over the past two decades.

Held Back by State Control

A large number international airports remain government-owned, particularly in the USA. Of the top 15 by passenger numbers (see Box 1.), approximately half are government-owned: Atlanta, Dubai, Chicago, Los Angeles, Hong Kong, Dallas/Fort Worth and New York JFK. Six are owned by specialist listed airport companies: Beijing Capital, Tokyo Haneda, Charles de Gaulle, Ataturk, Frankfurt and Shanghai Pudong. London Heathrow formerly owned by BAA Plc, is currently owned by FGP Topco a Ferrovial[2] (25%) led consortium. Amsterdam Schiphol is mainly state-owned, but ADP has an 8% cross-stake.

The group of listed airports punch well above their weight in terms of passenger numbers. Listed airports own, or have a participation in, 20 of the top 100 airports at a global level. Regarding the passenger market share, 24% of passenger numbers in the top 100 pass through a 'listed' airport. More impressively, when looking at the top 50, 29% of passengers pass through airports owned by listed companies.

In terms of passenger growth, two listed airports topped the 2015 list: Bangkok +40.6% and Kansai in Osaka (+19.9%). Aena, who listed in Madrid in February 2015 with a 49% free float[3], is the world's number one operator in terms of passenger volume, which in 2015 reached a total of 207m passengers (+5.9% compared to 2014). It owns two of the top ten airports in the European Union in terms of passengers: Madrid (5th) and Barcelona (9th).

Maria Jose Leal, Aena Deputy CFO, expands on this fact: "Aena's extensive airport network [46 airports and two heliports in Spain], coupled with their diversity in terms of type and size, has enabled the company to develop a broad experience in the management of airports. And what's more, Aena together with other concessionaire companies, manages 15 airports outside of Spain [12 in Mexico, two in Colombia and one in the UK] which further builds its international experience."

Equally, if not more impressively, is the fact that 16 of the airports owned by the listed companies rank in the top 50 airports global for quality, as shown in Table 1. Two additional airports have participation from listed companies as mentioned earlier. Here's a clear example of the benefits of investing in the listed airports opportunity set, and holding a stake in the underlying exposure to the performance of the assets they own.

US airports accounted for 27% in the top 100 in terms of passenger numbers. However, only 12 US airports make the top 100 in terms of quality. In fact, only two US airports achieve a four-star Skytrax airport ranking. In quality terms, the first US airport quality ranked is Denver at 28. Denver is followed by Cincinnati (32), San Francisco (37), Atlanta (43), Seattle (54), Dallas (58), JFK (59), Houston (71), Minneapolis (75), Detroit (89), Los Angeles (91) and Boston (97). President Trump's comments on the state of New York City's airports is a stark reflection on how chronic under-investment over decades has seen US airports slip down the rankings.

Perhaps President Trump should consider stimulating a privatization program during his term in office? Indeed, his first step could be to seek advice from his Mexican neighbors after their successful listings of ASUR, GAP and OMA.

Pedro Balcao Reis, Managing Director at Santander Corporate Banking in Mexico explains: "The privatization of Mexican airports in the 90's has been a major success. Cancun airport, operated by ASUR, privatized in 1998 and listed in 2000 is a showcase. Cancun is the second biggest airport in the country [an estimated 21m passengers in 2016] and its quality of service has improved considerably since listing – it is a great example of the potential of privately operated infrastructure."

From Transport Hub to Commercial District

Typically, airports transform from state-owned to privatized infrastructure assets once larger expansions are needed to cope with passenger growth. As part of the concession granted to the >

Table 1: Top 50 Quality Ranked Airports – Listed significantly well represented

Quality Rank	Skytrax Stars	Airport	Ownership	Passenger Number Rank	Annual Passengers (m) (growth on 2014)
1	5	Singapore Changi	Government	16	55 (+2.5%)
2	5	Incheon Intl Airport	Government	22	49 (+8.2%)
3	5	Munich Airport	Government	34	41 (+3.2%)
4	5	Tokyo Intl Airport	Listed – JAT	5	75 (+3.4%)
5	5	Hong Kong Intl Airport	Government	8	68 (+8.2%)
6	4	Centraair Airport (Nagoya)	Listed – JAT	100	10 (+5.2%)
7	4	Zurich Airport	Listed	70	26 (+3.2%)
8	4	London Heathrow	Private (25% Ferrovial)	6	75 (+2.2%)
9	4	Kansai Intl Airport (Osaka)	Listed – JAT	79	23 (+19.9%)
10	4	Doha Hamad	Government	58	31 (+17.1%)
11	4	Narita Intl Airport	Listed – JAT	48	37 (+4.9%)
12	4	Frankfurt	Listed – Fraport	12	61 (+2.5%)
13	4	Schiphol	Government (8% ADP)	14	58 (+6.0%)
16	4	Beijing Capital Airport	Listed	2	89 (+4.4%)
21	4	Auckland Airport	Listed	100	17 (+9.1%)
23	4	Sydney Airport	Listed	38	40 (+2.7%)
27	4	Barcelona	Listed – Aena	40	40 (+5.7%)
29	4	Vienna Airport	Listed	83	23 (+1.3%)
31	3.5	Madrid Airport	Listed – Aena	24	47 (+12%)
33	4	Paris CDG Airport	Listed – ADP	9	66 (+3.1%)
36	3	Bangkok Suvarnabhumi	Listed - AOT	20	52 (+13.8%)
48	4	Xi'an Airport	Listed – Fraport	54	33 (+12.7%)
49	3.5	Lima Airport	Listed – Fraport	100	17 (+9.2%)

Source: Skytrax World Airports Awards, Company websites, ACI.

[1] Airports Council International (ACI), Guide to World Airport Traffic Forecasts 2016.
[2] Ferrovial is a listed (Spain) diversified infrastructure company with operations in construction, airports, toll-roads and infrastructure services. It has interests in Heathrow, Glasgow, Aberdeen and Southampton airports in the UK.
[3] 51% remains in the hands of the Spanish Government.

privatized company, airports have to invest substantially into their infrastructure in order to increase the capacity and expand and upgrade the available retail area. At the same time, the core aviation business gets structured more efficiently and revenue streams become more diversified.

Larger airport operations include passenger and aircraft-related operational charges and commercial income such as retail, food & beverages, parking as well as real estate income. On top, some established airport operators further extend their business model into international airport development, which further diversifies the business model and secures long-term growth.

In many ways, modern airports do not only serve as transportation hubs. They have strong retail offerings, manage a huge variety of different infrastructure and transform more and more into service centers. Lukas Brosi, CFO at Zurich Airport explains: "'The Circle' marks a further major step in the development of Zurich airport. Just steps away from the terminal buildings, the new, architecturally striking complex will buzz with life and services. With the atmosphere of an international business district, it will be a location for business and lifestyle. Zurich airport will transform into the second center of Zurich."

Airports display a different risk-return profile compared to infrastructure sectors. The volatility of airports has been higher however, the overall total return performance of the airports sector outpaces significantly broader global infrastructure (Chart 1.) and equities.

Table 2: Global Sector Breakdown (as at Mar 31, 2017)

Sector	MC $bn	MC Wght	FF MC $bn	FF Wght	Yield
Electric Utilities	665,031	32.5%	571,556	34.3%	3.8%
Oil & Gas Distribution	271,672	13.3%	239,685	14.4%	4.0%
Ground Freight	258,652	12.6%	231,331	13.9%	2.0%
Multiutilities	189,367	9.3%	162,499	9.7%	4.4%
Telecom & Satellites	136,687	6.7%	116,807	7.0%	2.9%
Ground Transportation Services	118,616	5.8%	93,738	5.6%	1.3%
Gas Utilities	107,832	5.3%	69,186	4.1%	2.7%
Highways & Railways	88,398	4.3%	56,548	3.4%	4.0%
Airports	100,517	4.9%	53,958	3.2%	2.6%
Water Utilities	68,933	3.4%	48,364	2.0%	2.8%
Marine Ports	30,705	1.5%	15,792	0.9%	3.6%
Construction & Engineering	5,746	0.3%	4,632	0.3%	1.4%
Environmental Services & Equip	4,565	0.2%	4,199	0.3%	3.9%
Grand Total	**2,046,720**	**100.0%**	**1,668,295**	**100.0%**	**3.3%**

Source: GLIO, Reuters, March 31, 2017

"We believe listed infrastructure acts as a proxy for direct investment over the medium to long term."

Lukas Brosi, CFO at Zurich Airport.

A sound take-off

The compounded annual growth rate (CAGR) for global airports is forecasted at 4.9% per annum during the period 2016-2040. As you might expect, the developing markets have larger forecasted growth rates. The Middle East tops the list at +7.7%, followed by Asia-Pacific +6.2%, LATAM +4.6%, Africa +4.2%, Europe 3.7% and North American +2.8%.

By 2029, domestic and international passenger traffic could double from current levels to 14bn, with emerging markets taking a larger share of the overall total. By 2040, emerging markets are forecast to have a 60% market share, up from 44% in 2015. Airport cargo is expected to grow at more moderate rates globally (+2.3%).

The global universe of listed infrastructure securities covered by GLIO includes a diverse opportunity-set of industry sectors that are affected by the economic conditions, regulatory trends, and supply/demand dynamics that are unique to the local markets and sectors in which they operate.

Looking at the $2tn global listed infrastructure market, Airports comprise approximately 5% at a full market capitalization level, or 3.2% using free float. Airport dividend yields at 2.6% fall under the 3.3% average of listed infrastructure (see Table 2).

Box 1: Top 15 International Airports by Passengers in 2015

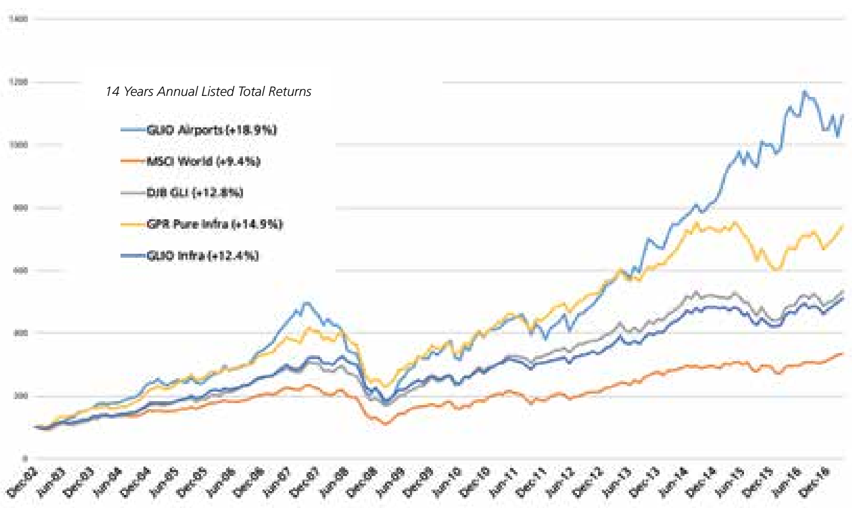
Rank	Airport	Owned by	Passengers (m)
1	Atlanta	Government	101
2	Beijing	Listed	90
3	Dubai	Government	78
4	Chicago	Government	77
5	Tokyo Haneda	Listed	75
6	London Heathrow	25% Ferrovial	75
7	Los Angeles	Government	75
8	Hong Kong	Government	68
9	Paris CDG	Listed	66
10	Dallas/Fort Worth	Government	64
11	Istanbul Ataturk	Listed	62
12	Frankfurt	Listed	61
13	Shanghai	Listed	60
14	Amsterdam	8% ADP	58
15	New York JFK	Government	57

Source: ACI World Data, Company websites

[4] The Skytrax World Airport Awards are the most prestigious accolades for the airport industry voted by customers in the largest, annually held global airport customer satisfaction survey. The Awards are based on 13.25mmillion airport survey questionnaires completed by 106 different nationalities of airline customers during the survey period. The survey covers 550 airports.

Global Listed Airports vs Global Listed Infrastructure & Global Equities

December 2002 to March 2017



"We see exposure to assets owned by the listed airports as an essential part of a broader diverse allocation to global listed infrastructure."

Ben Morton, Senior VP at Cohen & Steers.

Ben Morton at Cohen & Steers: "We see exposure to assets owned by the listed airports as an essential part of a broader diverse allocation to global listed infrastructure. These companies tend to own top-quality, globally recognized assets, and they tend to maximize the potential of these assets with professional management experience."

Thomas van der Meij, Head of Infrastructure Research at Kempen, adds: "Listed European airport multiples are in line with those of the other infrastructure sub-sectors; but recent transactions show that the private market is trading at a premium compared against the listed market. Given the sector's more cyclical business, we expect earnings to grow with the improved sentiment and modest inflation. As such, we believe that the airport sector currently offers a decent risk/return proposition."

The historical combination of attractive returns and lower volatility of a global listed infrastructure portfolio compared against global equities means that listed infrastructure has produced attractive risk-adjusted returns. Matt King of Morgan Stanley Investment Management sums up: "Investor acceptance of this growing asset class is gaining momentum due to its benefits to a multi-asset portfolio.

"Investors appreciate the income and diversification potential of the listed infrastructure asset class, along with transparency and liquidity. We believe it acts as a proxy for direct investment over the medium to long term," he concludes.

Table 3: GLIO Listed Airports Mid to Long-Term Total Returns

Company	Country	MC $bn	FF MC $bn	FF Wght	Yield	5 Yrs	7.5 Yrs	10 Yrs	12.5 Yrs	15 Yrs
Aena	Spain	23,791	11,658	21.6%	1.8%					
Sydney Airport	Australia	11,619	9,760	18.1%	4.6%	25.4%	24.1%	16.6%	18.5%	
Airports of Thailand	Thailand	16,318	4,895	9.1%	1.7%	49.3%	37.1%	24.5%	21.6%	
Auckland Intl Airport	New Zealand	5,628	4,390	8.1%	2.8%	30.6%	27.5%	17.9%	18.7%	18.3%
Zurich Airport	Switzerland	6,549	4,060	7.5%	3.0%	28.1%	20.9%	10.7%	22.1%	17.6%
Aero del Sureste (ASUR)	Mexico	4,782	3,491	6.5%	1.7%	33.4%	30.0%	24.0%	26.4%	28.2%
Aeroports de Paris (ADP)	France	12,261	3,433	6.4%	2.3%	16.5%	11.5%	7.4%		
Grupo Aero Pacifico (GAP)	Mexico	4,611	3,366	6.2%	3.1%	34.8%	27.1%	18.9%		
Japan Airport	Japan	2,930	2,637	4.9%	0.9%	29.7%	18.7%	9.2%	12.5%	10.7%
Fraport	Germany	6,526	2,610	4.8%	2.3%	9.9%	10.9%	4.7%	10.2%	8.8%
Beijing Cptl Intl Airport	China	2,249	1,709	3.2%	2.0%	18.6%	11.2%	3.5%	12.2%	13.5%
Aero del Centro Norte (OMA)	Mexico	1,808	1,284	2.4%	3.8%	35.4%	27.7%	14.7%		
TAV Havalimanlari	Turkey	1,445	665	1.2%	4.7%	15.5%	22.1%	7.6%		
Grand Total		**100,517**	**53,958**		**2.6%**					

Source: GLIO, Reuters

[5] *In 1996, Congress established the Airport Privatization Pilot Program (APPP; 49 U.S.C. §47134; Section 149 of the Federal Aviation Reauthorization Act of 1996, P.L. 104-264) to increase access to sources of private capital for airport development and to make airports more efficient, competitive, and financially viable. Participation has been limited so far.*



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