Airport valuations have taken off – the question is where will they land?

February 2019

Executive summary

2018 was another active year in the airport deals space. The last year has seen a number of high profile European airport deals with transactions in Copenhagen, London Luton, and Gatwick airports to name a few.

The recent airport transaction activity has demonstrated two key things – first, that there is a continued strong investor appetite for the airport asset class and second, that valuation multiples have continued to rise.

In fact based on transactions we've seen closing between 2016 and 2018, valuation multiples have averaged at approximately 22 times (x) enterprise value to earnings before tax, depreciation and amortisation (EV/EBITDA) – levels last seen pre-global financial crisis – and significantly above the 15x average observed for transactions between 2013 and 2015.

At the same time there are a number of ongoing airport deal processes at the time of writing, including stakes in Brussels airport, and a highly anticipated sale of the French state's 50.6% stake in Aéroports de Paris (ADP) expected in early 2019.

Given the current and imminent airport deal activity, it's not surprising that airport valuations are a very current topic. While it's clear that airport valuations are at historical highs, the question on most investors' minds is whether this level of pricing is sustainable or if a correction is due.

In this article, we take a deep dive into today's UK and European airport deals space to answer that question. We consider the airport demand – supply dynamics and the outlook for other factors driving current levels of pricing. The article also explores the trends in UK passenger growth versus the movement in EV/EBITDA transaction multiples for airports over time and highlights key airport valuation drivers.

Lastly, we examine the headwinds airport valuations are facing in the current economic climate – Brexit, rising interest rates and higher fuel prices.

Based on our assessment, we would expect that airports with substantial traffic growth expectations and/or a strong competitive positioning will continue to transact within a multiple range of 18x to 24x.

However, there is nothing to preclude observing higher or lower levels of multiples on individual transactions, if there are asset-specific reasons to justify this.

“An attractive class of asset”

1. An attractive class of asset

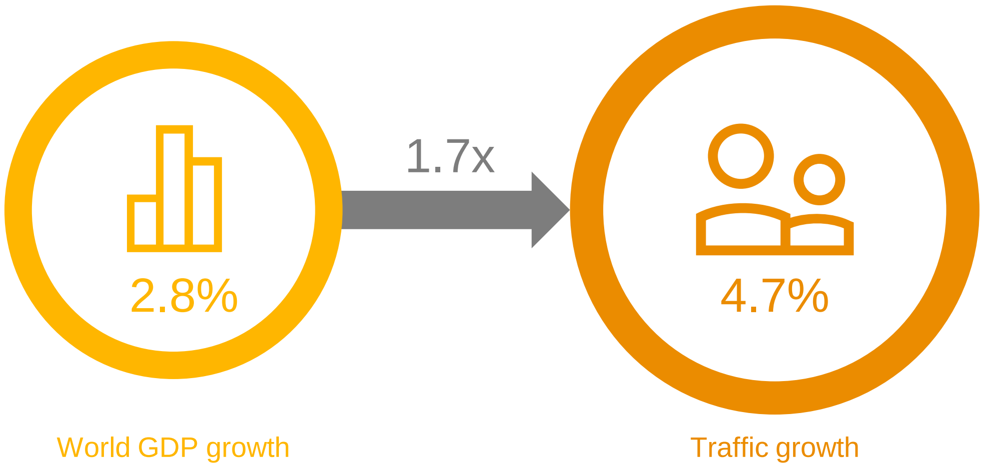
Airports are a uniquely appealing class of asset for investors. While they typically offer strong growth fundamentals, diverse income streams, asset resilience and cash distributions, they also provide the potential to realise significant capital gains upon disposal.

Traffic growth - the key driver of value for airports – is highly correlated to GDP growth offering investors exposure to broader macroeconomic growth. In the UK traffic growth has historically outpaced GDP growth by a factor of 2x.

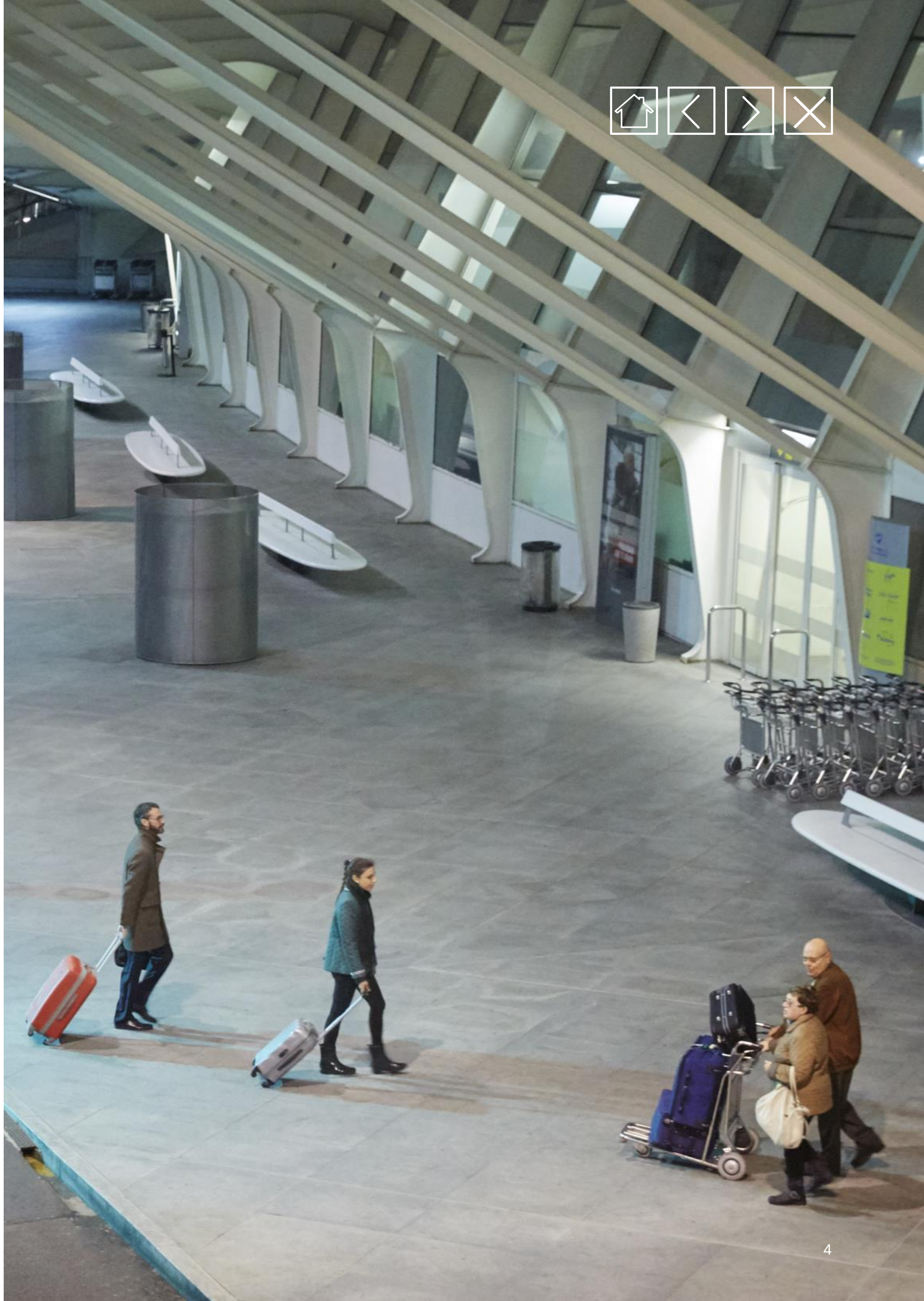
Looking forward this trend is set to continue with the long-term outlook for air traffic volumes forecast to outpace world GDP growth by a factor of 1.7x.

Figure 2: World GDP and future traffic growth

2018-2037 CAGR (%)



Source: Boeing Current Market Outlook 2018 to 2037,PwC Analysis



1. An attractive class of asset

Figure 1: Airport asset class characteristics

Strong and resilient GDP-linked traffic growth

- Global passenger growth averaged 4.4% over the last 15 years, exceeding GDP growth by c.1.8x
- Traffic has been resilient to external economic shocks, typically reverting to positive growth within 12 months of a shock event

Market power

- Often airports demonstrate a level of market power thanks to high barriers to entry. This means some airports can enjoy a level of pricing power over extended periods of time
- Where airports enjoy a near monopolistic market position, tariffs may be regulated such that it is allowed to enjoy a “fair” economic return

Diverse income streams

- Airport revenues are derived from both aeronautical and commercial sources
- Non-aeronautical revenues can be increased through optimising retail space, car parking or real estate. Increasingly airports are using technology and data to drive commercial revenues
- Aeronautical revenue can be improved through route network development

High operating margins

- Airports typically enjoy strong operating margins that can exceed 50%
- With a relatively high fixed cost base, airports benefit from increasing asset usage which drives the strength of airport margins

Visible and stable cash flows

- Mature airports tend to have a high level of cash flow visibility
- The relatively stable level of cash flow lends itself to higher leverage and can service greater levels of debt
- Capital expenditures can be delayed based on capacity utilisation allowing shareholders to smooth out distributions

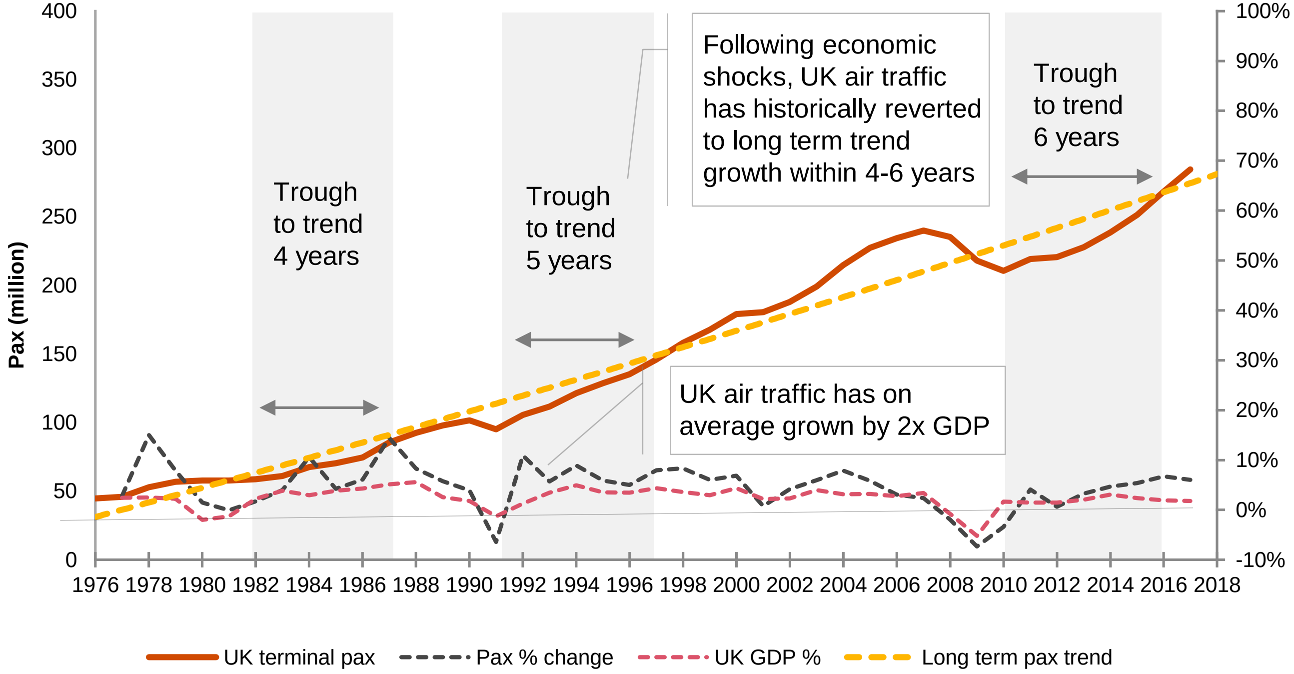
Cash yield and capital appreciation

- As the asset matures the predictable and stable cash-generative ability of airports is likely to mean that the assets can return consistent cash yields to investors
- As passenger volumes and airport earnings grow, airport investors typically see strong capital appreciation on exit

Source: PwC Analysis

Air traffic typically demonstrates a relatively high level of resilience, recovering from political, financial and other shocks in a fairly short period of time. As Figure 3 illustrates traffic has historically reverted to the long term trend growth levels within four to six years following an economic shock.

Figure 3: UK airport traffic and GDP growth



Source: CAA, PwC Analysis

In addition to the traffic growth opportunities, investors are attracted to the asset class by the high operating margins airports enjoy.

Through a combination of high barriers to entry, limited competition and economies of scale airports typically achieve EBITDA margins in the region of 30% to 60%.

This compares favourably to average EBITDA margins across other industries, which for European (including UK) listed companies averaged c.13%[1].

For more mature airport assets, these factors result in a high level of cash conversion and a potential for the airports to deliver stable cash yields and dividend distributions to shareholders.

Having historically enjoyed a high degree of cash flow stability, airports have also offered greater potential for capital appreciation than more traditional infrastructure assets. Even when air traffic falls during economic slowdowns, airports are often able to continue delivering dividends to shareholders through the deferral of operating costs and rescheduling or reduction of capital expenditure.

Taken together these factors have made airports a highly attractive infrastructure investment.

[1] Professor Aswath Damodaran, http://pages.stern.nyu.edu/~adamodar/ , PwC analysis

2. A broadening base of global airport investors

The appeal of the asset class has attracted a broad base of global airport investors.

In today's world of low yields, we are seeing an increasingly diverse range of investors interested in the European airport deal space. These range from construction, engineering and airport operating companies to private equity, infrastructure, pension and sovereign wealth funds. Each type of investor brings a specific set of core competencies and competitive advantages to a deal, and is best positioned to invest in different stages of an airport's lifecycle.

We are observing deal consortia comprising of an increasingly broad airport investor base with the aim of boosting value through operational and financial structuring improvements.

Equally, we have seen the European airport deal space being targeted by an increasingly international investor base, with active investors from Europe, North America, Australia, Asia and the Middle East participating in recent European airport transactions.

Information Box:
What influences an airport's value?

Discounted Cash Flow Analysis – While transaction multiples provide useful valuation benchmarks, typically the discounted cash flow (DCF) valuation methodology is used as the primary approach to value airports. This is because airports generally have long-term projections that offer cash flow visibility. The DCF approach is also more appropriate for differentiating between an airport's revenue streams (aviation, retail, real estate, external operations) and the various regulatory mechanisms under which airports operate.

Airport Transaction multiples – There are clear challenges in comparing transaction multiples between airports. This is due to each airport's specific operations and individual growth prospects. In addition to market factors and competitive bidding conditions at sale, key factors impacting airport value and transaction multiples include the following:

- **Maturity of the airport**. Most large, mature airports have less potential to increase traffic than smaller regional airports and may trade at a lower multiple. For a small regional airport starting from a low passenger base, attracting two or three new airlines can transform the business — a prospect that is often reflected in transaction multiples. Conversely, larger airports tend to have a broader airline base, so they are less vulnerable to customer concentration risk and volatility.
- **Potential for yield improvements**. Airports with non-aeronautical revenues that are lower than those of comparable airports can boost their earnings by improving their retail offering, increasing parking fees, and making other similar enhancements. This potential for better earnings can also be reflected in transaction multiples. However to benefit from an enhanced non-aeronautical revenue stream can require significant capital expenditure investment.
- **Regulatory environment**. Airports are typically subject to regulation when regulators see them as holding substantial market power. Regulated airports' risk/reward profile differs from those of unregulated airports – for example investors see regulated airports as more vulnerable to regulatory risk by way of changes to these regulatory regimes. Airports are also subject to different regulatory environments in different jurisdictions. In the UK, for instance, regulated airports are allowed to earn a return on their regulated asset base (RAB). RAB is therefore a key valuation metric, and the market places significant emphasis on enterprise value to RAB multiples in assessing the value of regulated airports.
- **Size of catchment area and penetration**. The extent to which an airport has penetrated its primary and secondary catchment areas and the size and affluence of these affects its passenger growth potential.

Information Box:
What influences an airport's value?

- **Capacity constraints**. Runway or terminal capacity constraints tend to depress an airport's traffic growth potential. Alleviating these constraints may require significant capital expenditure spend as well as planning and regulatory approval.

- **Airport traffic mix**. The make-up of an airport's traffic – the mix of short- and long-haul as well as business, leisure, charter, and low-cost traffic – affects airport earnings. For example, traffic mix can strongly determine an airport's commercial revenue spend per passenger. Domestic passenger retail spending will tend to be lower than that of leisure travellers (e.g. charter), due to shorter airside dwell time. Business traffic is a lucrative revenue stream given it will likely stay steady during an economic slowdown, compared to other traffic types such as charter.

- **Airline customer dependence**. The degree of airline concentration at an airport will impact value. If an airport is highly dependent on one or two key airline customers a reduction in aircraft capacity (due, for example, to reallocation of aircraft capacity across an airline's network or airline bankruptcy) will have a material impact on the airport. Further, airports typically have to renegotiate tariff increases on a frequent basis with their main carriers and single airline dominance at an airport will impact the balance of negotiating power in favour of the airline.

- **Ownership structure**. An airport's ownership structure i.e. whether it is a freehold airport or if the airport is on a finite life concession may have an important impact on value. Freehold airports are typically considered to have value into perpetuity whereas investors acquiring airports on a concession basis will only see returns over the life of the concession. The number of years remaining on a concession will also impact value.

- **Airport competition**. The extent to which an airline has the option to relocate operations to another airport that serves the same catchment area will determine the stickiness of an airline to a particular airport and will impact value. An airport's competitive constraints subsequently determines the balance of negotiating power in tariff discussions (i.e. the extent to which tariffs can be increased without significant adverse effects of the airline moving its operations away from the airport). It is difficult to isolate the impact of airline stickiness in a transaction multiple. However we have observed adverse impacts through the suppressed EBITDA margin of airports that do not have strong power in price negotiations with airlines.

3. Dry powder and required returns

Another factor affecting airport valuations is the increased fundraising activity and dry powder (uncalled capital commitments) currently available.

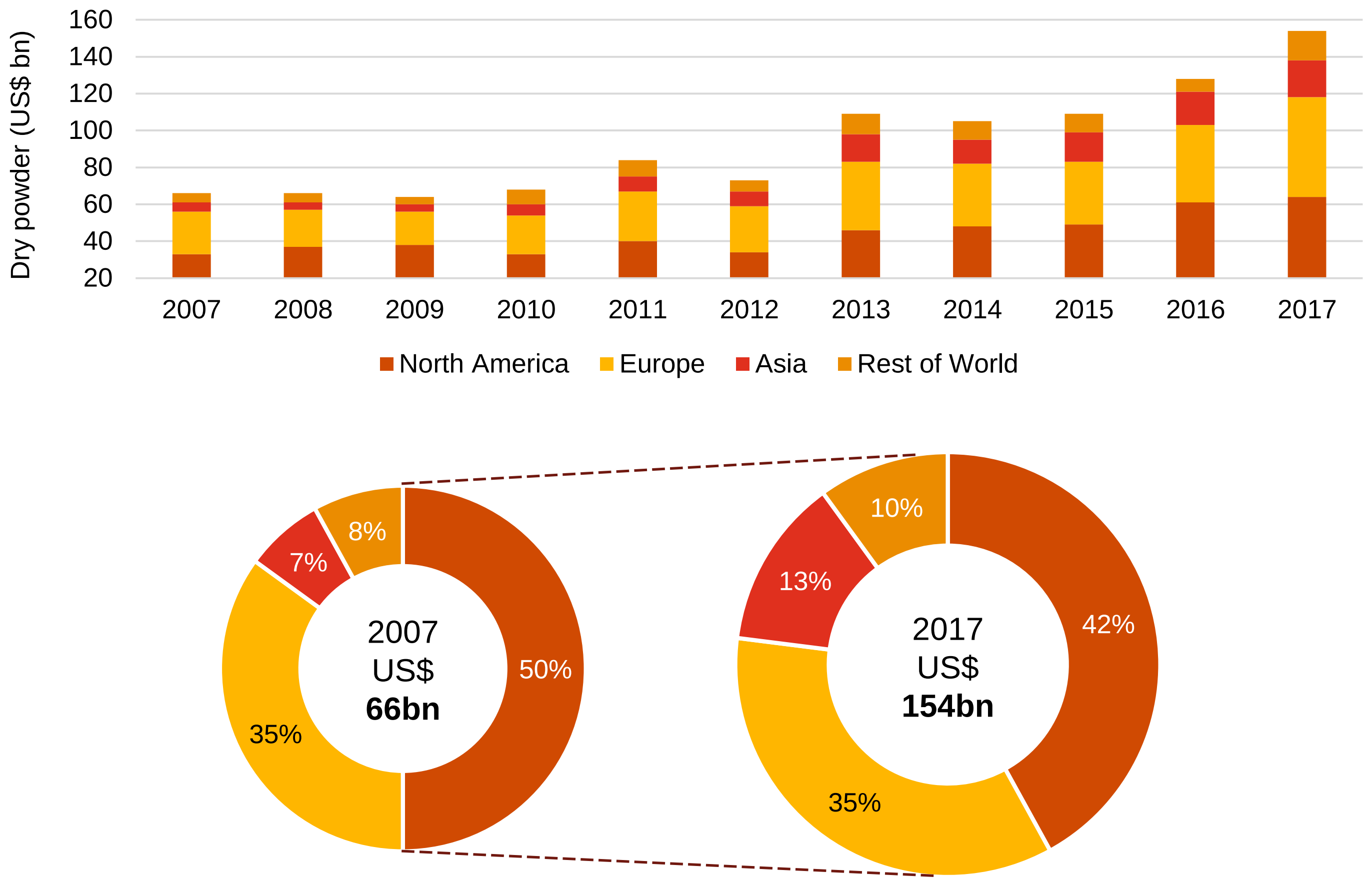
As Figure 5 illustrates, growing investor appetite and familiarity with the asset class has led to fund managers having a record amount of dry powder to deploy providing liquidity in this space.

In recent years, new money has been rapidly flowing into the unlisted infrastructure space growing to US$154bn as of September 2017 – a 40% increase in just two years.

There is also a clear trend towards higher levels of capital raised for infrastructure in Asia and emerging markets with the relative share of funds from these regions growing from 15% to 23% in the last 10 years.

This trend is entirely consistent with the broadening investor base in airports discussed previously and particularly with higher levels of activity from Asian and emerging market investors.

Figure 5: Unlisted Infrastructure Dry Powder by Primary geographic focus, 2007-2017

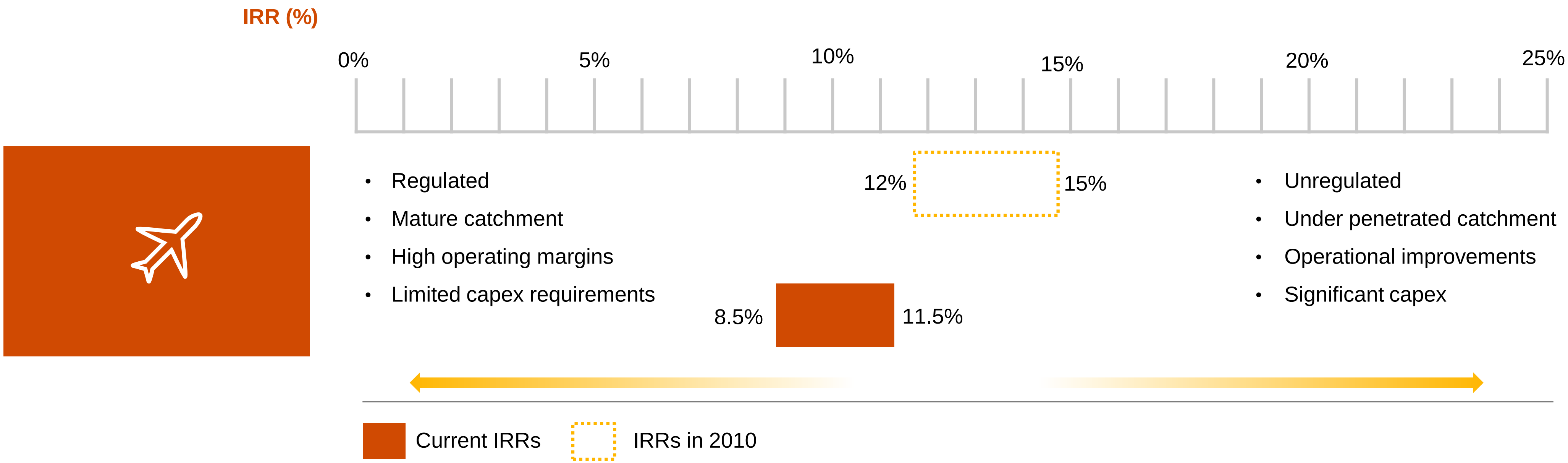


Source: Preqin, PwC Analysis

A further factor supporting airport pricing has been the historically low level of interest rates observed in advanced economies since 2011. These have made investments in treasury bonds relatively less attractive than alternative investments with similar risk-adjusted returns. In turn this factor has made unlisted airport infrastructure attractive for investors looking to diversify their portfolio, thereby pushing up demand for the asset class.

Due to a combination of the above we have seen that over time winning consortia in airport transactions have had to accept lower acquisition internal rate returns (IRRs) to secure a deal (see Figure 6), with some of the most recent deals reportedly completing for high single-digit returns. Of course the reported returns for these deals must be assessed in the context of the bid case, long-term cash flows and the level of risk assumed in these.

Figure 6: Airport equity return requirements



Source: PwC Analysis

4. Deal pipeline

Airport assets expected to come to market over the next 12 to 18 months generally fall into two categories: government-led privatisation initiatives and infrastructure funds looking to monetise their airport investments as funds reach the end of their life.

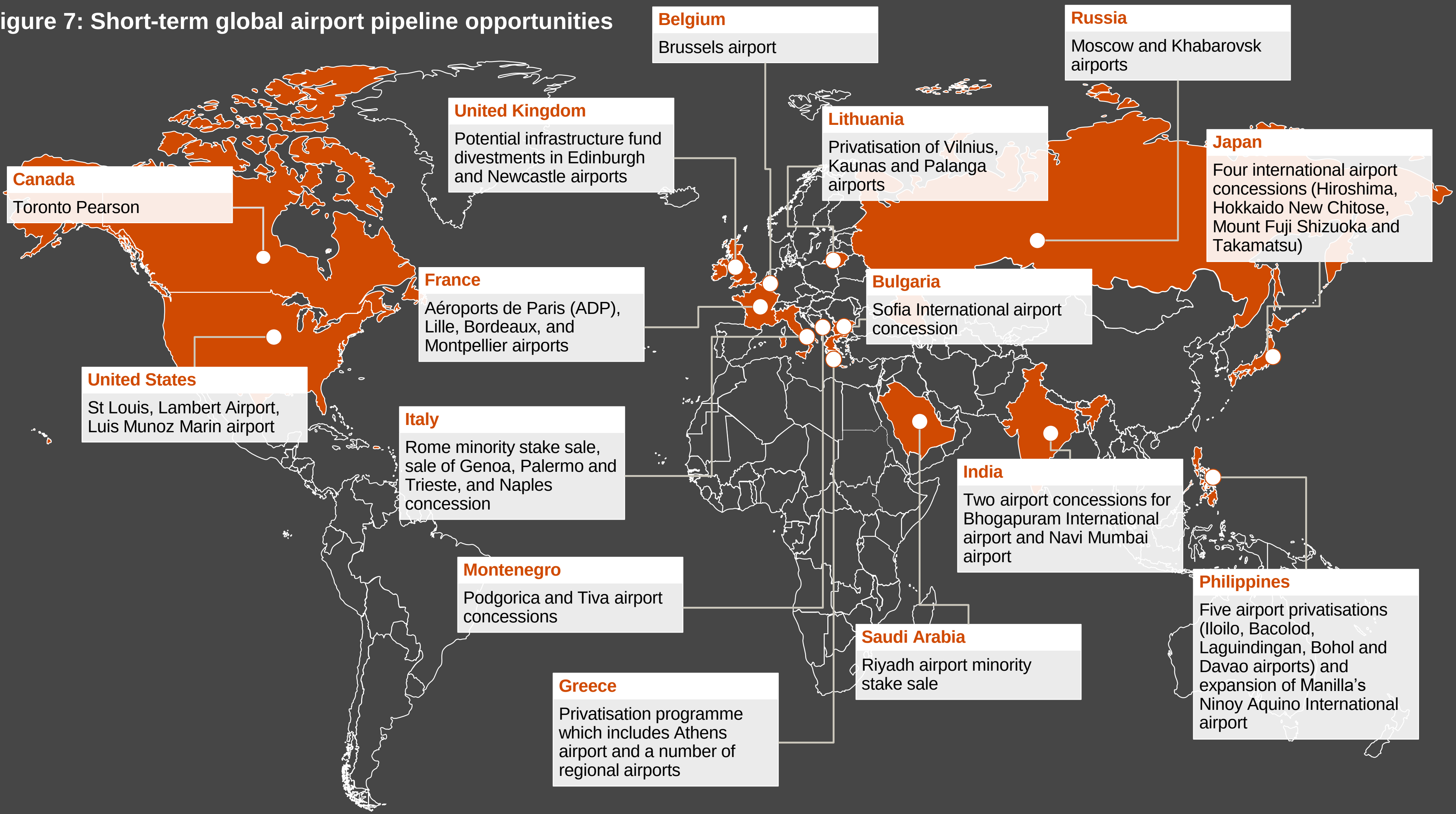
Financial investors – specifically, pension and sovereign wealth funds – tend to hold operationally mature airport investments for a longer term, reaping benefits from the relatively steady cash yield. This means that airports held by these investors rarely come to market but when they do they are highly sought after.

In relation to government owned airport privatisations, there is increasing significance being placed on the need for these processes to benefit regional development when private sector investment is being sought. Political objectives around employment and development are being recognised as important outcomes of private investment acceleration, alongside more conventional financial return.

Looking at the pipeline of airport investments coming to market in the short term (Figure 7) there are a number of short-term opportunities in European OECD countries, though the timing of these coming to market remains uncertain.

The combination of the current low-yield, low-interest rate environment, attractive asset class fundamentals, a broad international airport investor base, and relative scarcity of good airport investment opportunities coming to market have made recent airport deals highly competitive.

Figure 7: Short-term global airport pipeline opportunities



Source: InfraNews, publically available information, PwC analysis

5. The price of expected traffic growth

Figure 8a shows actual UK passenger traffic alongside EV/EBITDA multiples between 2000 and 2018 for European airports. While there are challenges in comparing transaction multiples between airports due to each airport's specific operations, individual growth potential and the deal structure, it is fair to say that, on average, airport transaction multiples have been rising since the global financial crisis and, based on transactions we've seen between 2016 and 2018, are back at pre-global financial crisis levels.

Figure 8b shows CAA traffic forecasts in 2007, 2011 and 2017. It can be seen that in the past, forecasts for UK air traffic were either above (2007 CAA forecasts) or below (2011 CAA forecast) the long-term passenger trend – there also appears to be correlation between these expectations of traffic growth and respective airport transaction multiples during that period as traffic growth expectation at the time would have been a key driver in pricing the transaction.

We also see that the 2017 traffic forecast is broadly in line the long term growth trend. This could suggest that market expectations for traffic growth, (which are in turn driving current pricing levels) are based on a maintainable passenger traffic base and give an indication that current traffic growth expectations being priced into deals are neither overly optimistic or unduly pessimistic.

While airport transactions clearly provide useful valuation benchmarks, it is imperative to undertake a comprehensive assessment of the comparability of transactions and make appropriate adjustments if it becomes apparent that they are incorporating different ownership structures, levels of control, growth expectations, capex requirements or profitability levels. A comprehensive assessment of comparable transaction multiples is therefore required if these are being used as valuation benchmarks.

Figure 8a: UK airport traffic and European transactions

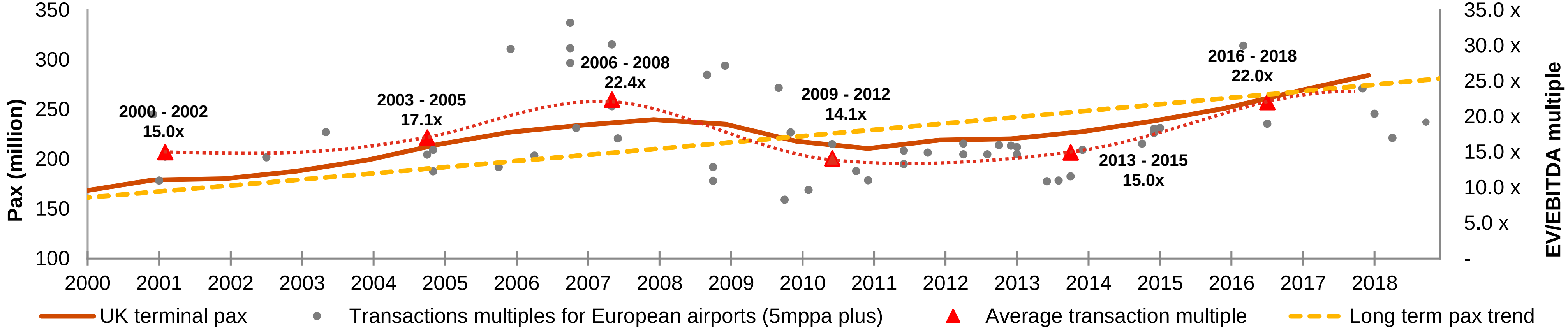
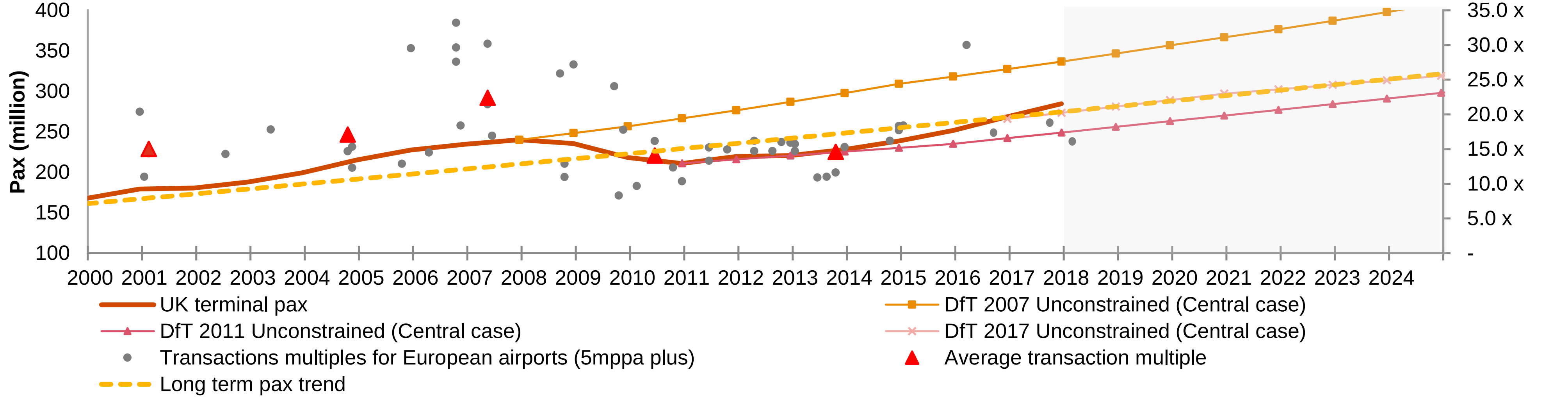


Figure 8b: UK airport traffic and CAA forecasts



Source: CAA, PwC analysis

6. Headwinds

Notwithstanding the above, airport valuations are facing certain macroeconomic and structural headwinds that investors should be aware of.

The EU referendum vote and subsequent triggering of Article 50 (Brexit) has undoubtedly raised concerns around the attractiveness of UK airports as well as European airports with significant UK traffic exposure.

Two main areas of concern are arising; i) the impact Brexit will have on broader macro-economic factors (GDP growth, inflation, interest rates and currency exchange rates), and by extension, airports' growth and risk profiles and ii) the regulatory impact of Brexit on the European air transport market.

From a regulatory perspective, if the UK leaves the EU without a withdrawal agreement, the UK would no longer be part of the EU's single aviation market (which is the current basis for UK-EU and intra EU flights). Moreover, the UK enjoys aviation market access rights from bilateral deals the EU has in place with other 3rd countries such as the United States and Canada. Absent a deal, the UK would have to renegotiate such agreements – a potentially laborious and time-intensive process. While a no-aviation-deal scenario looks very unlikely given the importance of the aviation sector to both sides, such an outcome could cause significant disruption to the UK and EU air transport market.

Short-term traffic in the UK post referendum vote has remained resilient, with UK traffic increasing by more than 3% over the last year. However, in the event that Brexit leads to softer economic growth in the short term, there is likely to be a slowdown in traffic growth. Currency movements may also impact UK airports, for example, through changing the mix of outgoing and incoming tourism, wage inflation or changes in revenue sources (e.g. potentially higher duty free revenues and yields or car park revenue yield dilution due to an increase in inbound traffic).

The macroeconomic impact of Brexit will be airport-specific depending on the nature of operations including revenue streams and traffic mix. While challenging to predict, such impacts are typically addressed through scenario analysis to traffic growth and yields over a short term horizon. Based on recent UK airport transactions, we have not seen evidence of investors pricing in any material Brexit related valuation discount and transaction multiples for UK airports remain strong. However, it is important to consider the impact of Brexit on each airport individually.

At the same time there are emerging signs that some UK airlines are facing increased pressures from greater competition, currency movements and rising fuel prices.

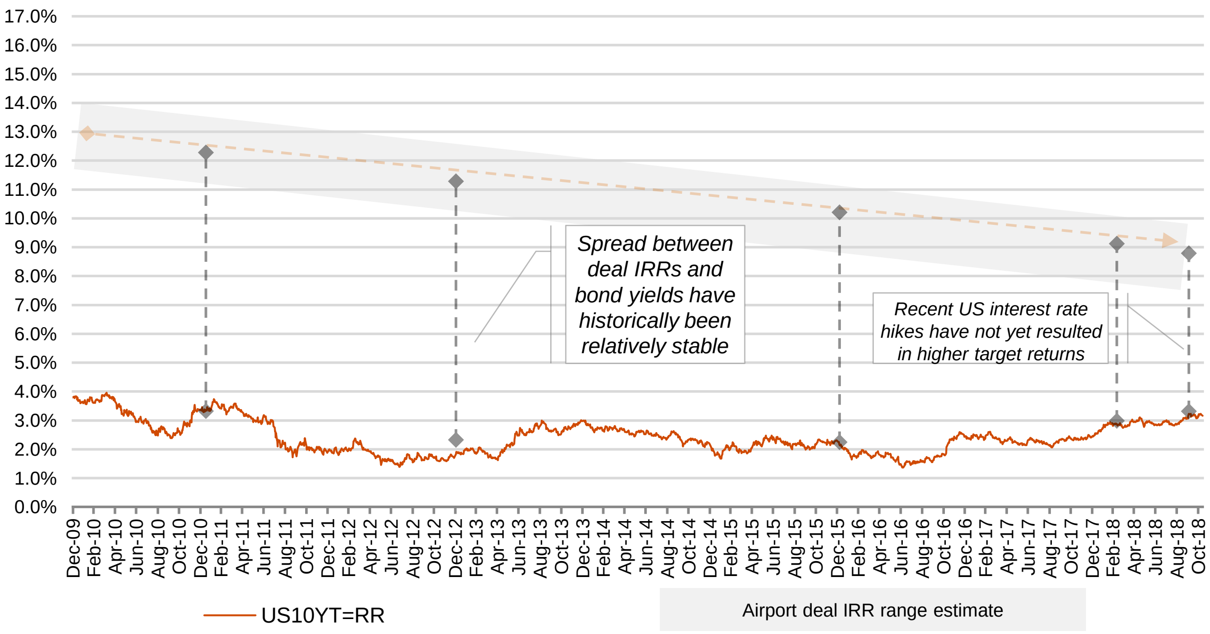
Oil prices have nearly doubled in the 24 months to   with ICE Brent Crude Oil increasing from c.$40 per barrel to c.$70 in that period. Airlines operating on tight margins have struggled to absorb the extra costs despite robust air travel demand. Indeed Monarch Airlines, the UK's fifth largest carrier, filed for insolvency last year, and Flybe has recently put itself up for sale. Air Berlin, once the fourth-largest airline in Europe, also went into administration due to rising fuel prices and intense competition. Further airline bankruptcies or cash flow squeeze may result in more cautious expansion plans which could curb traffic growth and have an impact on airport valuations.

Moreover, airports are increasingly facing competition for commercial revenues from technology (e.g. duty free revenues from online shopping) as well as new passenger behaviours (e.g. car park revenues from car ride share). These factors are forcing innovation in how airports use technology and compete to protect and grow yields.

As discussed previously in this document, historically low costs of funding have in part led to a decline in airport investor return requirements over time. We can also observe that historically the spread between airport deal target IRRs and government bond yields has been relatively stable, reflecting the risk adjusted return premium investors are demanding for airports. Recent interest rate hikes in advanced economies and anticipation of continuing interest rate rises do not seem to have translated in an upward adjustment to target IRR and valuation levels yet.

However if interest rates continue to rise (as widely expected) this may start to gradually push up target returns and put pressure on airport valuations. Offsetting that effect however are factors such as flight to safety and the relative scarcity of assets in the pipeline which resulted in the compression of return premiums and a re-pricing of the risk profiles of airport assets.

Figure 9: Airport target IRR to sovereign debt yield risk premium



Source: PwC Analysis

If you're thinking about investing

2018 has shown that UK and European airports continue to attract significant interest among airport investors, with strong expected demand for UK and European assets coming to market in the short term.

The current airport deal space is characterised by high demand from a broad base of international investors, high levels of capital to deploy, continued yield compression and, relative to the demand, a scarcity of high quality airport assets coming to market. Our analysis has also shown that traffic growth expectations (for the UK market) do not appear to be significantly out of line with the long term growth rate and historical levels of the GDP – traffic growth multiplier. Together these factors have led to increased airport valuation multiples and we expect pricing to remain strong in the short term absent any economic slowdown or shock.

Based on our assessment, we would expect that airports with substantial traffic growth expectations and/or a strong competitive positioning will continue to transact within a multiple range of 18x to 24x.

However, there is nothing to preclude observing higher or lower levels of multiples on individual transactions, if there are asset-specific reasons to justify this.

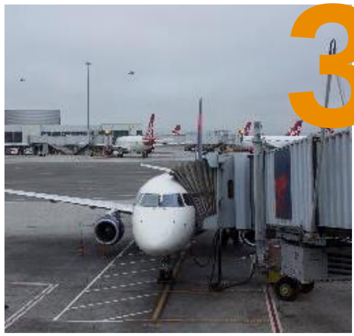
Our key messages around airport valuations in the current environment are the following:

1

Given the attractiveness of the airport asset class, the broad international nature of airport investors, long-term investment horizons of funds and relative scarcity in the opportunity pipeline, we expect European and UK airport multiples to be maintained at current levels in the short term, absent any economic slowdown or shock.

2

A broadening base of international airport investors are joining forces to deliver airport value enhancements - we are observing an increasing trend of construction, engineering and airport operators forming consortia with financial investors with the aim of delivering value enhancement through both operational and financial structuring improvements. Building the right partnerships can be critical to winning the deal.



3

Cyclicality should be built into long-term cash flow projections - when assessing the value of an airport, it is essential to recognise the cyclicality of the industry, consider where we currently sit in the economic cycle and build sensitivities into cash flow projections to reflect economic downturns and other risks. One impact of the Brexit vote has been to increase uncertainty around future potential outcomes for the UK and European aviation sector, making sensitivity testing around possible post Brexit scenarios even more important.

PwC Airports deals team

PwC has an integrated specialist airport team with expertise spanning valuations, transaction services and corporate finance. Having worked on numerous airport engagements globally, our team combines deep sector expertise with a fundamental understanding of the key airport business drivers.

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PwC Valuations has a specialist team with significant experience of airport valuations. Having valued over 30 airports globally, our team combines deep sector expertise with a fundamental understanding of the drivers behind airport value.

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