Current Themes in Aviation

Infrastructure Access and Capacity is a Key Focus

Access to Infrastructure is a Key Issue for Airlines

- **Access and capacity** to airport infrastructure is a key concern for airlines around the world
- According to ACL there are more than **30 airlines** requiring slots at London Heathrow
- The **Davies’ Commission** in the UK concluded that the third runway solution at Heathrow would only solve for existing demand and in 2030 a further capacity constraint will need to be addressed
- Slot constraints are causing concerns across global markets and limiting airline’s route strategies
- Passenger numbers at major airports typically grow in line with that Country’s GDP growth – this will present some **future challenges** to our existing infrastructure capacity but also presents **future opportunities**
- In the absence of new infrastructure, we need to find a way to utilise the existing airport infrastructure more efficiently

- One solution to access issues which has been successfully implemented in the UK is **slots trading or swapping** between carriers
Slots and Slot- Constrained Airports

Slots are taking on increased importance in the aerospace sector

Slots: An Overview

- Pairing of a scheduled time of arrival and departure allocated by the applicable airport coordinator to an on a specific date at a specific airport
- Legally characterised as licences or permits
- Issued by a slot coordinator at a “Level 3” airport on the basis that allocation is done on a neutral, transparent and non-discriminatory way
- Strategically important assets for airlines globally – defines their route strategy
- A “slot swap” is where one airline swaps its slot for another slot with another airline

Level 3 Airports

- **159** airports are presently Level 3 airports within the IATA Worldwide Slot Guidelines
- Level 3 airports are by definition those where:
  - demand for airport infrastructure significantly exceeds airport’s capacity;
  - flight scheduling by the operator has failed or proved ineffective; and
  - expansion of airport infrastructure to meet demand is not possible in the short term

In the Middle-East there are presently 10: **Dubai International, Tunis – Carthage, Johannesburg, Cape Town, Durban, Jeddah and Casablanca, Rabat Sale, Mauritius and Accra (Ghana)**
Benefits of Slots Trading

The structure provides many benefits to the key stakeholders in the industry

Key Benefits to Sector

- Helps to promote competition, airport operational efficiency and new entrants to the Australian market
- More efficient allocation of Slots should translate to greater passenger numbers, benefits to trade and tourism in Australia
- Promote operational efficiency at airports, the legislative intent behind many legislative enactments in the airport space\(^1\)
- Promotes the aerospace sector to a new group of long term investors seeking long term capital investments through slots financings
- Creates a means for airlines to recover capex when relocating from one airport to another – increases flexibility
- There is evidence of a strong correlation between financial strength and safety of airlines\(^2\)

---

1: Under the Sydney Airport Demand Management Act 1997 for instance the guiding principle is to achieve operational efficiency at supply-constrained airports
Slots Trading: Approaches and Views

The European and Australian legislation framework works in a similar way

**United Kingdom**
- In the UK the slot coordinator facilitates the trade through creating a ‘dummy’ slot and the purchaser pays the difference in value as consideration
- The slot coordinator ACL has set up its own secondary trading platform to facilitate this activity and offers a fee-paid service to facilitate trades between airlines

**Europe**
European Commission investigated the activity in 2008 and concluded that it was in the best interests of all stakeholders and delivered on the key objective of **operational efficiency** at EU slot-constrained airports
- “This system [slot trading] has already shown its value in London, where it has allowed a range of airlines to take advantage of the opportunities provided by the EU-US aviation agreement ["Open Skies"] and to create new levels of competition” – Jacques Barrot, EU Transport Commissioner

**Australia**
- Australian legislation also contemplates a swapping of slots – section 34(2) of the Sydney Airport Demand Management Act and section 20 of the Sydney Airport Slot Management Scheme
- Airlines already ‘swap’ slots bilaterally in Australia – IATA bi-annual slot conference
- The slot coordinator when asked to consider a swap must consider the “**operational efficiency**” of the airport – section 20(3) of the Sydney Airport Slot Management Scheme
European Commission – Conclusions on Slot Trading

Support from regulators and international associations

European Commission (EC) : ‘Recast’ of Slot Regulation 2011

- New rules proposed to help new entrants access the market, with supporting secondary Slots trading at the core of the proposal
- EC estimated the changes would be worth approximately €5b to the European economy and create 62,000 jobs over 2012-2015, and allow the system to handle 24m more passengers a year by 2025¹⁵
- Secondary Slots trading are the largest source of this benefit, generating “annual economic benefits of over €300m” across Europe⁷
- At congested airports secondary trading results in larger aircraft being used on longer haul flights, increasing passenger volume and efficiency², this benefit would be felt in all congested airports (including airports other than LHR and GTW²⁴)
- EC concluded regarding secondary Slots trading that “the benefits obtained are far greater than the costs” and that “a market-based mechanisms that can correct [current] deficiencies” ⁶

<table>
<thead>
<tr>
<th>QUANTIFIED IMPACTS SUMMARY: SECONDARY TRADING AT ALL EU AIRPORTS⁸</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passengers (%)</strong></td>
</tr>
<tr>
<td><strong>Flights (%)</strong></td>
</tr>
<tr>
<td><strong>Passengers (millions)</strong></td>
</tr>
<tr>
<td><strong>Airline operating costs (€ million NPV)</strong></td>
</tr>
<tr>
<td><strong>Direct implementation costs (€ million NPV)</strong></td>
</tr>
<tr>
<td><strong>Economic benefits (€ million NPV)</strong></td>
</tr>
<tr>
<td><strong>Net economic benefits (€ million NPV)</strong></td>
</tr>
<tr>
<td><strong>Airport employment (000 FTEs)</strong></td>
</tr>
<tr>
<td><strong>Airline employment (000 FTEs)</strong></td>
</tr>
<tr>
<td><strong>Fares (%)</strong></td>
</tr>
<tr>
<td><strong>CO₂ emissions (tonnes, 000s)</strong></td>
</tr>
</tbody>
</table>

*Non-financial values (passengers, emissions etc.) presented as annual average values

---

¹: http://ec.europa.eu/transport/modes/air/airports/slots_en
²: Commission Staff Working Paper, Annexes 12-21, 2011, page 55; European Commission
³: Impact Assessment of Revisions to Regulation 95/93, page 10-15; European Commission
⁴: Commission Staff Working Paper, Annexes 1-11, page 23-38 , 2011; European Commission
⁵: Commission Staff Working Paper, Impact Assessment, page 38 , 2011; European Commission
⁷: Commission Staff Working Paper, Impact Assessment page 58 , 2011; European Commission
⁸: Commission Staff Working Paper, Impact Assessment page 58 , 2011; European Commission
US FAA and DOT Support

Support from regulators and international associations

Delta Air Lines Comments to the FAA and the DOT¹

- In 2012 Delta purchased LGA 132 Slot pairs from US Airways, once acquired Delta invested heavily in LGA, improving capacity and efficiency at the airport, proven by the average seats per departure increasing over 70% over 2 years
- Services provided to consumers also benefit from the transfer, Delta offered consumers first-class seating on 87% of LGA flights, compared to 22% on the former US Airways flights

American Antitrust Institute (AAI)

- “Secondary slot markets promote new entry and competition”²
- “A transparent secondary market facilitates access by smaller carriers to obtain airport access, enhancing competition on price and potentially service quality”²

Department of Transport (DOT) Comments³

- Lodged with the Federal Register, the DOT proposed various alternatives to increase competition at New York airports, all of which included secondary markets for the trading of Slots
- After analysis of various Slot trading data, the DOT confirmed in its 2015 paper its belief that secondary trading creates and allows for increased efficiency

---

1: Department of Transportation Federal Aviation Administration, Docket No. FAA-2014-1073, Comments of Delta Air Lines
2: Department of Transportation Federal Aviation Administration, Docket No. FAA-2014-1073, Comments of the American Antitrust Institute
3: Department of Transportation, Federal Aviation Administration, 14 CFR Part 93, Federal Register (Thursday 8 2015)
Other Statements in Support

Global support from regulators and national/international associations

Recent Statements in Support

- Regulatory support for Slot trading exists
  - Airport Coordination Limited (UK): the secondary market trading portal aims “to make slot trading more open, efficient and transparent”¹
  - The European Commission recognised “we need to make sure that slots are used as efficiently as possible and that airlines have a fair chance to develop their operations”. going on to say “secondary trading is an acceptable way of allowing slots to be swapped among airlines” and “this system has shown its value in London”, “creating new levels of competition”²
  - Federal Aviation Authority (US): the FAA “proposes to allow airlines to buy, sell, lease, or trade slots through a secondary market” to help “manage delays and still provide some measure of access to carriers wishing to operate at the airport, encouraging competition”³
  - The International Air Transport Association (IATA) has also expressed support for the structure and for Slots trading generally “rules such as dis-allowing slot trading might have the effect of increasing the total size of the delay externality”⁴
  - Sydney Airport: “..encouraging increased slot utilisation and continued aircraft up-gauging will support future traffic growth”⁵
  - China is currently trialling secondary slot trading at Guangzhou Baiyun and Shangai Pudong Airports
  - The Korean Regulators are currently reviewing the slot regulations and evaluating ways to boost efficiency

1: Slot Trading (https://www.acl-uk.org/slot-trading/), ACL
3: Fact Sheet – Notice of Proposed Rulemaking: Slot Management and Transparency, Federal Aviation Administration
4: The Dilemma of Slot Concentration at Network Hubs, IATA
5: Sydney Airport 2016 Investor Day Presentation 17 October 2016, Sydney Airport
Ancillary Benefit: Slots Financings by Airlines

Slot Trading creates the Opportunity for Slots Financings in the Australian market

Benefits to Airlines

Slot trading enables the market to determine a market based value for the slots

- The ability for airlines to lever slots will enhance the slot value beyond utilisation
- Creates a long term capital funding source for airlines on very favourable terms and pricing, making them more resilient to fluctuating macro cycles
- Strengthen the financial position of the airlines, diversifying their funding sources to new investors and to the investment grade global markets
- The ability to trade and lease Slots gives airlines a means to easily alter their route strategy, providing flexibility
- We have received strong interest from a number of international airlines looking to raise capital against Slots and strong interest from investors wanting to invest long term in slots deals

Current Financing Deals

- Macquarie recently completed a bond capital raising for Virgin Atlantic in the UK of GBP252m – first of its kind in Europe
- Underpinning the financing were slots at London Heathrow which were used as financing collateral
- We are currently working on our second slots financing currently in Europe – to close in 2017
Conventional Structural Enhancements can achieve a significant up-notch in the Bond Rating

Potential significant notch improvement from corporate rating

<table>
<thead>
<tr>
<th>S&amp;P Rating</th>
<th>Airline</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td></td>
</tr>
<tr>
<td>A+</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td></td>
</tr>
<tr>
<td>BBB+</td>
<td>easyJet PLC, Ryanair Holdings PLC</td>
</tr>
<tr>
<td>BBB</td>
<td>Southwest Airlines Co.</td>
</tr>
<tr>
<td>BBB-</td>
<td>Deutsche Lufthansa AG, Qantas Airways Ltd., Alaska Airlines Inc., WestJet Airlines Ltd.</td>
</tr>
<tr>
<td>Sub-investment grade</td>
<td></td>
</tr>
<tr>
<td>BB+</td>
<td>Delta Air Lines Inc.</td>
</tr>
<tr>
<td>BB</td>
<td>British Airways PLC</td>
</tr>
<tr>
<td>B+</td>
<td>Virgin Australia Holdings Ltd., Air Canada</td>
</tr>
<tr>
<td>B</td>
<td>SAS AB, Avianca Holdings S.A.</td>
</tr>
<tr>
<td>B-</td>
<td>Gol Linhas Aereas Inteligentes S.A.</td>
</tr>
</tbody>
</table>

This should translate to a material cost saving for Airline

S&P Global Ratings Composite Credit Spreads By Rating Category (bps)

Source: S&P, Bloomberg
Increased Interest in Infrastructure and Aviation assets

Pension funds have significantly increased their target allocation to infrastructure

Global Pension Allocation Movements

- High demand for infrastructure and core-plus infrastructure assets
- Increase demand has led to equity yield compression and infrastructure equity investors are venturing into debt and adjacent asset classes
- Growth in the pension fund system has led to a significant increase in un-deployed capital and increased allocations to infrastructure-related assets

Increased Attractiveness of Aviation Sector

- Historically airline sector performance has been viewed as too cyclical by long term investors
- Improved performance of Aviation sector in recent years has attracted new investors and renewed interest in the sector

Global Pension Allocation by Asset Class (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash</th>
<th>Property/Infra and other real assets</th>
<th>Bonds</th>
<th>Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>57%</td>
<td>35%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>2003</td>
<td>51%</td>
<td>36%</td>
<td>2%</td>
<td>12%</td>
</tr>
<tr>
<td>2009</td>
<td>45%</td>
<td>46%</td>
<td>3%</td>
<td>20%</td>
</tr>
<tr>
<td>2016e</td>
<td>46%</td>
<td>51%</td>
<td>45%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: Bloomberg, IATA (Revision as at June 2016)
Virgin Atlantic: First European Slots Deal

Macquarie successfully helped Virgin Atlantic to unlock the value of their Slots – a European first

Transaction Overview

- **£252m** senior secured note
- Secured over take-off and landing Slots at Heathrow
- Bond instruments privately rated by Moodys’ – investment grade
- A1 and A2 senior tranches offering different returns and amortisation profile to accommodate investor demand
- **15 year maturity** (AWL 10 years (A1 tranche) and 12 years (A2 tranche))
- Notes placed with blue-chip long term institutional investors at attractive rates including:
  - Pension Funds
  - Insurance Groups – Life and General; and
  - Specialist Debt Funds
- Macquarie’s role:
  - devised structure and advised Virgin Atlantic Airways; and
  - acted as sole arranger and distributor of the bonds

Virgin Atlantic on the transaction

“As a business we challenge ourselves to think differently. We are always looking for new opportunities to strengthen our position so that we can invest more for our customers

This is an innovative financing arrangement. It represents not only a significant milestone for Virgin Atlantic as our maiden capital markets transaction, but is also the first time an airline has successfully accessed the value of its London Heathrow slot portfolio in this way.”

Virgin Atlantic’s CFO

“This was a ground-breaking deal which was both innovative and challenging. Full credit to the Macquarie team for seeing this through from inception to closing, we are delighted with the terms of this offering”
Important Notice and Disclaimer

This presentation is provided on a confidential basis to selected recipients only, and may not be reproduced in whole or in part or distributed or transmitted to any other person, nor may any of its contents be disclosed to any other person, without Macquarie’s prior written consent. This presentation has been prepared as a basis for further discussion. This is a sounding document only. Any offer or proposal in respect of the arrangements described in this presentation will be subject to further subject to internal approvals and discretion and formal engagement. Furthermore, the arrangements described in this presentation, including, without limitation, the proposed financing terms, are subject to Macquarie internal approvals and change and any subsequent offer or proposal in respect of those arrangements, if made, may not be made on the basis of the arrangements or terms as described herein.

The name “Macquarie” in this document refers to Macquarie Group Limited ABN 94 122 169 279 and its affiliates.

This presentation is provided for general information purposes only, without taking into account any potential investors’ personal objectives, financial situation or needs. It should not be relied upon by the recipient in considering the merits of any particular transaction. It does not constitute a prospectus or offering memorandum and is not an offer to buy or sell, or a solicitation or recommendation to invest in or refrain from investing in, any securities or other investment product or an invitation to be involved in or take any further part in the arrangements described in this presentation. Neither this presentation nor any other documentation or information (or any part thereof) delivered or supplied in connection with this presentation shall be deemed to constitute an offer of or an invitation to purchase or subscribe for any securities or any other investment product or to be involved in or take any further part in the arrangements described in this presentation. Nothing in this presentation constitutes investment, legal, tax, accounting or other advice. The recipient should consider its own financial situation, objectives and needs, and conduct its own independent investigation and assessment of the contents of this presentation, including obtaining investment, legal, tax, accounting and such other advice as it considers necessary or appropriate. This presentation has been prepared on the basis of publicly available information and information provided by the airline. Macquarie has relied upon and assumed, without independent verification, the accuracy and completeness of all such information. It contains selected information and does not purport to be all-inclusive or to contain all of the information that may be relevant to the arrangements described in this presentation. The recipient acknowledges that circumstances may change and that this presentation may become outdated as a result. Macquarie is under no obligation to update or correct this presentation.

Macquarie, its related bodies corporate and other affiliates, and their respective directors, employees, consultants and agents (“Macquarie Group”) make no representation or warranty as to the accuracy, completeness, timeliness or reliability of the contents of this presentation. To the maximum extent permitted by law, no member of the Macquarie Group accepts any liability (including, without limitation, any liability arising from fault or negligence on the part of any of them) for any loss whatsoever arising from the use of this presentation or its contents or otherwise arising in connection with it.

This presentation may contain forward-looking statements, forecasts, estimates and projections (“Forward Statements”). All statements other than statements of historical facts included in this presentation, including, without limitation, those regarding the airline’s financial position, business strategy, plans and objectives, are Forward Statements. Such Forward Statements involve known and unknown risks, uncertainties and other factors which may cause actual future results and operations to vary materially from the Forward Statements. Such Forward Statements are based on numerous assumptions regarding the airline’s present and future business strategies and the environment in which the airline will operate in the future. Further, certain Forward Statements are based upon assumptions of future events which may not prove to be accurate.