

Legacy carriers operating in long-haul markets have faced little competition, and are able to use premium class fares to subsidise economy class cabins. Many new entrant airlines are offering single-class premium services with discounted fares. The viability of this strategy is analysed.

# Is low-cost long-haul economically viable?

**T**he success of low-cost airlines in short-haul markets in North America, Europe and the Asia Pacific over the past 10 years has brought to the fore whether the same phenomenon is possible or likely in the long-haul arena. This requires an analysis of why low-cost carriers (LCCs) have been successful in the short-haul markets, the potential difference in unit costs that new entrant low-cost operators could have over incumbent airlines in long-haul markets, and whether there is room to significantly discount the fares charged by incumbents at a level that is economically sustainable over unit costs.

## Low-cost short-haul

Many new airlines have used a low-cost model to launch short-haul operations over the past 10 years, the most successful of which are: Southwest, jetBlue and Westjet in North America; Ryanair, easyJet and Air Berlin in Europe; and Air Asia and Virgin Blue in the Asia Pacific.

The success of these airlines is due to their ability to achieve a decisive lower unit cost per available seat-mile (ASM) than the incumbent airlines, which has in turn allowed the LCCs to offer genuinely lower fares over a sustained period, thereby stimulating demand and fuelling strong growth rates.

Achieving a low unit cost has partly been thanks to the internet, which together with simplified fare structures and revenue management, has allowed airlines to market directly to customers. The internet also allows airlines to distribute and sell tickets, and collect revenue at a fraction of the cost of traditional systems. The internet has therefore probably been the single most

important factor in the success of low-cost airlines.

Other main areas where low-cost airlines have been able to achieve lower unit costs include: single fleet type policies; higher seating densities and aircraft seat numbers; higher rates of aircraft utilisation; the use of secondary airports; the minimal use of overnight stays at outstations for crews; higher utilisation of legal annual working hours for crews; lower transition training costs for pilots; the legal minimum number of flight attendants; the minimal use of catering; and avoiding the unnecessary use of in-house maintenance where it is economically unjustified. Low-cost airlines also benefit from lower labour cost structures.

In addition, low-cost airlines operate at high load factors, thereby reducing the cost per seat sold.

## Long-haul strategies

Several new entrants have entered the long-haul market, particularly the transatlantic, over the past two years. These include Maxjet, Silverjet, Eos, Zoom Airlines and Oasis Hong Kong Airlines.

The dynamics and economics of long-haul travel are inherently different to short-haul services. While lower fares stimulate short-haul traffic, economy fares only increase slowly as route length increases. The total operating cost per trip rises with route length, so the point is eventually reached when economy fares cannot cover all costs. While trip cost per seat can be reduced by increasing aircraft size, larger seat numbers make it harder for airlines to fill seats and generate sufficient revenue. It is therefore hard to make all-economy services work on long-

haul markets.

Premium fares increase with route length much faster than economy fares, especially the highest fares. These fares are several times higher than the average cost per seat, and legacy carriers use them to subsidise economy classes. Premium-class fares are therefore high enough for new entrants to enter the market by offering discounts over the legacy carriers' fares. This is a common strategy among these new entrants. Low fares stimulate demand, but new entrant long-haul airlines are also able to achieve lower unit costs per ASM.

"The full business- and first-class fares charged by legacy carriers are high, and are used to subsidise their economy-class fares, which can cost just one-tenth of business- or first-class fares," says Joshua Marks, senior vice president of planning and development at Maxjet. "This leaves the legacy airlines wide open to competition from lower business-class fares."

Examples of official fares, including taxes, offered by legacy carriers are up to £4,000 (\$8,000) for a London-New York return on British Airways (BA), and up to £4,500 (\$9,000) on Virgin Atlantic on the same route. By comparison, BA and Virgin Atlantic offer discounted return economy fares as low as £250 (\$500) on the same route.

"Our strategy is to offer a business-class-only service, with fares that are hard for legacy carriers to match," continues Marks. Maxjet's fare structure is a simple system of offering one-way fares from £350 (\$700) to £850 (\$1,700), and availability is determined on a first-come, first-served basis. The highest return fare possible on London-New York is therefore only £1,700 (\$3,400), which is about 40% of the full business-class fare

## ONE-WAY FARES OFFERED BY LEGACY &amp; NEW ENTRANT CARRIERS ON LONG-HAUL ROUTES

Route	One-way business fare \$	Route length nm	Revenue per pax mile \$	Revenue per ASM @ 60% LF	Revenue per ASM @ 70% LF
<b>London LHR-New York JFK</b>					
British Airways	4,000	3,000	1.33	0.80	0.93
Virgin Atlantic	4,500	3,000	1.50	0.90	1.05
Continental	5,000	3,000	1.67	1.00	1.17
Eos-restricted	1,500	3,000	0.50	0.30	0.35
Eos-unrestricted	3,750	3,000	1.25	0.75	0.88
Maxjet	700	3,000	0.23	0.14	0.16
Maxjet	1,700	3,000	0.57	0.34	0.40
Silverjet	1,900	3,000	0.63	0.38	0.44
<b>London LHR-Hong Kong</b>					
British Airways	5,000	5,200	0.96	0.58	0.67
Virgin Atlantic	5,000	5,200	0.96	0.58	0.67
Cathay Pacific	3,550	5,200	0.68	0.41	0.48
Oasis Hong Kong	940	5,200	0.18	0.11	0.13
Oasis Hong Kong	2,000	5,200	0.38	0.23	0.27

in BA's tariff. Maxjet's lowest business class return fare is just £700 (\$1,400).

Maxjet started operations from its London Stansted (STN) base to New York JFK, and has since added Las Vegas. It will commence operations to Washington DC in May 2007, and to Los Angeles in August 2007. It operates a fleet of three 767-200ERs configured with 102 sleeperette seats.

Another new entrant is Oasis Hong Kong, which started operations between London and Hong Kong in late 2006 with a 747-400 configured in two classes. Oasis is the first airline ever to commence operations in the ultra-long-haul market. The airline has the same type of simple fare structure as Maxjet, and has a tariff of one-way fares of £470 (\$940) to £999 (\$1,999), making its highest possible return fare £2,000 (\$4,000). By comparison, full return fares quoted in BA's, Virgin Atlantic's and Cathay Pacific's tariffs range from £3,500-5,000 (\$7,000-10,000).

Similarly, Oasis also provides competitive tariffs in economy class, with return fares of just £150 (\$300) up to £560 (\$1,120), including taxes. These are considerably lower than BA's return economy fares of £440-1,500 (\$800-3,000).

"We realised that a lot of traffic between London and Hong Kong was being taken away from the direct services by carriers such as Finnair and Emirates, which offer connecting services via their respective hubs. Passengers were being tempted away by fares that were lower than those offered by BA, Virgin Atlantic and Cathay Pacific," says Steven Miller, chief executive officer at Oasis Hong Kong. "We simply offer the same fares that are offered on some of these connecting services, which can have an

elapsed time of 16-17 hours, on our direct flight service, which takes about 12 hours. BA and Cathay have not reduced their fares significantly since we started operations, and we have taken traffic from airlines providing connecting services. We also operate used 747-400s, which were acquired at a low capital cost, at a high rate of utilisation on ultra-long-haul flights. These are some of the factors that combine to give us a unit cost advantage over the incumbents."

Another category of new entrant long-haul airline includes those that provide a luxurious business-class service, and focus on high-yielding corporate passengers. Their fares offer smaller discounts over legacy carrier fares.

An example is EOS Airlines, which provides a luxurious service on its operation between London Stansted and New York, like Maxjet. The airline operates 757s equipped with just 48 seats. Each one is 78 inches long in the lie-flat position, and provides 21 square feet of space for the passenger, which Eos claims is about 40% more than its competitors. Eos's fare structure is based on restricted and unrestricted fares. These are \$950-2,950 return for a restricted fare and \$3,750-7,500 for an unrestricted one. Eos's fares are therefore 17-45% cheaper than the \$8,000-9,000 charged by the legacy carriers BA and Virgin Atlantic.

## Comparing fares & revenues

Fares charged by legacy carriers in premium classes are not only higher than economy fares, but are also high when analysed on a per ASM basis at typical load factors. This suggests that there is certainly room for large reductions, which is beneficial to new entrants that

can attain the lowest unit cost per ASM. Fares should be converted to unit revenues received per revenue passenger mile (RPM) and then factored by passenger load factor to get revenue per ASM.

It should be borne in mind that the legacy carriers have formed relationships with the largest corporations, which enjoy significant discounts on the published fares. Marks estimates that large corporations can pay 60-70% of the published fares, although these are still high compared to the fares offered by Maxjet, and other new entrants with similar tariffs such as Silverjet.

Gross business and economy fares charged by legacy and new entrant carriers on the two routes from London to New York and Hong Kong are summarised (*see table, this page*). The business-class fares are full tariff fares. A selection of gross economy and premium economy fares charged by BA and Oasis International on the New York and Hong Kong routes have also been analysed. The gross revenues and unit revenues per RPM for business- and economy-class fares can also be analysed.

The fares have been analysed on a US Dollar basis, since unit aircraft operating costs are in US cents per ASM. The majority of the fares were first quoted in UK Pounds and then converted to US Dollars at the current exchange rate of \$2.00 per £1. This provides relatively high revenues, since the US Dollar has been less than \$2.00 to the UK Pound for the past 15 years.

Single-sector US Dollar fares are then expressed in terms of gross revenue per RPM over the great circle distance of the route. These revenues are then expressed in rates per ASM, based on different load factors of 60% and 70% in business class. While relatively simple, this gives an indication of the gross unit revenues received per ASM. Net revenues will be lower once various taxes have been deducted from gross fares, and several fare levels and discounts are also provided, which will all combine to produce a lower yield mix and revenues per ASM. The analysis nevertheless illustrates the differences between the legacy carriers and the new entrants.

The highest gross fares charged by BA and Virgin Atlantic in business class and by Continental in its BusinessFirst class on the New York route are equal to \$1.33-1.67 per RPM, and equal to 93-117 cents per ASM with the cabin filled at 70% load factor (*see table, this page*). This compares with 40-88 cents per ASM for the highest gross fares charged by Maxjet, Silverjet and Eos Airlines. The highest restricted fare charged by Eos is equal to 35 cents. These unit revenues are therefore less than half those received by the legacy carriers.

*Maxjet operates with about 100 seats in an all-business class configuration on used 767-200ERs. Its fare structure is simplified, with one-way fares between London and New York at \$700 to \$1,700.*

In contrast, the lowest and highest gross economy fares offered by legacy carriers are equal to revenues of 7.5-35.5 cents per ASM when operating at a 70% load factor, but do rise to 8.5-40.5 cents per ASM at an 80% load factor. The lowest economy class tariffs are close to or even lower than the total unit cost per ASM for medium and large widebodies on long-haul routes.

These economy-class unit revenues illustrate how the revenues generated from premium classes are used to subsidise the economy cabin.

Hong Kong is another route with a new entrant offering low-cost fares. The full business-class tariffs charged by BA and Virgin Atlantic are higher on this route than the Tokyo route, although the two have similar stage lengths. Full business-class fares at a 70% load factor are up to 67 cents per ASM. This compares to equal to just 27 cents per ASM for the highest one-way business-class fare charged by Oasis Hong Kong, and is equal to just 13 cents per ASM for the lowest business-class fare available from Oasis.

In comparison, BA's economy class fares range from 6.8 cents to 32 cents per ASM when expressed at an 80% load factor, and therefore overlap the full range of business-class fares offered by Oasis. Moreover, Oasis's economy-class fares are equal to revenues of only 2.3-8.6 cents per ASM at the same load factor.

## Cost advantages

Long-haul airlines have fewer options or strategies available to them for reducing unit cost per ASM than do short-haul carriers. Long-haul operations already have inherently low unit costs per ASM, mainly because of the combination of long route distances and the size of aircraft used. These two factors result in high aircraft ASM productivity. Long-haul aircraft typically generate 4,500-5,000FH per year, equal to 12-14FH per day. It is hard for airlines to increase their levels of utilisation, because they have to maintain departure and arrival times that are attractive to high-yield premium passengers. Other issues limiting improvements in aircraft utilisation are downtime required for maintenance, airport curfews, time zone differences, and operations to a mix of cities on a route network.

"There is also the further issue of the



trade-off between schedule reliability and aircraft utilisation," says Marks.

"Downtime is required for maintenance, and schedule reliability will suffer if aircraft are pushed too hard. There is also a trade-off between utilising used aircraft with lower financing costs and schedule reliability, and utilising new aircraft that can achieve higher system reliability. We took the option of operating used 767-200ERs that were built between 1984 and 1989, and have a spare aircraft so that we can maintain system reliability. This has to be considered in relation to their lease rentals, which are low compared to new aircraft."

Carriers can gain advantages when operating only on ultra-long-haul routes. "We so far only operate two used 747-400s on London-Hong Kong, which has a flight time of about 12 hours," says Miller. "Because of scheduling constraints and because we are not operating any other routes yet, we achieve about 13 hours per day with our aircraft. We are acquiring another three used 747-400s and are starting operations on HKG-Vancouver in June 2007. We will later add other destinations to either the West Coast of North America or Western Europe. Because we will be operating exclusively on ultra-long-haul routes, we will be aiming to get our average daily utilisation up to 16-17 hours."

While legacy airlines can use high seating densities to improve aircraft productivity, this is not an option for new entrants. All those airlines offering a business-class-only service lack the high seat numbers of an economy-class cabin for reducing unit costs, while the use of only business class reduces seat numbers and increases cost per seat.

So far all new entrants in the long-

haul market have taken the option to operate used aircraft. It is hard for any new entrant to acquire new aircraft, particularly when industry demand for aircraft is high. New entrants have no proven track record or credit rating. "We might consider the 777 if we were to change to new aircraft," says Miller, "but it is expensive at \$120-140 million compared to \$40-60 million for the 747-400s that we have acquired from Singapore Airlines and All Nippon Airways. All five aircraft are in good condition, and we have maintained a high on-time performance with them. We can keep these aircraft for several years, and always have the freighter conversion market as a possible outlet when we want to sell them."

"Although we have 102 seats in our aircraft, having a single cabin class results in savings from simplicity, because we avoid incurring the costs that result from the complexity of offering a three- or even four-class service," says Marks. "This is because multiple-class services have a surplus of flight attendants, space is wasted, surplus catering and passenger services are carried, and there is wastage and spoilage. The increased cost and complexity of revenue management also affect reservations and all items relating to the cost of sales."

Catering and other costs relating to passenger services will be similar for legacy and new entrant carriers. New entrants such as Silverjet can have even higher passenger service costs when offering a luxurious product.

New entrants can make savings in crew costs. "While legacy carriers use their highest-paid pilots on long-haul services, our salary scales are lower and so deliver us a cost advantage," says



Marks. "Like all other new entrants in the long-haul market, our strategy is to use a single aircraft type, thereby avoiding the costs that other airlines have of transition training when pilots get ratings for other aircraft types. Having one aircraft type also results in higher crew scheduling efficiency, and contributes to an overall lower labour cost structure."

Miller adds that Oasis, being a new airline, was able to avoid the inherent costs borne by legacy carriers. "Our crews are based in the UK, which means that we did not have to relocate them to Hong Kong. We therefore avoided all the costs of relocation, and providing medical insurance and other benefits," says Miller. "Using a single type also eliminates transition training costs."

Unlike short-haul operations, new long-haul entrants can only gain small strategic advantages when operating from secondary airports. "Operating from London Heathrow would be expensive because of the congestion, but we still need to operate from a major airport with good facilities and catchment area. This is why we chose London Stansted, which also provides some savings," says Marks. New entrants still have to provide the same preferential check-in treatment for business-class passengers and lounges, and so cannot gain advantages in airport fees and handling costs.

One major cost advantage that new entrants can exploit is an overall lower labour cost, starting with lower salary scales. New entrants with single fleet types, single-class services, simplified fare structures and revenue management, and outsourced activities, are able to employ fewer staff per passenger flown and reduce the total cost of employing each

staff member. This also goes in hand with the lower overheads of new entrants.

"Being a new airline we have inherently lower costs," says Miller. "We outsource many of our activities. We use a call centre, for example, for reservations and do this for half the cost that we could do it if it were done in house."

New entrants have also concentrated their efforts to maximise the use of their own websites to generate reservations. "Our marketing, distribution, ticket sales and revenue accounting costs can be much lower than those of legacy carriers," claims Marks. "We sell more than 80% of our tickets through our website, but we still have a presence with travel agencies."

## Economics

The economics of low-cost long-haul operations can be examined in several respects.

The first of these is to see how much of a cost advantage these airlines can achieve over incumbents following the various strategies described.

The second is to analyse how aircraft trip costs convert to average cost per seat and cost per ASM.

The third is to examine the average net revenue per seat required at different load factors to cover aircraft trip costs, and the average yield required, and how these compare with the tariffs of the different airlines in the market.

Two scenarios are examined which broadly reflect the operating conditions of legacy and new entrant airlines. The first is the London-New York market, and other routes of about 3,500nm. The second is ultra-long-haul routes of about 5,500nm.

*Unlike many other new entrants in the long-haul market, Zoom of Canada has an all-economy class service with discounted fares.*

The first transatlantic scenario has been examined with a used 767-200ER and a used 767-300ER, both configured in a generous all-business-class arrangement similar to that are offered by carriers such as Maxjet and Eos. This gives the aircraft 105 and 135 seats respectively. These have been compared with the A330-200 and 777-200ER, both acquired new and operating in typical tri-class configurations of 237 and 284 seats, in a legacy style of operation (see table, page 34). These seat numbers include 40 premium-class seats on the A330-200 and 54 premium-class seats on the 777-200.

Aircraft utilisation can be a main factor influencing costs per seat. The A330-200 and 777-200 are assumed to achieve about 4,500nm per year, but the 767s have been analysed with the assumption that they only generate 3,500FH per year. This accounts for the possibility that a new entrant would need to have a larger fleet of used aircraft to maintain system reliability at a competitive level.

A fuel price of \$2.05 has been applied to fuel burns for each aircraft on the route, and the analysis also assumes that new entrants gain no particular advantage in aircraft maintenance costs. Savings are likely, however, for some elements of maintenance costs.

A flightcrew complement of two has been used, and salaries for the highest scales of US airlines have been used for the A330-200 and 777-200, while medium-level salaries of US carriers have been used for the 767s. This reflects the probable cost structures of new entrants versus incumbent carriers. Pilots with the new entrants are assumed to generate 750FH per year, compared to 700FH for pilots working for legacy carriers. The additional costs of employing crew for the new entrants will also be lower than for legacy airlines if the new entrants can avoid transition training and other costs.

The 767s both use six flight attendants, while the A330-200 requires nine and the 777-200 uses 10. The larger number on the bigger aircraft not only reflects the higher number of seats, but also the effect of having three cabin classes.

Catering and all cabin service costs are assumed at \$110 per seat for first class, \$85 per seat for business class, and \$19 per seat for economy class.

The 767-200ER's total cash cost

*Oasis Hong Kong Airlines is the first start-up airline to commence services in the ultra long-haul market. It operates daily between London and Hong Kong, and offers fares similar to legacy carriers which have connecting services that transit via their hubs in Europe and the Middle East.*

totals about \$43,800, and the 767-300ER's is a little higher at \$48,300. This compares to the A330-200's cost of \$52,200, and \$59,000 for the 777-200.

Aircraft lease rentals also have to be considered. In the case of the 767s, the market rates for aircraft built in the late 1980s or early 1990s are about \$40,000 per month for the -200ER and \$65,000 per month for the -300ER.

Lease rentals for the A330 and 777 are based on current market rates for aircraft that are six to seven years old; representing the typical age of aircraft operated by legacy carriers. These are \$750,000 per month for the A330-200, and \$875,000 per month for the 777-200ER.

This provides a total aircraft-related trip cost of \$44,900 for the 767-200ER, \$50,000 for the 767-300ER, \$67,600 for the A330-200 and \$76,900 for the 777-200 (see table, page 34). While these are clearly higher for the latter two, they have more seats over which to absorb cost. These trip costs translate into unit costs per ASM of 12.2 cents for the 767-200ER, 10.6 cents for the 767-300ER, 8.1 cents for the A330-200, and 7.7 cents for the 777-200ER (see table, page 34).

The ultra-long-haul operation has been analysed with the 747-400 being used by a legacy and new entrant carrier. The 777-200ER and 777-300 being also analysed. The 747-400 for the new entrant has been examined in two classes with a total of 359 seats. This is the same as Oasis Hong Kong's configuration, and with 397 seats in three classes for the legacy carrier, which is a typical layout. The 777-200ER and -300ER have been examined with 284 and 340 seats, both in three classes (see table, page 34).

All aircraft have been assumed to generate annual utilisations of 4,750FH, equal to about 13FH per day.

A flightcrew of four has been used for all types, assuming that airlines would carry two supernumerary crew on routes of this length. The salary scales of senior pilots from US airlines have been used.

A crew of 14 flight attendants has been used for the 777-200ER, and a crew of 17 for the 777-300ER and 747-400.

Catering and cabin service costs are higher than for the 3,500nm route, and are \$125 per seat for first class, \$100 per seat for business class and \$25 per seat for economy class.



Total cash operating costs are \$92,750 for the 777-200ER, \$103,000 for the 777-200 and \$129,000-131,000 for the 747-400 under both styles of operation.

Lease rates for average aged aircraft have been used for the legacy carrier, and a lease rate of \$72,000 per month has been applied for the used 747-400 operated by the new entrant. This more than offsets its marginally higher maintenance costs.

Lease rates for a six to seven year old 747-400, and a younger aged 777-200ER and 777-300ER to reflect the typical age of these aircraft used by legacy carriers. These are \$800,000 per month for the 747-400, \$875,000 per month for the 777-200ER and \$1.0 million per month for the 777-300ER.

Total aircraft-related costs are \$118,000 for the 777-200ER, \$132,400 for the 777-300ER and \$154,700 for the 747-400 when operated by the legacy carriers, and \$131,500 for the used 747-400 (see table, page 34).

These are equal to costs per seat of \$390-417 for the 747-400, 777-300 and 777-200ER in a legacy-style operation, and \$366 per seat for the new entrant operating a used 747-400. These equal unit costs per ASM of 8.3 cents for the 777-200ER, 7.8 cents for the 777-300 and 747-400 when all operated by a legacy carrier. The new entrant with the 747-400 benefits with a lower unit cost of 7.3 cents per ASM.

### Revenues versus costs

These costs exclude ground and passenger handling at airports or an element for airline overheads. Taxes also have to be deducted from gross fares, as

do costs relating to ticket sales to provide net revenues from tickets. The revenues required to cover the costs described are therefore net of taxes and cost of sales.

When these trip and unit costs are analysed in terms of typical load factors, the required average net revenue per seat and net yield per seat that will cover these costs can be determined.

In the first scenario of transatlantic routes, the used 767s configured in an all-business class arrangement require higher net revenues per seat than the A330 and 777-200. The 767-200ER requires a net revenue of \$610 and \$710 per seat at load factors of 60% and 70%, and the 767-300ER requires \$530 and \$620 per seat at the same load factors (see table, page 34). The benefits to the airline of being able to increase passenger load factors from 60% to 70% are clear.

These rates are \$200-220 more per seat than the A330 and 777-200 in the case of the 767-200ER, but only \$140-165 more than in the case of the 767-300ER.

These costs per seat for the used 767s compare to Maxjet's one-way net fares of \$700-\$1,700 on London-New York, and Silverjet's fares of \$900-1,900 on the same route.

The net fare, after taxes, will have the cost of sales-related items deducted before leaving a net fare, which has to cover these costs per seat, of \$530-710. The costs of ground handling and airline overheads also have to be covered.

Maxjet's lowest fare of \$700 covers the cost per seat for a 767-200ER at a 60% load factor. The airline has a further five higher fares that should generate a high enough yield mix to cover all costs. Even an average net yield of \$800 at a load factor of 60% on the 767-200ER

## ANALYSIS OF LONG-HAUL OPERATIONS REVENUES &amp; COSTS

Aircraft	767-200ER New entrant	767-300ER New entrant	A330-200 Legacy	777-200 Legacy
Route length nm	3,500	3,500	3,500	3,500
Total seats	105	135	237	284
Total trip cost-\$	44,828	49,983	67,556	76,876
Trip cost per seat	427	370	285	271
Unit cost per ASM-cents	12.2	10.6	8.1	7.7
Break-even revenue per seat at 60% load factor-\$	712	617	475	451
Break-even yield per seat at 60% load factor	20.3	17.6	13.6	12.9
Break-even revenue per seat at 70% load factor-\$	610	529	407	387
Break-even yield per seat at 70% load factor	17.4	15.1	11.6	11.0

  

Aircraft	777-200ER Legacy	777-300ER Legacy	747-400 Legacy	747-400 New entrant
Route length nm	5,000	5,000	5,000	5,000
Total seats	284	340	397	359
Total trip cost-\$	118,300	132,400	154,700	131,500
Trip cost per seat	417	389	390	366
Unit cost per ASM-cents	8.3	7.8	7.8	7.3
Break-even revenue per seat at 60% load factor-\$	695	649	649	611
Break-even yield per seat at 60% load factor	13.9	13.0	13.0	12.2
Break-even revenue per seat at 70% load factor-\$	595	556	557	523
Break-even yield per seat at 70% load factor	11.9	11.1	11.1	10.5

would generate \$50,400 in revenue, leaving \$6,000 to cover handling and sales-related costs. A higher net yield of \$900 at 70% would generate \$66,000, leaving \$21,000 to cover the same costs.

Silverjet's lowest fare is higher at \$900, and its higher fares provide enough margin to cover all probable costs.

The strategy of using an all-business class configuration and offering discounted fares is clearly a feasible strategy.

The benefits of higher load factors are two-fold: not only does average cost per seat reduce, but average net yield and yield mix also increase as fewer seats and higher fare brackets are available.

In the ultra-long-haul market, the used 747-400 operated by a start-up carrier requires average net revenues of

\$611 and \$523 per seat when operating at load factors of 60% and 70% (see table, this page). The average net revenues required per seat are higher at \$557-649 for the aircraft operated by a legacy carrier, thereby explaining the need for these airlines to use premium cabins to subsidise the economy cabin.

Taking the fares of Oasis as an example, it can be seen how the trip costs of \$132,000 for the 747-400 can be covered, leaving an adequate margin to cover passenger taxes, the cost of ground and passenger handling, company overheads, and costs relating to the process of ticket sales. Oasis's one-way business-class fares are \$940-2,000, so an average fare of \$1,200 at a load factor of 70% will therefore generate \$67,000 of revenue. Economy fares are \$300-1,120

and an average fare of \$550 and load factor of 80% will generate a further \$118,000 on revenue. This will leave a margin of \$53,000 to cover all other cost items.

## Future developments

The long-haul market has so far seen just a few examples of airlines that have started services on some of the world's busiest routes. There are clearly many more routes that could be operated by new entrants from London alone. Nevertheless, it is too early to see how successful these carriers will be in the long term, and there are only a few indications to suggest that some of these are succeeding financially.

The main targets for new entrants will clearly be the busiest routes in the world's three main long-haul markets, plus a few others such as Johannesburg-London. "While east-west markets have become more liberalised, north-south markets are still restricted," says Marks. "The entry of new entrants is more likely on routes of eight to 11 hours like the transatlantic, and less likely on routes longer than 12 hours."

The Open Skies agreement that was agreed between the US and Europe in April 2007 is a major step towards a large number of new services being started across the Atlantic. Ryanair's chief executive, Michael O'Leary, has already stated that the carrier will launch a new long-haul subsidiary to offer services across the Atlantic with competitive fares.

Established new entrants will expand their operations. "We already have licenses to San Francisco, Chicago, Cologne, Berlin and Milan from Hong Kong, and are applying for more," says Miller. "The Hong Kong government has been very supportive of us, since it is keen for Hong Kong to remain a hub, rather than become a spoke city for other hubs such as Dubai and Helsinki. It is also difficult for Cathay Pacific and BA to offer the fares that we can offer, so we all have a common theme of serving the city with direct services."

The airlines that are able to grow the fastest, or that have the financial resources to expand their operations, will be able to reach economies of scale that allow them to reduce their overall cost base and so offer additional fare discounts to further stimulate traffic. New entrants have yet to take large volumes of traffic from the legacy airlines, but medium and large corporations will become more aware of the savings they can make when sending groups of executives on business. **AC**

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