This report is the third in a series on the airline industry produced by The Boston Consulting Group’s travel and tourism practice. Other topics include understanding the demand for air travel, the impact of China and India on long-haul travel, and the role of the megahub in future airline traffic flows.

Middle Eastern carriers have been the fastest-growing long-haul carriers in recent years. The largest of them—the Dubai-owned Emirates Airline—has grown at a rate of more than 20 percent per year over the past decade. And there is more to come. Emirates itself accounts for more than one-quarter of all orders for the A380 “superjumbo,” as well as for a substantial number of midsize long-haul aircraft, while Qatar Airways and Abu Dhabi-owned Etihad Airways are attempting to replicate Emirates’ phenomenal success with aggressive fleet plans of their own.

Competitors are eager to know whether these ambitious growth plans are achievable, where the new capacity is likely to be deployed, what sources of advantage the Middle Eastern carriers might leverage, and what responses might be possible.

Our analysis of Middle Eastern carriers’ growth plans and sources of advantage indicates that they are likely to deploy the lion’s share of their new capacity on flights eastward out of Europe and back. That is where they have significant cost advantages—and some limited hub-driven advantages—over most other carriers, particularly European-based competitors. When these advantages are combined with the resolve of government owners who have access to considerable resources—and who see the airlines’ growth as crucial to national development—it is clear that European and Asian airlines are going to be facing large new blocks of low-cost capacity in the Europe–Asia corridor.

But there is also the demand side to consider. Despite having an attractive product, competitive prices, and appealing layover stops for leisure travelers in their hub nations, Middle Eastern carriers are likely to struggle in competition for the all-important business flyer on Europe–Asia routes. That has significant

1. We consider the Europe–Asia corridor to include all flights between Europe and Australasia (Australia and New Zealand), as well as all other Europe–Oceania flights, unless otherwise noted.
implications both for their overall relative advantage and for the way that incumbent end-point carriers can compete. At the end of this report we recommend a number of actions that incumbent carriers can take to leverage their own positions of strength and minimize the competitive impact of the growth of Middle Eastern carriers.

Massive but Credible Fleet Expansion

The size and audacity of the fleet orders announced by Middle Eastern carriers have dominated industry headlines. Although these carriers currently fly just 9 percent of long-haul seats, they are responsible for nearly a quarter of all global long-haul aircraft orders over the next decade. Emirates is the largest buyer, accounting for around 70 percent of all new Middle Eastern long-haul orders, and it plans to triple its capacity over the next six to eight years. If it succeeds, Emirates will catapult ahead of a dozen bigger airlines to become the world’s largest long-haul carrier by 2012. (See Exhibit 1.) Not only are the Middle Eastern carriers ambitious, they are also

2. By *end-point carriers* we mean airlines based in one of the regions at either end of an origination-destination city pair. They can (but do not always) offer nonstop flights. *Midpoint carriers* are those that are situated between the two regions of a city pair. The global regime of bilateral air rights means that international carriers have to carry the bulk of their passengers to, from, or via their home country.

3. This report focuses on Emirates Airline as the implicit champion and pioneer company, but our conclusions are applicable to long-haul Middle Eastern carriers as a group. Our research is based on publicly available information, and the conclusions we draw are ours alone. Neither Emirates nor any other airline played a role in the preparation of this report, and we make no representation as to any airline’s actual views or plans.
resolute. Each carrier is backed by government owners who are determined to attract new nonoil-related economic activity into their countries. They plan to create large regional transport hubs, achieving critical mass quickly through dramatic fleet expansions and related infrastructure development.

For these governments then, rapidly expanding airlines are not just a matter of national pride; they are a critical plank in their economic-development strategy. Given the significant amounts of oil-driven national wealth that Middle Eastern carriers have access to, it would be risky for a competitor to assume that these airlines will not have the resolve to implement their aggressive plans.

But resolve is one thing; execution is another. Questions have been raised about the ability of the Middle Eastern carriers, and Emirates in particular, to secure sufficient labor resources and overcome other supply-side constraints associated with scaling up their business models.

We maintain an open mind on these issues. On the one hand, the absolute level of growth that Emirates is planning has never been attempted before (let alone achieved) in the airline industry, and airspace requirements and the need for hub coordination could impose real constraints in Dubai. On the other hand, Emirates has had an outstanding track record of growth over the past 15 years, and the Middle Eastern countries have been very successful at attracting and retaining foreign labor—skilled and unskilled—in large quantities.

Looking to Europe and Asia

Assuming that Middle Eastern carriers can clear the operational hurdles to their growth, can they deploy all their on-order aircraft? If so, where? Will they be able to remain within their current Middle Eastern footprints, or will they have to rely on new geographical areas?

To answer these questions, we compared Emirates’ fleet plans with our analysis of future patterns of long-haul demand. We found that although Emirates may struggle to secure rights and airport access in some cities and countries, the airline should be able to deploy its new fleet fully through its current Dubai hub, with new markets, such as South America and the west coast of the United States, making only modest contributions to overall expansion. We also found that Emirates’ new capacity will be very heavily concentrated on flights eastward out of Europe and back.

These findings are presented in Exhibit 2, which shows a pattern of growth that would allow Emirates to deploy all of its

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EXHIBIT 2

EMIRATES WILL REQUIRE AGGRESSIVE GROWTH IN MOST MARKETS

<table>
<thead>
<tr>
<th>Routes involving Europe</th>
<th>Routes not involving Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America–South Asia routes</td>
<td>28</td>
</tr>
<tr>
<td>Europe–Africa routes</td>
<td>36</td>
</tr>
<tr>
<td>Europe–Asia routes (including Australasia/Oceania)</td>
<td>18</td>
</tr>
<tr>
<td>Other routes not involving Europe (for example, Asia–South America routes)</td>
<td>4</td>
</tr>
<tr>
<td>Routes to and from Dubai (beginning or ending in Europe)</td>
<td>10</td>
</tr>
<tr>
<td>Routes to and from Dubai (beginning or ending in non-European countries)</td>
<td>7</td>
</tr>
<tr>
<td>Short-haul routes within the Middle East</td>
<td>9</td>
</tr>
<tr>
<td>Number of seats, 2005 (millions)</td>
<td>13.5</td>
</tr>
<tr>
<td>CAGR (%)</td>
<td>28</td>
</tr>
</tbody>
</table>

SOURCE: BCG analysis.

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4. The governments of Dubai (Emirates Airline), Abu Dhabi (Etihad Airways), Qatar (Qatar Airways), and Bahrain/Oman (Gulf Air) are the sole owners of these airlines.
planned fleet by 2012. 5 Although we used very aggressive assumptions for Emirates’ passenger growth on corridors such as North America–South Asia and Europe–Africa (a compound annual growth rate of 56 percent and 28 percent, respectively, from 2005 to 2012), they only begin to scratch the surface of the new capacity Emirates will procure. Assuming more modest growth on routes in which the airline already has a mature position—inside the Middle East, for example, and on flights originating from or destined for Dubai (4 percent and 7 percent per year, respectively)—Emirates would need to achieve a growth rate on Europe–Asia routes of 18 percent per year to make its fleet plan work. 6 That is more than three times what we would expect the underlying rate of demand growth to be on routes between Europe and Asia, and it implies an increase in Emirates’ estimated Europe–Asia market share of up to 5 percentage points. 7

Add Cost Advantage to Resolve and Ambition

What about the size, source, and nature of the much-touted “low-cost” positions of Middle Eastern carriers? Do they, in fact, exist?

Exhibit 3 shows the long-term underlying differentials in unit cost among representative long-haul carriers from each major region. 8 It is based on a bottom-up analysis that standardizes for factors such as route lengths and products, and focuses on key differences in underlying cost drivers, such as labor rates, productivity, utilization, tax rates, and the

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5. Note that this discussion and exhibit show only one potential pattern of passenger growth that would allow Emirates to use all of its on-order fleet. A limitless number of patterns are theoretically possible. Note also that this discussion is about passenger flows (or origin-destination demand) rather than scheduled seats flown.

6. We are assuming that Emirates will not focus on short-haul flights within the Middle East. However, it is highly possible that—in line with Dubai’s aggressive tourism plansoverall origination-and-destination growth rates out of and into Dubai may be higher than the forecasts for the Middle East overall that we used in our analysis.

7. For a discussion of the distinction between underlying demand and actual rates of growth, see the first report in this series, Understanding the Demand for Air Travel: How to Compete More Effectively, BCG Focus, June 2006.

8. Unit costs are costs per available seat kilometer (ASK) flown.

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EXHIBIT 3
NORTH AMERICAN AND EUROPEAN LONG-HAUL CARRIERS HAVE AN UNDERLYING UNIT-COST DISADVANTAGE

<table>
<thead>
<tr>
<th></th>
<th>Operating costs</th>
<th>Cost of capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle Eastern flag carrier</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Asian flag carrier</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td>North American flag carrier</td>
<td>118</td>
<td></td>
</tr>
<tr>
<td>European flag carrier</td>
<td>121</td>
<td></td>
</tr>
</tbody>
</table>

Underlying total unit cost (modeled) for a 7,000-kilometer route (Indexed, Middle Eastern carrier = 100)

Source: BCG analysis.
cost of capital. On this like-for-like basis, the Middle Eastern carriers have an estimated 18- to 21-percent long-term total-unit-cost advantage over their North American and European competitors—thanks primarily to low labor-unit costs and the absence of corporate taxes. By the same token, however, they are on a par with many of their Asian competitors.

Tempering Middle Eastern carriers’ unit-cost advantage are per-flight cost penalties that they incur by virtue of the location of their hubs. These penalties fall into three categories. First, there is the longer flight path that is often necessitated when flying via the Middle East, particularly between cities that are some distance north of the equator. Second, there is the cost of an additional stop wherever there is an end-point European or Asian carrier that can fly directly between a city pair. And third—the most subtle of penalties—there is the additional cost associated with the technical inefficiencies of flying two medium-haul legs rather than a short-haul leg coupled with a long-haul leg, even if total flight distance is the same.

The net impact on overall flight costs of these countervailing hub-cost disadvantages will be specific to each route and carrier. Take the example of three airlines flying between London and Mumbai: two end-point carriers (a Europe-based and an Asia-based airline) fly the route non-stop, whereas a Middle Eastern carrier makes a “midpoint” stopover. According to our analysis, the Asia-based airline will have the lowest total trip costs, but the Middle Eastern carrier actually does better than the Europe-based carrier on this route because its unit-cost advantage is large enough to outweigh the fact that it has to fly slightly farther than the European carrier and make a stop along the way.

The cost advantage of Middle Eastern carriers is least pronounced when they have to make an extra stop en route.

To gain an understanding of Middle Eastern carriers’ overall cost competitiveness versus that of European carriers on Europe-Asia routes as a whole, we performed for every Europe-Asia city pair the same sort of analysis described above for the London–Mumbai route and aggregated the results. (See Exhibit 4, on page 6, in which Emirates serves as a surrogate for all Middle Eastern long-haul carriers.) For 39 percent of passengers flying between Europe and Asia, Middle Eastern carriers could have a total cost advantage over their European competitors, according to this analysis. If we assume a subsidized model for the Middle Eastern carriers, their cost advantage increases to 54 percent of passenger volume.

As one might expect, the cost advantage of Middle Eastern carriers is least pronounced when they have to make an extra stop en route (the first, third, and sixth columns in Exhibit 4). In these situations, Middle Eastern carriers will have cost advantages over European carriers only when either the origination or destination city or both are some distance south of the equator (on the route from London to Mumbai, for example), so the extra distance they must fly is not significant. For nonstop flights on European carriers versus one-stop flights on Middle Eastern carriers, the cost advantage of Middle Eastern carriers accrues on 6 percent of passenger volume; for one-stop versus two-stop flights, their advantage accrues on 22 percent. Where the number of stops is equal (columns

9. Total unit cost equals operating costs per ASK plus the cost of capital (debt and posttax equity-return requirements) per ASK. We have not assumed any fuel-cost advantages for Middle Eastern carriers.

10. We address the revenue disadvantages associated with the geographical position of Middle Eastern hubs later in this report.

11. Note that the costs associated with an additional stopover include not only extra airport, passenger, and baggage-handling charges but also significant amounts of fuel for each additional takeoff and landing.

12. This assumes that aircraft of the appropriate size is used on each leg.

13. For purposes of comparison and in keeping with our focus on the true underlying cost position of various airlines by region, we have assumed aircraft of similar types and ages. However, our conclusions do not change substantially when aircraft of types and ages specific to different airlines are factored in.

14. In this analysis, we are excluding Europe–Oceania routes, which currently require a “technical stop” in Asia or the Middle East because of the distances involved.

15. Our subsidized model assumes that the government owner does not demand any return on its equity investment and that no landing or takeoff charges are applied at the Middle Eastern hub stop.
two and five), Middle Eastern carriers can expect a cost advantage over European carriers for approximately 62 to 80 percent of passengers.

Middle Eastern carriers will have the clearest cost advantage when their status as midpoint hubs allows them to offer one less stop than end-point incumbents. This situation arises wherever their ability to draw on multiple continents for feeder traffic allows Middle Eastern carriers to reach critical scale out of small and midsize cities earlier than end-point carriers (which can draw only on their own continent). However, as the narrowness of the fourth column in Exhibit 4 indicates, this advantage can be expected to accrue on only a relatively small proportion (about 6 percent) of Europe–Asia passenger volume.

What of the Lucrative Business Passenger on Europe–Asia Flights?

We have established that the ambitious fleet plans of Middle Eastern carriers are potentially viable in terms of operations, that they are likely to be implemented, and that the bulk of the impact will be on routes between Europe and Asia. We have also demonstrated that these airlines’ resources and determination to grow are backed up by some significant cost advantages.

But how will Middle Eastern carriers fill their planes? What type of passenger and—more important—what revenue quality are they likely to attract?

Middle Eastern carriers certainly have the ability to put forward a strong customer proposition. Foremost is price: low costs, combined with an ownership base that has a long-term planning

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16. This is the basis for the frequently repeated claim that Middle Eastern carriers’ geographical position “at the crossroads of three continents” constitutes a significant source of advantage.
horizon and is eager for growth, allow these carriers to make competitive—and sometimes loss-leading—offers. They can also offer free or subsidized stopover packages for consumers tempted by a rain-free, luxury-filled holiday and shopping destination. And although it is difficult to generalize about in-flight product and service, it is fairly clear that most Middle Eastern carriers at least match the options of most other airlines in all cabins.

From the demand perspective, however, Middle Eastern carriers have an Achilles’ heel on Europe–Asia flights in that their midpoint stop will often entail disruptions or additional flight time. On balance, this may not be a large issue for leisure travelers, who are usually willing to put up with a certain amount of inconvenience in order to secure a lower fare or a new experience (which a stopover package would provide). But it could be a significant issue for business travelers, who may have to wake up during the journey to change aircraft, particularly on overnight Europe–Asia trips.\(^\text{17}\)

This disadvantage in the business passenger segment is compounded by the fact that Middle Eastern carriers have not become members of major alliances, which robs them of valuable network and loyalty pull.\(^\text{19}\) What’s more, as relative newcomers to most significant business markets, they have a weaker corporate-distribution presence than incumbent carriers.

All these factors strongly suggest that Middle Eastern carriers will be at a relative disadvantage when it comes to competing for business passengers. The significance of being “under share” in premium passengers is hard to overstate in an airline environment. Indeed, the resulting yield disadvantage can often outweigh even significant cost advantages.

This potential weakness has serious implications for the overall competitive impact of Middle Eastern carriers, especially in the crucial Europe–Asia market, where the bulk of their additional capacity is likely to be deployed. Although it does not necessarily compromise the ability of Middle Eastern carriers to achieve the growth they are aiming for or affect their competitive cost position, it does suggest that important positions of advantage will be left for end-point carriers, especially those airlines that take steps to reduce their unit-cost disadvantage.

How Incumbent Carriers Should Respond

So despite their cost, capacity, and ownership advantages, Middle Eastern carriers can’t declare complete victory yet. Although the Middle Eastern juggernaut can’t be stopped in toto, individual North American, Asian, and European carriers can still play a strong role in influencing where and how (and in some cases, whether) Middle Eastern carriers will succeed in becoming their competitors.

Incumbent carriers need to start with a full understanding of where they are likely to face potential Middle Eastern competition. For instance, we expect that Emirates’ footprint alone will be large enough for it to compete on 65 percent of all Europe–Asia routes and on 90 percent of all South Asia–North America routes but that the airline will not be able to compete through its Dubai hub on Europe–North America routes.\(^\text{19}\)

Once they understand the potential scope of competition from Middle Eastern carriers, incumbent carriers should establish, on a route-by-route basis, where that competition will be most potent. As we have seen, Middle Eastern carriers will tend to find it less economical to compete on routes where the level of demand justifies nonstop service or where going through the Middle East involves a lot of additional flying time. On such routes, even high-cost carriers will find that the amount of cost reduction required to become competitive against a Middle Eastern carrier may not be as formidable as they assumed.

17. This will be less of an issue on Europe–Oceania routes, which always require a technical stopover and more than 20 hours of flying time.
18. Emirates, for example, has been quite resolute in refusing to join an alliance.
19. The estimate relating to Europe–Asia routes includes 90 percent of all Europe–Oceania routes.
Finally, and most important, incumbent carriers should think about their revenue competitiveness against Middle Eastern carriers. They need to maintain and bolster their presence on routes in which their ability to attract business travelers and other premium traffic is highest, and then leverage that advantage onto other city pairs.

We have identified a set of “sweet spot” routes on the Europe–Asia corridor characterized by a large absolute and relative number of business travelers—that is, at least 100 high-yield passengers per day. These routes, which represent 23 percent of all Europe–Asia passenger volume, are indicated on and above the curved line in Exhibit 5; prominent examples are London–Hong Kong, Paris–Tokyo, and Frankfurt–Beijing. Incumbent carriers can further leverage these sweet-spot routes to attract business passengers traveling between city pairs that are too “thin” to warrant daily direct service. (Such city pairs account for 59 percent of all Europe–Asia passenger volume.)

Overall, we estimate that more than 30 percent of all Europe–Asia passengers can be won and “quarantined” from significant Middle Eastern competition. For their part, Middle Eastern carriers have a strong presence among city pairs that do have enough traffic to warrant daily direct service but that offer fewer than 100 business travelers a day. In this sector, which accounts for 18 percent of passenger volume, Middle Eastern airlines can woo consumers with stopover packages and lower prices.

In focusing on their sweet spots and positions of strength, incumbent carriers need to go beyond current business as usual. It is critically important that they bring costs down to a level where any remaining disadvantage vis-à-vis Middle Eastern carriers is at least commensurate with the expected revenue advantage. Just as important, they need to align decisions about their aircraft fleets with this strategy. For example, a focus on serving primarily business passengers and achieving a revenue premium is far more suited to smaller B787 and A350 aircraft than to the larger B747 and A380 planes, even on relatively “thick” routes.20 And all customer-facing elements of the airline—product, network, distribution, service, and marketing—as well as partnership and

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20. See the upcoming BCG Focus on the role of the megahub in future airline traffic flows for a discussion of the relative economics of these aircraft types.
alliance arrangements need to be revisited with a fresh perspective to ensure that they make the maximum contribution to winning a superior share of the business traveler market on these priority routes.

A Checklist for Incumbent Carriers

The competitive threat posed by Middle Eastern carriers in long-haul travel is credible. Backed by purposeful governments, these carriers will be determined long-term participants in the major markets of Europe, Asia, and Oceania, as well as in the growing market between South Asia and North America.

As noted above, incumbent carriers need to respond to this threat by cutting costs and building and consolidating their revenue advantages. They can begin by asking the following questions:

- Have we taken the time to fully understand the extent to which our airline might face competition from Middle Eastern carriers? Where do our current and future route networks overlap with those of the Middle Eastern carriers? What are the factors that will govern the timing and likelihood of their entry? Are any of those factors within our control?

- Have we gone beyond thinking about the general competitive threat of Middle Eastern carriers to thinking about competitive advantage on a route-by-route and carrier-by-carrier basis? Do we know on which of our routes a Middle Eastern carrier might have the greatest advantage?

- What elements of our cost base have Middle Eastern airlines exposed? Even if we are able to escape competition from a Middle Eastern carrier, what other types of lower-cost competitors might we face in the future?

- What level of cost reduction do we need to achieve to close the cost gap with Middle Eastern carriers? On routes where the gap is significant, should we consider more radical solutions, such as migrating to a new business model?

- Which of our routes should we consider a sweet spot? How much of our current and future traffic do they represent? What actions should we take now to ensure that these routes remain our stronghold? Which other airlines—for example, those at the other end of a route—might have designs on our sweet-spot routes? How do our costs compare with those carriers’ costs? How are we going to compete against them?

- How can we leverage our competitive advantage onto other routes or onto other passenger segments?

- What do our answers to these questions imply for our product set? For our fleet plans? Are there investments we need to make to align our operations with our longer-term competitive strategy?

We are convinced that the answers to these questions will reveal a number of viable strategies for competing with Emirates and its would-be followers in the Middle East. As with all airline strategies, however, there are no perfect answers or guaranteed winners. As usual, success will be a function not only of understanding the broad strategic context and making good choices within it but also of executing plans with outstanding attention to detail, flexibility, and follow-through for customers.
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