

MarketLine Case Study

Top 10 Global Airlines

Industry issues and strategic responses

Reference Code: ML00019-031

Publication Date: September 2015

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The logo for MarketLine, featuring the word "MarketLine" in a bold, white, sans-serif font. The "Line" part is stylized with a thick, white, horizontal bar that extends to the right and then curves upwards, forming a shape reminiscent of a stylized 'L' or a wing. The entire logo is set against a dark blue background.

OVERVIEW

Catalyst

Airlines aim to benefit from rising disposable incomes and a steady increase in passenger volumes, while contending with volatile fuel prices, congestion in hub airports, and low switching costs for passengers. This report outlines the strategic responses of the top 10 global airlines, and how successful these have been.

Summary

- Profitability in the global airline industry is notoriously low
- Passenger volumes have shown long-term increases, and emerging economies in particular are experiencing growing demand for air travel
- Airlines have limited freedom to raise fares because of budget carriers competing exclusively on price in regional short-haul markets, and the new Middle Eastern airlines expansion' into the Europe-Asia long-haul market
- Fuel is the single largest operating cost for airlines and its price is strongly correlated with crude oil price, therefore unpredictable. Hedging strategies and investment in more fuel-efficient fleets are the most common ways to address this
- Alliances and other partnerships offer economies of network size and scope, they are common for the legacy carriers, less so for the budget airlines
- Major hubs are often congested, leading to delays. Where a slot system is in place, it is vital for airlines to obtain enough slots to permit its expansion
- Despite the tough market conditions, most of the top 10 airlines have positive average net margins for the 2010-2014 period, and the majority outperformed the global industry

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AIRLINE INDUSTRY STRUCTURE

Definition

For the purposes of this case study, the airline industry is valued according to the IATA definition, which includes both passenger and freight revenues. This differs from the definition used in MarketLine's Airlines industry profile.

Airlines can adopt several different business models

Airline Basics outlines several different business models available to passenger airlines.

Legacy

These companies are "legacy" carriers because they were already present in the market when the budget airlines began to start up in the 1990s. They are typically large companies, with diverse fleets suitable for flying a wide range of short-, medium-, and long-haul routes. It is common for them to offer a range of ticket prices, including some very expensive Business class fares that offer an enhanced level of comfort.

Budget

Budget, or low-cost, carriers offer a no-frills service and compete primarily on price. Features that are usually included in the ticket price of a legacy carrier, such as in-flight meals or generous luggage allowances, are unavailable or require surcharges on the basic fare. In some cases, budget airlines fly to smaller airports rather than the major hubs, meaning that passengers may have to travel further by land in order to reach their ultimate destination.

Charter

These airlines do not deal directly with passengers. Instead they contract with travel agents to provide a certain number of flights, with these B2B customers then finding the passengers.

Regional

Regional airlines carry passengers between smaller, regional airports and either hub airports or other regional destinations.

It is possible for airlines to operate a mixture of these business models.

Revenue streams

When the main revenue streams and costs are considered, the difficulty of achieving good profit margins in the industry is apparent.

Passenger ticket sales

The major source of revenue for most airlines is sales of passenger tickets. However, price competition can be severe. Airlines have direct competition from other carriers, which has intensified since the entry of the budget airlines. For domestic routes, indirect competition from railways may be significant, especially in Europe and Japan with their high speed trains and well-developed rail networks.

Surcharges

Fuel surcharges are common for many airlines in periods of high fuel prices. In addition, some budget airlines have been in the habit of charging extra for everything from luggage to using a credit card to buy tickets.

Cargo

Most airlines carry some cargo on their passenger flights, and some also have dedicated freighter planes. However, since their fleet is designed primarily for carrying passengers, there are limits to how much revenue they can generate from cargo.

B2B services

Large airlines may generate additional revenues by offering services such as maintenance or in-flight catering to other carriers in the industry.

Major operating costs

Fuel, employees, and maintenance are usually the major costs for an airline. It also has expenditure for catering, ground services, aircraft rental or leasing, booking systems, and so on. Finally, it may need to rent or lease aircraft.

Fuel

Aviation fuel is a significant cost for airlines, and there are no substitutes for it at present. Its price tends to track crude oil price closely. Thus in periods when oil prices are high, fuel costs rise and cut into profitability.

Employees

The airline industry is fairly labor-intensive, and employee costs such as salaries, benefits, and pensions, are usually the second-largest component of total costs after fuel.

Maintenance

It is vital for safety and regulatory compliance that an airline's planes are maintained to a high standard, and this can be costly.

Aircraft

Most airlines have a mixture of owned and rented/leased planes. Rental and leasing costs would then be part of the operating costs for the carrier.

OPPORTUNITIES AND THREATS FOR AIRLINES

There are several factors that promise growth in revenue for airlines, including rising personal incomes in emerging economies, network size economies due to increasing alliance memberships, and a rise in global air freight volumes.

However, there are several reasons why enhanced revenue may not always translate into higher profitability. High fuel costs, price competition, hub congestion, and the emergence of the Middle Eastern carriers are among the most important here.

Opportunities

The main opportunities arise from sustained exogenous growth in demand and industry-wide strategies for exploiting it.

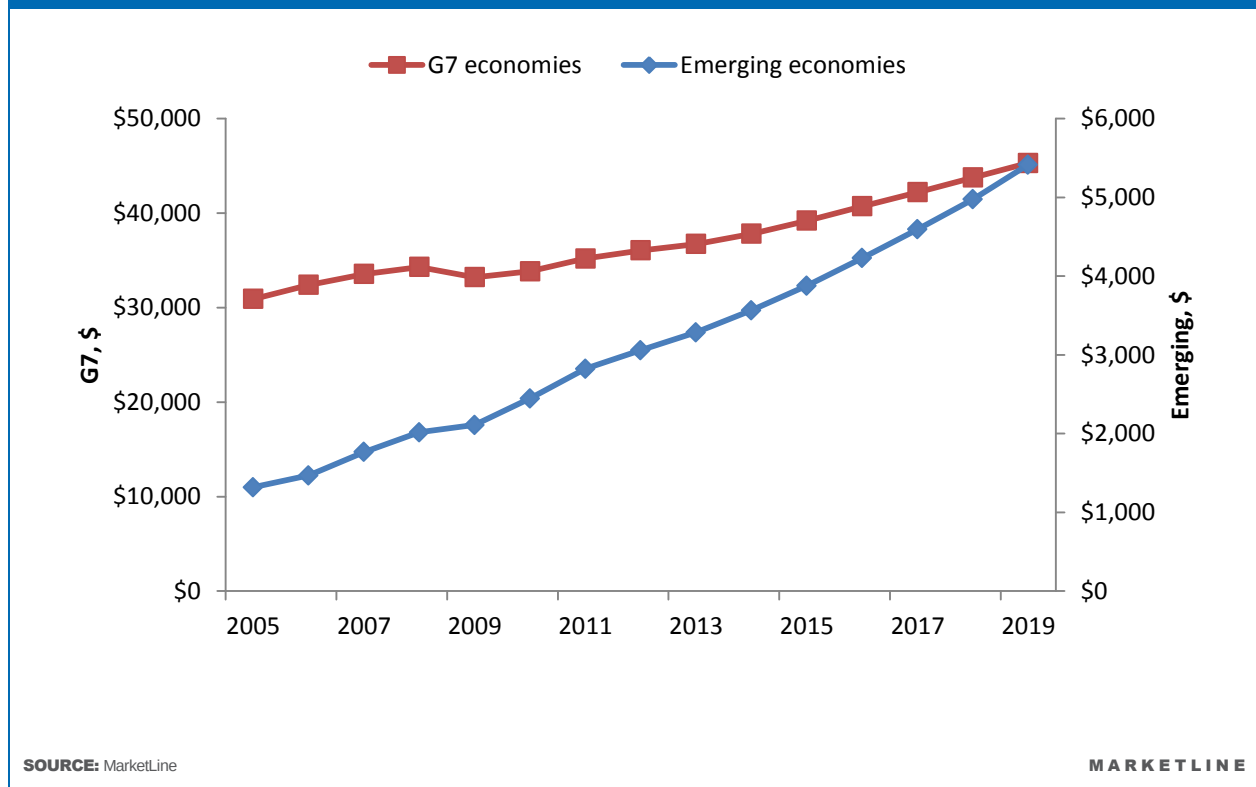
Rising personal incomes in emerging economies

Emerging economies such as the BRIC countries are seeing average personal incomes rise. According to Boeing's Market Outlook for 2015-2034, air travel is "one of the first discretionary expenditures to be added as consumers join the global middle class".

A sample of 14 countries classed by the IMF as emerging economies is compared with the G7 economies in the following chart. The metric is per capita household income (sum of gross household income in all the countries divided by the sum of populations).

It can be seen that in 2014, the average per capita income in the emerging economies was much smaller than in the G7 economies, at \$3,567 as compared to \$37,808. However, the annualized growth from 2005 to 2014 was 11.7%, as compared to 2.3%. Also, whereas the G7 countries showed a dip in 2009 as the global recession took effect, the emerging economies saw incomes growing more slowly but not contracting.

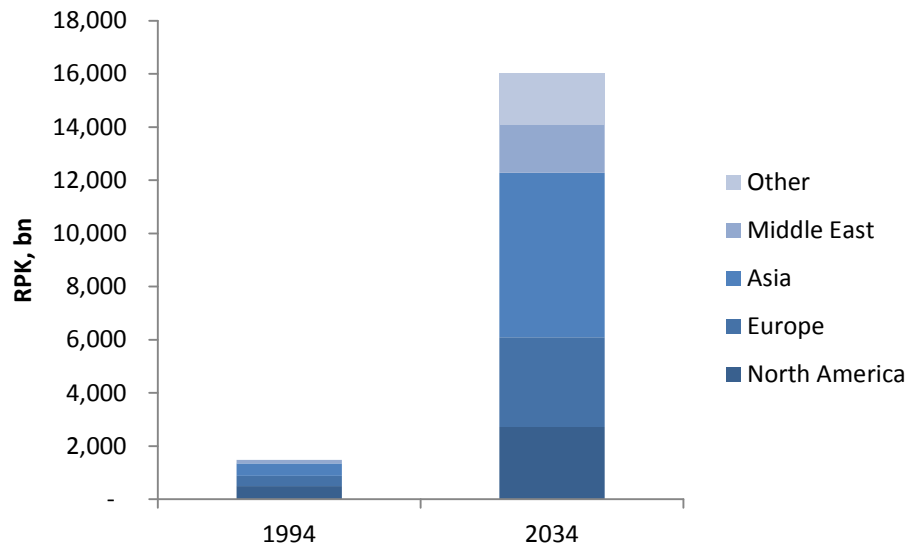
Figure 1: Per capita household income in selected emerging economies and the G7



These income trends are translating into increasing passenger volumes. According to Boeing data, global volume in terms of revenue passenger kilometers (RPK) was around 1,500 billion in 1994, and by 2034 will be approximately

16,000 billion. Furthermore, the regional segmentation is changing. Whereas in 1994, 73% of this volume was attributed to Europe and North America, by 2034 these regions are expected to be contributing just 38%. At that point in time, Asia will have almost the same contribution, and China will be a major part of this.

Figure 2: Regional revenue passenger kilometers, 1994 and 2034



SOURCE: Boeing

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Alliances offer network size economies

In 1997, Star Alliance began operations. Initially, it had five members: Thai Airways International, Air Canada, Lufthansa, Scandinavian Airlines and United Airways. As of 2015, this had risen to 28. It was followed by OneWorld and SkyTeam.

Table 1: The three leading airline alliances, 2015

	Star Alliance	oneworld	SkyTeam
Established	1997	1999	2000
Members	28	16	20
Airports	1,330	1,015	1,052
Countries served	192	154	179
Daily departures	18,500	14,296	16,270
Annual passengers, m	641	513	602
Number of aircraft	4,657	3,428	3,054

SOURCE: Alliance websites

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Alliance members offer code-sharing arrangements to each other. In a code-share, a particular flight can appear in the marketing and booking systems of two or more airlines, known as marketing carriers. However, only one airline, the operating carrier, will actually fly the route. In some cases, different airlines within the alliance might fly successive legs of a route.

There are several ways of structuring code-shares, but essentially most of the fare revenue goes to the operating carrier, while a percentage goes to the marketing carrier with whom the passenger bought the ticket.

The benefit of code-shares to airlines is that they can offer more routes to their customers. For example, suppose a small airline has a fleet of regional jets only. Operating alone, it would be excluded from the long-haul market entirely. However, as part of an alliance, it can offer long-haul routes that are actually going to be flown by an alliance partner using its fleet of Boeing 777 or Airbus A340 planes. The marketing carrier benefits by obtaining some revenue from the flight, while the operating carrier benefits from the additional marketing and sales channel. As of 2015, the alliances provided around 60% of global airline capacity.

Also, the prevalence of alliance membership demonstrates some features of airline microeconomics.

Consider scale economies first. Suppose a company makes N units of output and sells them all, each a price P . Suppose also that total fixed costs are F , while the variable cost of a single unit of output is V .

$$\text{Cost per unit produced} = V + (F / N)$$

Clearly, as N increases, the average cost of producing a unit of output decreases: the fixed component of total costs is shared between more units. While N cannot increase indefinitely - a factory will have capacity limits, for example - the ability to reduce average unit cost in this way represents an economy of scale. On this simple view, economies of scale should be available in all industries. However, in practice they are more important in industries where fixed costs are a large proportion of total costs.

Scope economies are obtained when a company expands the range of products or services it offers. Often this happens because the company has invested in creating intellectual property, in the broadest sense of the term, and wishes to exploit it in as many ways as possible. For example, suppose a semiconductor company has invested in developing a new microcontroller design for automotive applications. It may well decide to expand its product range, retaining the core design, but adding additional features requiring relatively little additional R&D to create products suitable for different end-markets.

The main costs in the airline industry are fuel and labor, which account for around 50% of total cost. In this situation it might be expected that scale economies are not all that important. However, they do seem to influence the way carriers operate.

For an airline, output is the number of passengers or PKM it flies. Airlines often use a "hub-and-spoke" model, because it offers scale economies on each route. "Spoke" airports are small, and serve relatively few people; "hub" airports are large, and located close to major population centers. Flights between hubs and spokes can use smaller planes; while inter-hub flights can use larger planes that are sure to have good load factors because they are common to many passengers whose ultimate source and destination spokes are different. When every seat is occupied, large planes tend to have lower costs per passenger than small ones. Thus hub-and-spoke routes maximize the load factors for spoke-hub and inter-hub flights, and also channel passengers as much as possible into larger planes. Spoke-spoke direct flights, on the other hand, would tend to increase the number of flights made by smaller, less cost-effective planes. (If passenger numbers rise and airliner fuel efficiencies increase, it may be that the shorter flight times and convenience of direct flights will become more important.)

Airlines obtain scale economies by optimizing load factors on all flights, and scope economies by using hub-hub flights as part of a more extensive network of complete routes. Code-sharing as part of an alliance expands the effective network size for all participating carriers, thereby enhancing these economies.

Freight volumes are increasing

IATA states that on average, airlines generate 9% of revenue from freight. While only a small proportion, it is notable that most airlines do carry freight, suggesting that it can be profitable. After some years of stagnation, global air cargo volumes in terms of freight tonne-kilometer (FTK) began to rise in 2014, and IATA predicted an increase of 5.5% in 2015. This suggests a small but beneficial change for airlines.

Threats

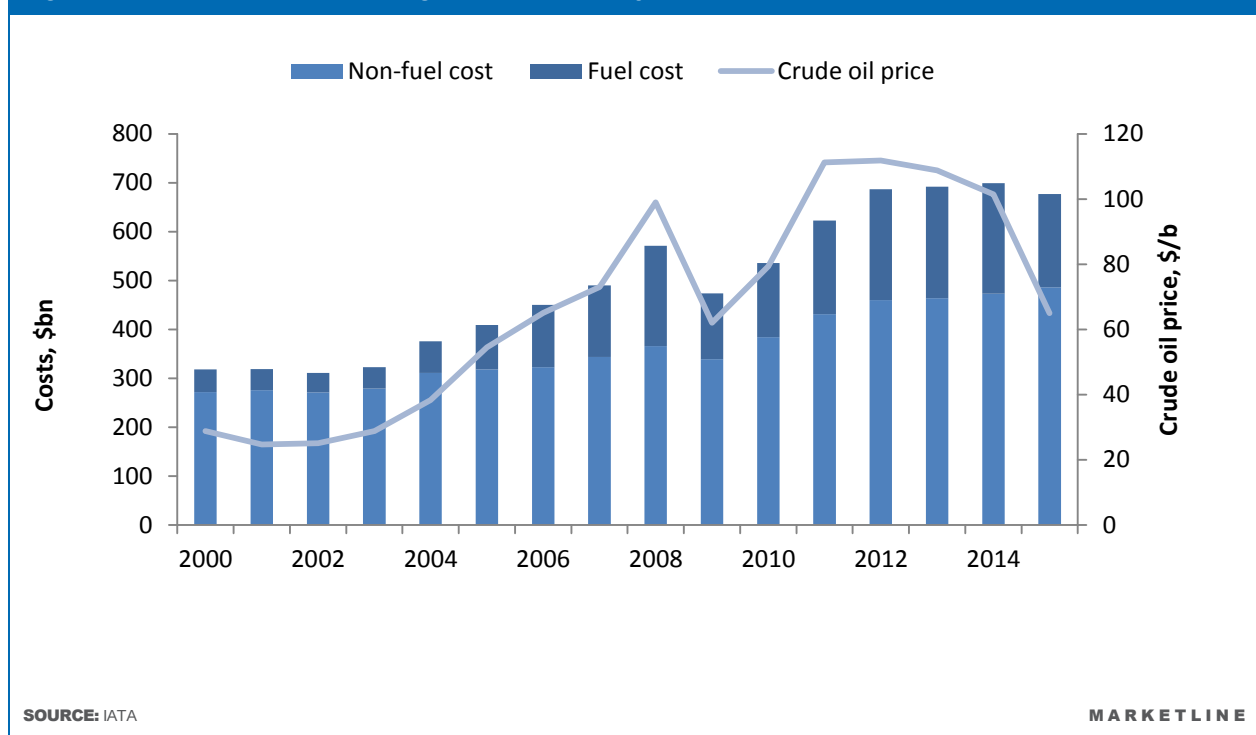
Major threats arise from the nature of modern air travel itself and from competition between carriers.

Fuel prices are high and volatile

All modern air travel relies on burning aviation fuel. Electric planes exist, but are mainly experimental. The only ones that have been developed into production are small. For example the Chinese-designed Yuneec International E430 is a two-seater plane with a maximum speed of 95 miles per hour - hardly a replacement for the typical airliner.

This means that fuel forms a significant component of total costs for airlines. Aviation fuel prices track crude oil prices closely, and although the latter have fallen in 2015 they are still high by historic standards. IATA data shows that for the global airline industry fuel accounted for 14% of total costs in 2000, and around 28% in 2015: an improvement on the 36% figure seen in 2008 at the height of the commodity boom, but still a cause for concern.

Figure 3: Fuel and non-fuel costs for global airline industry, 2000-2015

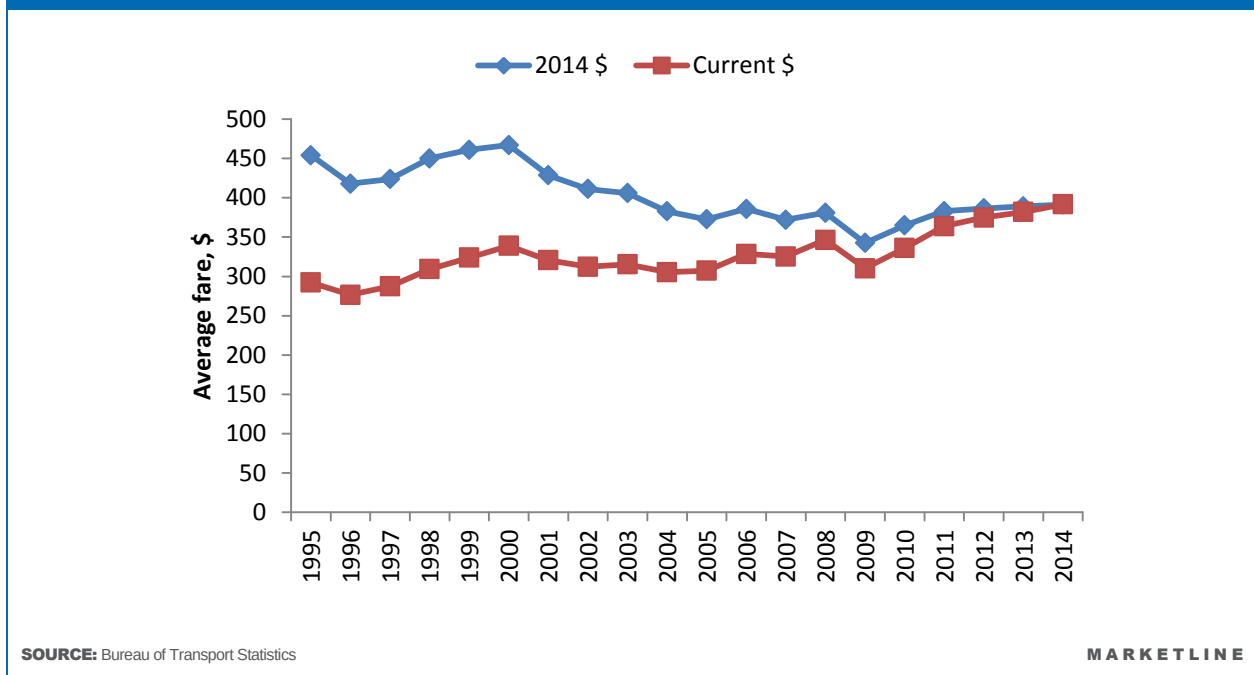


Price competition can be intense

Most of the world's largest airlines are legacy carriers, although budget carriers Ryanair and easyJet are in the top ten by passenger numbers. The rise of the budget airlines has increased the intensity of price competition in the global industry. They operate primarily in the short- and medium-haul market, although some long-haul routes are available.

As figure 4 shows, average domestic air fares in the US have shown a long-term decline in real terms. This suggests that price competition is having a significant impact. Real-terms fares have increased since 2009, which is likely to be due to the impact of fuel prices and also recovery from recession, although recovery from the 2001 recession did not have a similar effect.

Figure 4: Average domestic US air fares in current and constant 2014 \$, 1995-2014



In 2014, IATA noted that since 1950 the unit price of air travel for the global industry has fallen by 400%, although recent years have seen this plateau out.

Passenger switching costs are low

Inherent switching costs for buyers in the airline industry are low. In other words, a passenger who flies a route with a particular airline on one occasion incurs no cost if he or she switches to flying with a competing airline on another occasion. This tends to strengthen buyer power, and also increases rivalry in the market.

Hub airports are suffering from congestion

There are physical limits to the number of flights per hour that an airport can handle. A 2011 report by the EU Commission noted that five European airports (Düsseldorf, Frankfurt, London Gatwick, London Heathrow, and Milan Linate) were already operating at maximum capacity, and predicted that by 2030 the figure would rise to 19. Congestion is also seen at major airports in the US, Australia, and elsewhere.

Additional terminals and runways can be built, but this is a costly and time-consuming solution. Furthermore, governments concerned about the environmental impact of air travel may be unwilling to authorize the extra infrastructure. This means that airport operating companies may need to increase landing and take-off fees or introduce schemes whereby airlines can trade their "slots" at the airport among themselves.

Congestion limits the number of flights an airline can offer from major hubs, and delays related to congestion make flying less attractive than alternative modes such as intercity rail travel.

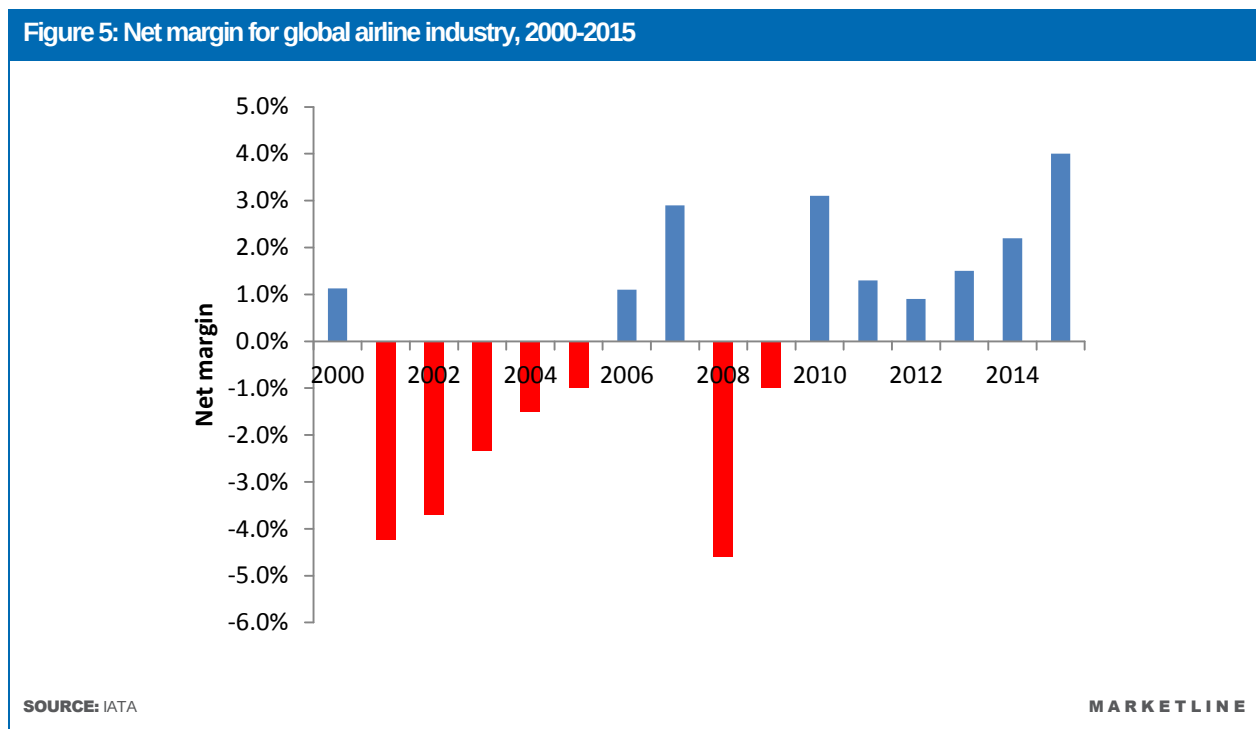
Air travel has a significant carbon footprint

A 2010 report from the International Civil Aviation Organization (ICAO) stated that aviation contributed 2.0-2.5% of current global carbon dioxide emissions. It further pointed out that the cumulative impact of emissions over time was more important than the annual figure, and that without a policy for reduction, the output levels would rise by a factor of 1.9-4.5 over the period 2005-2050. While aviation leads to lower emissions than road transport, it is perhaps considered more blameworthy because much road transport is needed to deliver essential goods, while air travel is often more of a luxury.

Reducing emissions is likely to be costly for the industry. It may require continual investment in more efficient airliners. A switch to biofuels appears to be technically feasible, but if airlines have to compete with other users such as road vehicles there could be limitations in supply. Governments may impose taxes on activities with a large carbon footprint, and in an industry with low margins even a small tax could mean the difference between profit and loss. Failure to reduce emissions may lead to reputational damage, and loss of revenue if environmentally-aware consumers opt for rail travel.

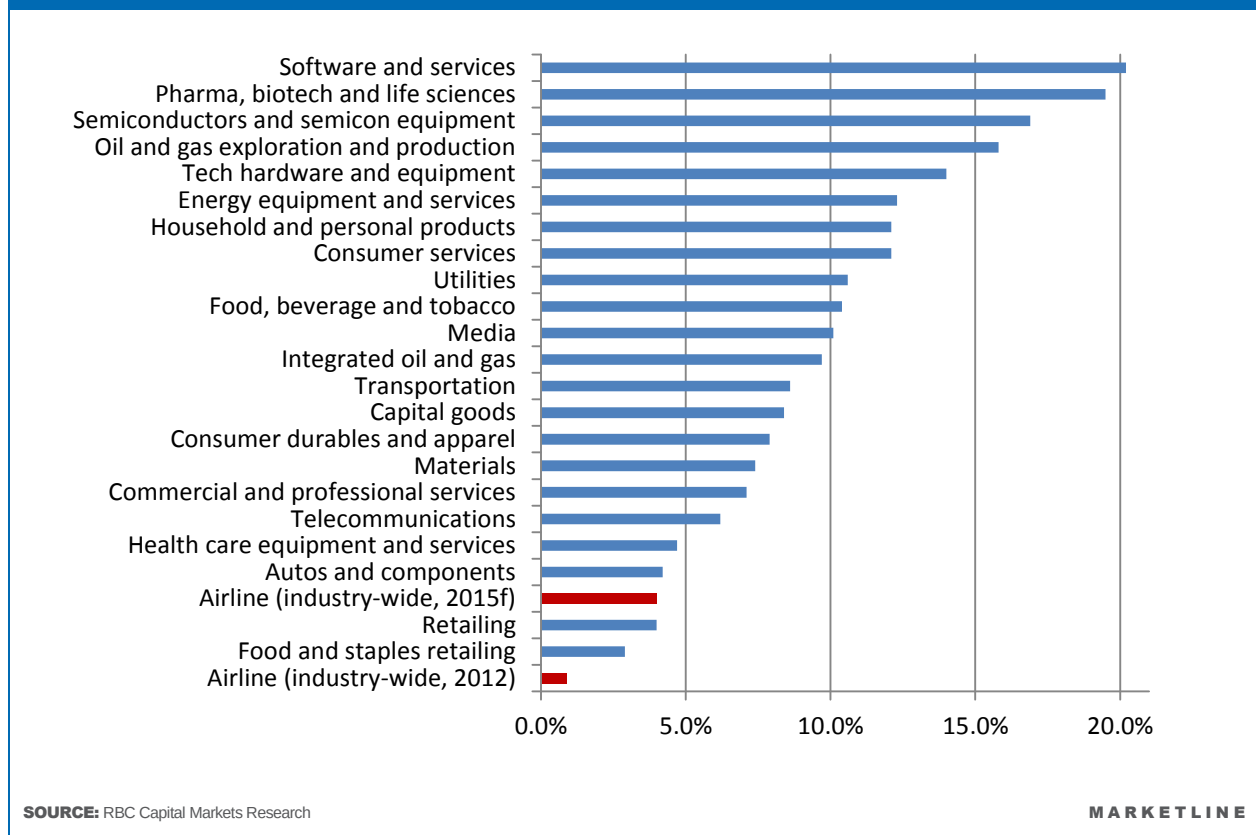
Profitability is improving but still low

The airline industry is generally characterized by low profit margins. For the period 2000-2015 (including estimates for 2015), IATA data for the global industry shows that the average operating margin was 2.2%. The average net margin was close to zero. The years from 2010 have seen some improvement, with a forecast of 4% for net margin in 2015.



To put this into perspective, this margin will equate to total net income of \$8.7bn for the entire airline industry. In FY2014, Apple Inc. reported a net income of \$39.5bn and a net margin of 21%. Another comparison is shown in Figure 6. Here, net margin for the global airline industry is shown with the same metric for the S&P 500 companies broken down by industry sector. Although the comparison is a little unfair (S&P 500 companies are likely to be more successful and therefore profitable than the whole of the sector they operate in), it goes some way to support the idea that airlines find profitability difficult.

Figure 6: Net margin for global airline industry and S&P 500 by sector, 2012



However, the global figures mask some strong regional variation. ICAO and IATA data for EBIT margins (earnings before income tax) over the 2010-2015 period (2015 forecast) show that airlines in North America were consistently more profitable than other regions. IATA attributes this to the impact of industry consolidation, higher load factors for both passengers and freight, and lower fuel prices.

Table 2: Airline EBIT margins by geography, 2010-2015F average

Region	Average EBIT margin
Global	4.27%
North America	6.78%
Asia-Pacific	5.02%
Latin America	2.75%
Middle East	2.65%
Europe	2.32%
Africa	0.45%

SOURCE: IATA**MARKETLINE**

Middle Eastern carriers are challenging airlines in other regions

One source of increased competition in the global industry is the rise of airlines based in the Middle East. The leading player here is Emirates Airline. This airline was launched in the early 1980s. Its current President Sir Tim Clark, then Head of Airline Planning, states that the ruler of Dubai gave him the instruction "always make a profit". Sure enough, FY2015 saw the 27th successive year of profitability for Emirates. Its net margin was 5.7%, despite the fact that fuel accounted for 35% of total costs, compared to 28% for the global industry. It is likely that the rise in passenger numbers and cargo revenues contributed to the strong bottom-line performance: July 2015 figures from the Airports Council International show that Dubai is now the world's third busiest airport - ahead of traditional hubs such as London Heathrow and Tokyo Haneda.

Etihad and Qatar Airways are the other two main Middle Eastern challengers.

The incumbent carriers frequently allege that some of these airlines benefit from state subsidies, as their operating margins can be quite low - indeed, some US carriers have submitted documentation to courts suggesting this. Furthermore, there are signs of increasing price competition between the Middle Eastern carriers, for example when Etihad started flights to Hong Kong, Emirates immediately undercutting their already very competitive fares.

HOW ARE AIRLINES RESPONDING?

In this section, the world's top ten airlines by passenger-kilometers flown will be surveyed. Their financial performance over the past five years will be examined, and their strategic responses to the opportunities and challenges described in the previous section will be analyzed.

Table 3: Top 10 global airlines by PKM, 2014

Airline	2014 PKM, m
Delta Air Lines	129,433
Southwest Airlines	129,087
China Southern Airlines	100,683
United Airlines	90,439
American Airlines	87,830
Ryanair	86,370
China Eastern Airlines	66,174
EasyJet	62,309
Lufthansa	59,850
Air China	54,674

SOURCE: MarketLine.

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Delta Airlines

Delta Airlines is a US-based carrier offering domestic and international flights. During the 2010-2014 period, it remained profitable.

Table 4: Delta Airlines, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	31,755	35,115	36,670	37,773	40,362
Net income/(loss)	593	854	1009	10,540	659
Employees	79,684	78,392	73,561	77,755	79,655
Net margin	1.9%	2.4%	2.8%	27.9%	1.6%
Net income / employee	7,442	10,894	13,717	135,554	8,273

SOURCE: Company filings

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Emerging economies

In FY2014, Delta Airlines generated 49% of its passenger revenues from domestic flights. Only 17% came from its Pacific and Latin America operations, where significant emerging economies are located. This may make it difficult for Delta to benefit from rising personal incomes in these economies. However, the company has what it describes as "strategic equity investments" in Aeroméxico and Brazilian carrier GOL, which should bring income from operations in these countries.

Alliances

Delta is a member of the SkyTeam alliance. It also has joint venture agreements with Air France-KLM and Alitalia, Virgin Atlantic Airways and Virgin Australia Airlines, which include revenue and profit/loss sharing. These JVs improve its access to the North America-Europe and North America-Asia markets.

Freight

While the global airline industry generates around 9% of its total revenue through cargo, the proportion for Delta is smaller, at 2%, although the airline is able to access all the major freight gateways around the world.

While it may have limited opportunities for exploiting rising air freight volumes, Delta does not rely exclusively on passenger revenues. 11% of 2014 revenues came from its "other" operations, including provision of maintenance, repair, and overhaul (MRO) services to third parties.

Fuel prices

Delta has historically bought fuel under contracts that set the price according to various market indices, so offering little protection against fuel price volatility. The airline has hedging systems to mitigate the risk of fuel prices rising. However, in 2014, falling crude oil prices meant that Delta suffered a loss on its fuel hedge, with a major impact on net profit for the year.

The carrier has also taken a strategic step uncommon in the airline industry by integrating vertically backwards into the fuel value chain. It has two wholly-owned subsidiaries, Monroe Energy and MIPC, which operate a refinery located in Philadelphia. The refinery both supplies aviation fuel to its parent company, and also generates revenue by selling other refinery products to third party buyers.

Price competition

Delta's 2014 annual report notes that it faces competition from traditional network carriers, national point-to-point carriers, and budget airlines in the domestic sector. In the international sector, it must compete with what it describes as "well-funded carriers in the Gulf region, including Emirates, Etihad Airways and Qatar Airways", among other competitors. Its SkyTeam membership helps alleviate such competition. Also, it has received anti-trust immunity for its key joint ventures, allowing it to "coordinate schedules, pricing, sales and inventory" in their expanded transatlantic and transpacific operations.

The long-distance passenger rail system in the US, Amtrak, is not a major indirect competitor to airlines. For example, a journey from New York to Los Angeles takes around six hours by plane, but three days by train.

Passenger switching costs

In common with most airlines, Delta has a loyalty scheme, called SkyMiles. The scheme allows customers to accrue frequent flyer credits by flying with Delta and its partners, or buying goods and services such as hotel accommodation from participating companies.

Hub airport congestion

Delta acknowledges that at four US airports the Federal Aviation Authority allocates slots, while national regulators or other agencies allocate slots at airports outside the US. At present, the airline has a sufficient number of slots to operate the services it wishes to.

Air travel carbon footprint

Delta summarizes its strategies for reducing carbon dioxide emissions as follows:

"We have reduced the fuel needs of our aircraft fleet through the retirement of older, less fuel efficient aircraft and replacement with newer, more fuel efficient aircraft. In addition, we have implemented fuel saving procedures in our flight and ground support operations that further reduce carbon emissions. We are also supporting efforts to develop alternative fuels and efforts to modernize the air traffic control system in the U.S., as part of our efforts to reduce our emissions and minimize our impact on the environment."

In 1994, Delta's fuel consumption (neglecting cargo) was 0.03 gallons per passenger-mile, by 2014 this figure had improved to 0.02.

Profitability

Delta avoided any net losses during the 2010-2014 period. Its average net margin for these years was 7.3%. This means it ranked third of the ten airlines considered here, notably higher than the 1.8% reported by IATA for the global industry.

However, closer analysis shows that the main reason for this was the unusually high net income in 2013. Although net income before tax was stronger in 2013 than in the other years considered, the bottom line profit was due primarily to income tax provision benefit, not to operations. If 2013 is excluded, Delta had the less exciting average net margin of 2.2%.

Middle Eastern carriers

Delta's FY2014 annual report notes the challenge of Etihad, Qatar, and Emirates Airline, and suggests that in some cases, state support makes it easier for these carriers to grow their business.

Airlines are currently (Q3 2015) exempt from WTO rules on state subsidy, despite protests from carriers such as Air France-KLM. It is likely to be difficult to mitigate the competitive threat from Middle Eastern carriers if international trade rules remain as they are.

Southwest Airlines

Southwest Airlines had the largest number of domestic passengers in the US market, according to Department of Transportation data for the year ending September 2014.

Table 5: Southwest Airlines, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	12,104	15,658	17,088	17,699	18,605
Net income/(loss)	459	178	421	754	1,136
Employees	34,901	46,128	45,861	44,831	46,278
Net margin	3.8%	1.1%	2.5%	4.3%	6.1%
Net income / employee	13,151	3,859	9,180	16,819	24,547

SOURCE: Company filings **MARKETLINE**

Emerging economies

Southwest Airlines is strongly focused on the US, with international flights restricted to nearby countries: Mexico, Jamaica, The Bahamas, Aruba, and Dominican Republic.

It may find it difficult to exploit rising passenger numbers in the emerging economies of Asia-Pacific. Its fleet currently consists mainly of Boeing 737-700 airliners, which have a maximum range of about 2,800 km. The distance by air from New York to London is 5,600 km, while from Los Angeles to Tokyo is 8,800 km. Thus without substantial investments in planes capable of flying long-haul routes, it is restricted to the Americas, and even then it would not always be able to offer non-stop flights to the more remote destinations.

Given that its business model is to provide low-cost flights within the US and its nearest neighbors, it is unlikely to make such a change.

Alliances

Southwest does not participate in any of the three major airline alliances. The reason is again likely to be that its focus is on domestic and near-international flights. Given its location and the restricted range of its fleet, it might benefit from code-sharing, but would be less able to reciprocate for other alliance members.

Freight

Passenger traffic accounted for 95% of Southwest's FY2014 revenues. While the airline offers a cargo service between around 80 US locations, it is not a major contributor to revenue. Since all the locations are within the US, they are accessible to land transport modes, in particular road freight and logistics companies will be strong indirect competitors here.

Fuel prices

In FY2014, fuel accounted for 33% of Southwest's total costs, very similar to the global industry average reported by IATA. The airline uses hedging schemes, but warns in its 2014 annual report that this may not be sufficient to completely obviate the impact of fuel price volatility on its costs.

It is also scheduled to take delivery of Boeing 737 MAX 8 and MAX 7 airliners in the years to 2019 (170 and 20 planes respectively). These airliners are considerably more fuel-efficient than the planes they will replace.

Price competition

Southwest has always used a low cost-low fare business model, which means it should be able to compete strongly on price. However, fuel and payroll accounted for 65% of total costs in FY2014, and it is difficult to control these. Although fuel prices in 2014 were lower than in the 2008-2013 period, they were still high by historic standards. This makes Southwest, like all airlines, vulnerable to price competition.

Also, its US focus means that car travel and other land modes can offer significant indirect competition.

Passenger switching costs

Southwest has operated a loyalty scheme called Rapid Rewards since 2011. It offers reward points on the basis of the amount a passenger spends with the airline. Southwest states that since its launch, the program has "exceeded the Company's expectations with respect to the number of new frequent flyer members, the amount spent per member on airfare, the number of flights taken by members, the number of Southwest's co-branded Chase Visa credit card holders added, the number of points sold to business partners, and the number of frequent flyer points purchased by program members". This suggests that it is an effective method of weakening buyer power by making passengers less likely to travel with competing airlines.

Hub airport congestion

While Southwest points out that airport congestion is a potential threat to its future expansion, it does not appear to be a major problem as of FY2014. In fact, the airline recently acquired additional slots at Washington Reagan National Airport and New York LaGuardia Airport, which allowed it to expand its services. Furthermore, it is able to use secondary, less congested, airports for some of its services.

Air travel carbon footprint

The upgrading of its airline fleet with major purchases of Boeing 737 MAX airliners, which are designed to offer greater fuel efficiency and lower carbon dioxide emissions, should improve the airline's carbon footprint. However, if it offers additional flights, the efficiency benefits could be negated.

Profitability

Over the 2010-2014 period, Southwest had an average net margin of 3.6%. This is above the global industry figure of 1.8%. The company was in profit for each of the five years considered, and margins have increased from 3.8% in 2010 to 6.1% in 2014.

The growth in profitability was achieved because although costs increased over 2010-2014, revenues increased more rapidly. Given the major contribution of fuel and payroll to the cost structure, it is likely that Southwest will need to pursue higher revenues rather than attempting to cut costs any further if it is to maintain profitability growth.

Middle Eastern carriers

The focus on domestic flights puts Southwest at an advantage to many airlines when the threat from Middle Eastern carriers is concerned. Without specific agreements between governments, it is generally impossible for a foreign airline to operate purely domestic flights in a different country, therefore these airlines are not able to compete in Southwest's key markets.

China Southern Airline

China Southern Airline is the largest Chinese airline in terms of passenger numbers, fleet size, and destinations. It is headquartered in Guangzhou, China.

Table 6: China Southern Airline, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	12,657.5	14,197.5	15,799.9	16,035.4	17,541
Net income/(loss)	944.6	831.5	426.2	323.2	287.1
Employees	57,096	54,326	73,668	75,154	82,132
Net margin	7.5%	5.9%	2.7%	2.0%	1.6%
Net income / employee	16,544	15,306	5,785	4,301	3,496

SOURCE: Company filings **MARKETLINE**

Emerging economies

China Southern is of course very strongly placed to benefit from China's economic growth. In FY2014, domestic flights accounted for 77% of passenger volumes (PKM basis) and 65% of freight volumes (FTK basis). When flights to Hong Kong and Macau are included, these proportions are even higher (79% and 68%, respectively).

Over the 2010-2014 period, domestic PKM rose with a CAGR of 8.0% and domestic FTK with a CAGR of 7.4%. The CAGRs for international PKM and FTK were 23.3% and 19.5%, respectively. If this trend persists, international operations will form an increasingly large proportion of the airline's business. At present, though, domestic operations dominate. The large increase in Chinese passenger volumes predicted by Boeing over the next two decades will be advantageous for all airlines based in the country, as foreign players will have limited access (if any) to the domestic flight market.

Alliances

China Southern is a member of the SkyTeam alliance, and also partners with Qantas in code-sharing. In FY2014, it had codeshare arrangements with 18 airlines for 379 destinations, including 109 outside China. Given that its international business is currently small but growing faster than its domestic business, the ability to expand its network in this way should be beneficial to its top line.

Freight

The airline has a relatively strong dependence on cargo, which in FY2014 accounted for 7% of total revenues, essentially unchanged from the percentage in 2010. Revenue from cargo increased in 2014 compared to 2013, primarily because the volumes carried rose.

Fuel prices

In FY2014, fuel accounted for 36% of total costs for China Southern, higher than the global industry figure of 32%. In part, this may be due to the unusually low payroll costs making other components proportionately larger.

Its 2014 annual report stated that it had to buy fuel at China's national spot price, which is affected by global crude oil prices and interventions by the National Development and Reform Commission. This would imply that hedging strategies are unavailable. However, the airline has been imposing fuel surcharges on certain routes, the levels based on fuel consumed and the Singaporean price for aviation kerosene. These reduce its exposure to fuel price volatility. In 2015, alongside several other Chinese carriers, China Southern announced that it was no longer going to use surcharges.

Price competition

The contribution of payroll to total costs is relatively low for China Southern. This means that even with the current upward pressure on wages in China, the airline has a more manageable cost base than many western airlines where payroll is a larger contributor to costs and one that can be difficult to control. This in turn should make the airline more able to compete on price.

There are some low-cost airlines operating in China, such as 9Air, which will intensify price competition for China Southern. Also, the development of high-speed intercity rail services, launched in 2007, will add more indirect competition for domestic routes. By 2020, China is expected to have around 50,000 km of high-speed routes.

Passenger switching costs

China Southern has a loyalty scheme called Sky Pearl Club, which offers reward points on the basis of miles travelled. This should reduce buyer power by rewarding loyalty to this carrier.

Hub airport congestion

Several Chinese airports are suffering from congestion, and the country has a poor reputation for delayed flights. If not addressed, this will limit the ability of China Southern to expand its operations.

A third airport for Beijing was announced in 2014. When completed in 2019, it will have a capacity of 72 million passengers and 2 million tonnes of cargo a year, taking some pressure off the existing airports. Also, in 2015 the Civil Aviation Administration announced that it was opening ten so-called "one-way routes", in which planes flying to and from a particular airport use different flight lanes, in a bid to ease congestion.

Air travel carbon footprint

It is not clear what steps, if any, China Southern is taking to deal with carbon dioxide emissions from its operations, although its latest purchases of Boeing 777-300ER airliners may improve fuel efficiency.

Profitability

Over the period 2010-2014, China Southern had an average net margin of 3.9%, well above the global industry figure of 1.8%. Margin was steadily declining, however, from 7.5% in 2010 to just 1.6% in 2014. Although revenue grew rapidly, its pace of growth was outstripped by the rate at which costs increased. With limited ability to control its largest cost, China Southern is currently at risk from any increase in the price of aviation fuel.

Middle Eastern carriers

The Middle Eastern carriers may be able to challenge China Southern in the long-haul international market. However, given its current dependence on domestic flights, which are difficult for non-Chinese companies to offer, it is in a stronger position than those airlines which generate more revenues from international flights.

United Airlines

United Airlines (UAL) is a US-based carrier owned by a holding company, United Continental Holdings, Inc. It was formed in 2013 when the parent company merged its two subsidiaries Continental Airlines and United Air Lines.

Table 7: United Airlines, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	23,325	37,003	37,152	38,279	38,901
Net income/(loss)	253	840	(723.0)	571	1,132
Employees	86,000	87,000	88,000	87,000	84,000
Net margin	1.1%	2.3%	-1.9%	1.5%	2.9%
Net income / employee	2,942	9,655	-8,216	6,563	13,476

SOURCE: Company filings **MARKETLINE**

Emerging economies

In United Airlines' 2014 annual report, the company states "With key global air rights in North America, Asia-Pacific, Europe, Middle East, Africa and Latin America, UAL has the world's most comprehensive global route network."

The airline offers flights from several of its US hubs to Beijing and Shanghai, and also destinations in emerging Asian economies such as India, Thailand, and Vietnam. In July 2015, it announced a partnership with Brazilian carrier Azul, which will increase its access to Brazil.

Alliances

United Airlines is a member of Star Alliance, participating in code-share and other agreements. It also has similar relationships with airlines outside this alliance, including Aeromar, Aer Lingus, Air Dolomiti, Cape Air and others. Finally, to strengthen its transatlantic and transpacific offerings, it has signed up to joint ventures with Air Canada, Lufthansa, and ANA.

A train-to-plane codeshare and frequent flyer alliance with Amtrak is a further, and less usual, partnership for United Airlines.

Amtrak offers rail connections between Philadelphia, Wilmington, Stamford, and New Haven to any US destination on United Airlines, from Newark International Airport, so that United Airlines can offer passengers mixed air-rail tickets.

Freight

Cargo revenues in FY2014 accounted for just 2% of United's total revenue. Over the 2006-2014 period, volumes (FTK basis) rose with a CAGR of 2.5%, but there is considerable fluctuation year to year, even outside the expected cyclic variation of demand through the 2009 recession and recovery. It is likely that United Airlines will continue to focus on passengers, as it is not seeing a clear benefit from increasing global demand for air freight.

Fuel prices

In FY2014, fuel was the largest single expense for United Airlines, accounting for 32% of the total costs. This is similar to the industry-wide figure. In 2012, fuel accounted for 37% of its costs. The airline buys fuel under short- and long-term contracts and uses hedging to reduce the risk of price rises.

Price competition

United's 2014 annual report considers competition in domestic and international markets separately. The company points out that there are few regulatory barriers to domestic market entry: any US airline that meets Department of Transportation criteria can operate between any two airports in the country. Furthermore, as price competition is intense, and fare discounting common, it can be difficult to boost revenues through fare increases. However, except where an agreement has been reached with a foreign government, foreign-based carriers cannot offer services flying between two points within the US.

Internationally, United Airlines competes with US- and foreign-based carriers. Except where so-called "open skies" or "fifth freedom" agreements have been reached between the US and foreign governments, United is unable to go beyond the major international gateway airports, thus restricting its ability to expand. Long-haul international flights are only rarely offered by the budget airlines, which means that one major source of price competition on shorter routes is not so important here.

Passenger switching costs

United Airlines operates a frequent flyer program, MileagePlus. Customers accrue reward points by flying with United or certain partner airlines, or by making purchases by hotels and other companies that are part of the program. This loyalty scheme should weaken buyer power.

Hub airport congestion

As mentioned in the preceding section, four US hub airports have slot allocation regulated by the Federal Aviation Authority, and several foreign airports used by United are subject to similar restrictions from the relevant civil aviation authorities. It is not clear whether this is significantly affecting United Airlines' operations, however.

Air travel carbon footprint

While United is aware of the ICAO's plans to reduce aviation carbon dioxide emissions, in its 2014 annual report it stated that it was not yet able to determine the impact these would have on its business in quantitative terms. The company is trying to reduce emissions by upgrading its fleet to be more fuel efficient, either through acquisition of new planes or retro-fitting its existing ones. It is also supporting the use of alternative fuels.

Profitability

Of the airlines considered in this report, United had one of the weaker profitability performances. Its average net margin for the 2010-2014 period was 1.1%, compared to the global industry figure of 1.8%. In 2012 it made a loss, mainly attributable to the fact that the fuel prices it paid that year were the highest of the 2010-2014 period. With profitability so sensitive to a factor outside the company's control, and price competition such that it will be difficult to increase prices to compensate, it will be important for United to enhance either the efficiency of its fleet or its hedging strategies.

Middle Eastern carriers

As United Airlines operates several long-haul international flights, it is likely to face significant competition from the Middle Eastern carriers. The airline generated 57% of its passenger revenues from its US and Canada flights, but in the international market will be facing these significant (and aggressive) competitors.

American Airlines

American Airlines is based in Texas. In 2011 it entered Chapter 11 bankruptcy, from which it emerged in 2013. The holding company AMR subsidiary, American Airlines, Inc. merged with US Airways Group, Inc. in 2013 to form a single company called American Airlines, while AMR changed its name to American Airways Group.

Table 8: American Airlines, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	22,170	23,979	24,855	26,743	42,650
Net income/(loss)	(471.0)	(1,979.0)	(1,876.0)	(1,834.0)	2,882
Net margin	-2.1%	-8.3%	-7.5%	-6.9%	6.8%

SOURCE: Company filings

MARKETLINE

Emerging economies

American Airlines generates around 33% of its total revenues from international passengers, and 54% from domestic passengers. It is therefore in a position to benefit from increasing demand for air travel in emerging markets. As of 2015, its exposure to these markets is relatively limited: it flies to a few cities in Brazil, China, and India but otherwise tends to focus on cities in the developed economies. Given that its fleet includes planes with suitable flight range, it should be straightforward to expand into more emerging markets going forward.

Alliances

This carrier is a member of the oneworld alliance, but until 2014 it was part of Star Alliance. As of FY2014, it had codeshare agreements with British Airways, Iberia, Finnair and AirBerlin. It also had joint business agreements with British Airways, Iberia, Japan Airlines, Qantas Airways and Finnair which enable cooperation on certain routes with sharing of revenues and costs.

Freight

In FY2014, cargo accounted for just 2% of American Airlines' total revenues. Because of the difficulty of combining data for the merged and previous entities, it is not clear what the longer-term trends in cargo volumes are. However, the carrier's strong focus on passengers means that it is unlikely to benefit greatly from the global increase in demand for air freight services.

Fuel prices

Fuel accounted for 33% of American Airlines' total costs in FY2014, only very slightly above the global industry figure. The company states in its 2014 annual report that its fleet contains a large number of older, less efficient aircraft, which increases the impact of fuel price increases, although it is continuously investing in newer planes designed with fuel efficiency in mind. It also points out that because the market is so competitive, it is difficult to raise fares or add surcharges to compensate for fuel price rises.

Price competition

American Airlines identifies its competitors as "other major domestic airlines and foreign, regional and new entrant airlines, as well as joint ventures formed by some of these airlines". Budget airlines with low costs are a particular competitive threat. American Airlines competes with one or more such carriers on many of its routes. Furthermore, the good financial performance of the budget airlines is allowing them to invest in fleet expansion, making them more able to compete and grow their market share.

Passenger switching costs

A frequent flyer scheme, AAdvantage, allows passengers to accumulate mileage points from flights with American Airlines, partner airlines, and purchases from other participating companies. This should weaken buyer power by rewarding loyalty to the carrier.

Hub airport congestion

The 2013 merger that created American Airlines required the divestment of some slots at important hubs: LaGuardia (New York), Ronald Reagan International (Washington DC), and Heathrow (London). However, while American lists increasing airport congestion as a business risk in its annual reports, it does not provide any detail of a strategic response to this, so it is likely that at present this is not a major issue for the company.

Air travel carbon footprint

As of 2015, the European Union requires airlines operating intra-EU flights to participate in the Emissions Trading Scheme; however, this does not apply to carriers such as American Airlines, which only serves destinations in the EU by connecting them to non-EU locations.

American Airlines is aware of the ICAO's plans to reduce aviation carbon dioxide emissions, but according to its 2014 annual report it did not expect any costs arising from this in the short term. Other than the fleet upgrades mentioned above, it is not clear what strategy the airline has for reducing its carbon emissions.

Profitability

American Airlines had the worst profitability of the ten airlines considered in this report. Over the 2010-2014 period, its average net margin was -3.6%. It posted substantial losses for 2010-2013, only returning to profitability in 2014. One reason for the lack of profitability was high wage costs. In 2011, American Airlines had higher labor cost per seat-mile than its competitors Delta, US Airways, United, Continental, or Southwest. Several of these had themselves filed for bankruptcy protection a few years earlier, restructured, and emerged with lower cost structures, making them more competitive.

Once American had entered Chapter 11, it had greater freedom in law to alter the terms of collective bargaining agreements with its workforce, allowing it to cut costs more vigorously: reducing pay and benefits, for example. The result was a return to profit in FY2014.

Middle Eastern carriers

The threat from Middle Eastern airlines is acknowledged by American Airlines in its 2014 annual report, although there is no explicit mention of a strategy to address this.

Ryanair

Ryanair is a budget airline based in Ireland. Its CEO Michael O'Leary is one of the few airline bosses to be a household name in the UK, with a reputation for pugnacious soundbites.

Table 9: Ryanair, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	3,979	4,818	5,826	6,482	6,685
Net income/(loss)	405	498	743	755	694
Employees	7,168	8,063	8,388	9,137	8,992
Net margin	10.2%	10.3%	12.8%	11.6%	10.4%
Net income / employee	56,473	61,726	88,603	82,642	77,191

SOURCE: Company filings **MARKETLINE**

Emerging economies

Ryanair flies only to destinations in Europe, plus Morocco, so it is unable to benefit from the rapid growth in demand seen in the major emerging economies. Its fleet is composed solely of Boeing 737-800 airliners, which have a maximum range of 5,950 km. This means that flights to countries such as India or China would need refueling stops, increasing journey times in comparison with airlines capable of flying non-stop on these long-haul routes. Accessing emerging economies would require significant investment and possibly a change in business model for Ryanair.

Alliances

Ryanair's Customer charter states "Ryanair will not enter into alliances with other airlines so that we can pretend we fly to destinations that we actually don't or charge high fares". With its strong focus on short-haul flights in Europe and low-cost business model, the company may consider that network size economies do not offer it much benefit as its customers would not be looking to Ryanair for longer flights.

Freight

At present, Ryanair does not carry any cargo. This is likely to be because loading and unloading cargo would slow down turnarounds, reducing the number of daily flights per plane. The benefit of rapid turnaround presumably outweighs the loss of the cargo revenue stream.

Fuel prices

In FY2014, fuel accounted for 46% of Ryanair's total costs, the highest proportion observed for the ten airlines considered in this report. This is mainly because its other costs were unusually low, rather than because Ryanair is unusually profligate in its fuel purchases. For example, Lufthansa had just 25% of total costs due to fuel, the lowest percentage of these ten airlines. However, it spent more on fuel per RPK than Ryanair did.

This proportion does mean that Ryanair's profitability may be even more sensitive to fuel price than usual. It uses hedging schemes and enters into long-term (around 18 months) forward contracts for fuel purchases as a way of protecting itself against price fluctuations. Its policy is to avoid fuel surcharges.

Between 1999 and 2005, it upgraded its entire fleet from Boeing 737-200 to 737-800 airliners, and it has retrofitted winglets, which reduce aerodynamic drag at the wing tips. The upgraded planes are more fuel-efficient than their predecessors. Ryanair's fleet are all single-class 189 seat designs rather than the more usual two-class 162 seaters, and the company aims for high load factors. This leads to reduced fuel demand per seat.

Price competition

Price competition is central to Ryanair's strategy. By cutting costs and offering a no-frills service it can charge low fares and compete intensely on price. Since most of its flight times are quite short, passengers are more tolerant of a basic service than if they were travelling on a long-haul flight under the same conditions.

It also charges a range of fees that mean that a passenger may well end up paying more than the basic fare. For example, while all airlines charge for carrying excess baggage, Ryanair has a low threshold and a high fee for this. In FY2014, "scheduled revenue" accounted for 75% of its total revenue, while "ancillary revenue" made up the remainder. The latter included "revenues from excess baggage charges, administration/credit card fees, sales of rail and bus tickets, priority boarding, reserved seating, accommodation, travel insurance and car rental."

Passenger switching costs

Unusually for an airline, Ryanair does not appear to have any loyalty or frequent flyer schemes. It instead relies on its clear brand image and competitive fares to retain existing customers and attract new ones.

Hub airport congestion

Many of the airports used by Ryanair are secondary locations. For example "Paris Vatry" is actually 90 miles away from the center of Paris, whereas the usual hub for Paris, Charles de Gaulle airport, is only 15 miles from the center. However, the airline does use some primary European airports, and acknowledges that its expansion plans may be restricted by the finite number of slots available. At present, though, the majority of the airports it uses do not require slot allocations. While its choice of locations may not be convenient for passengers, hub airport congestion is less of an issue for Ryanair than for certain legacy carriers.

Air travel carbon footprint

Ryanair is clearly aware of the need to reduce its carbon footprint. Its strategic actions to improve fuel efficiency will also tend to reduce its carbon dioxide emissions, provided expansion in flight numbers does not outweigh this.

Profitability

Profitability is where Ryanair's business model demonstrates its success. Of the ten airlines considered here, Ryanair is by far the most profitable. Over the 2010-2014 period, its average net margin was 11.1%. Furthermore, this was not due to one unusually good year: annual net margins ranged from 10.2% to 12.8%.

Payroll and related employee costs is one area where Ryanair has economized. In FY2014, it spent the equivalent of \$64,800 per employee. The figures for Lufthansa and Air France-KLM were \$81,860 and \$102,560. Furthermore, by having only one kind of airliner in its fleet, it can keep maintenance costs down.

Essentially, Ryanair focuses on cheap, short-haul flights and does not attempt to go beyond this business model.

Middle Eastern carriers

The rise of the Middle Eastern carriers does not pose a major threat to Ryanair. Their focus on long-haul flights and service quality is quite different to Ryanair's focus on short-haul routes and competitive fares.

China Eastern Airlines

China Eastern Airlines offers passenger, freight, and business jet services, and is based in Shanghai, China.

Table 10: China Eastern Airlines, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	12,252	13,409	14,152	14,803	14,558
Net income/(loss)	88	745	481	386	578
Employees	57,096	59,872	65,000	68,874	69,849
Net margin	0.7%	5.6%	3.4%	2.6%	4.0%
Net income / employee	1,545	12,437	7,394	5,606	8,275

SOURCE: Company filings **MARKETLINE**

Emerging economies

China Eastern is ideally positioned to benefit from China's economic growth and rapid increase in demand for air travel. In FY2014, 67% of its revenues (passenger and other) were generated from domestic flights. It also offers long-haul flights to many international destinations.

Alliances

China Eastern is a member of SkyTeam alliance. In 2014, the airline optimized transit connections with Delta Airlines at Shanghai airport to increase joint sales; implemented code-share agreements with Air France-KLM; and partnered with Qantas to strengthen their China-Australia service.

Freight

As well as its passenger fleet, China Eastern operates dedicated freight aircraft. In FY2014, it began cargo flights from Zhengzhou to Chicago and Amsterdam, allowing it to benefit from the US and European markets. It also established a truck delivery network in Zhengzhou that currently serves 28 domestic locations. These strategies should allow it to benefit from rising demand for air freight. In FY2014, cargo accounted for 6% of total revenues.

Fuel prices

In FY2014, fuel accounted for 34% of China Eastern's total costs. This is only slightly above the global industry figure. The carrier is reducing its fuel consumption by optimizing its fleet and routes. The 2014 annual report states that the company did not use any hedging strategy that year. In 2015, alongside several other Chinese carriers, China Eastern announced that it was no longer going to use surcharges to compensate for high fuel prices.

Price competition

China Eastern notes in its 2014 annual report that growth of low-cost airlines, and strengthening of the performance of the large international carriers, was increasing competition in domestic and international markets.

In FY2014, the airline saw its passenger numbers rise by 6.0%, and RPK rise by 6.1%. Its passenger revenues only rose by 3.2%. This supports the idea that price competition made it difficult to increase fares. Going forward, it will be important to maintain growth in volume and load factor to ensure that revenues continue to rise.

Passenger switching costs

China Eastern runs a frequent flyer scheme called Eastern Miles. As of FY2014, this has almost 23 million members, suggesting that it is an effective way of increasing customer loyalty.

Hub airport congestion

Chinese hub airports are frequently highly congested, and the section on China Southern Airline outlines some remedies that are being applied. China Eastern makes little mention of this issue in its company filings, although it is likely to be an issue for all airlines with significant routes in China.

Air travel carbon footprint

The airline has a dedicated Aviation Safety and Environment Committee which among other things is responsible for "considering and making recommendations on major environmental protection issues in relation to aviation carbon emission on domestic and international levels and overseeing their implementation.

In 2013 China Eastern accomplished a test flight of an Airbus A320 using biofuel produced in China. It was the first Chinese airline to retro-fit winglets to its aircraft. Also, in 2014 it began fleet upgrades in which Airbus A340 airliners will be replaced by Boeing 777s. This is estimated to save 1 tonne of fuel per hour.

Profitability

Over the 2010-2014 period, China Eastern achieved an average net margin of 3.2%, well above the global industry figure of 1.8%. Its cost structure is similar to that of China Southern, except that its spending on employee salaries and benefits was 13% of total costs, rather than the 6% for China Southern. This may simply reflect different ways of breaking down the costs, but it might also imply that staffing costs are an area that China Eastern should focus on to improve profit margins.

Middle Eastern carriers

In principle, the Middle Eastern carriers do pose a threat to China Eastern. For example, Etihad flies to and from Beijing, Kunming, and Shanghai to many international destinations. In practice, the large share of domestic flight revenues in China Eastern's operations may make the threat less significant.

easyJet

easyJet was set up in 1995 by entrepreneur Stelios Haji-Iannou as a low-cost airline based in the UK.

Table 11: easyJet, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue	4,895	5,684	6,346	7,011	7,454
Net income/(loss)	199	371	420	655	741
Employees	6,887	8,288	8,206	8,343	9,649
Net margin	4.1%	6.5%	6.6%	9.3%	9.9%
Net income / employee	28,924	44,703	51,170	78,557	76,796

SOURCE: Company filings **MARKETLINE**

Emerging economies

Like Ryanair, easyJet focuses on short-haul flights within Europe. In FY2014, 43% of its passengers were from the UK, and only 10% were not from the major western European nations. With no exposure to any emerging markets, rising demand for air travel there will not benefit easyJet.

Alliances

easyJet does not participate in the three major airline alliances. Its focus on the low cost short-haul market means that there would be little benefit in membership.

Freight

easyJet does not carry cargo. In 2009, it tested a cargo service, but this does not appear to have been continued. As for Ryanair, easyJet prefers the faster airport turnaround that a passenger-only service offers.

Fuel prices

In FY2014, fuel accounted for 32% of easyJet's total costs, close to the global industry percentage. It hedges forward 65%-85% of the next 12 months' fuel requirements to protect against price volatility. It has also retrofitted winglets onto its planes to increase fuel efficiency.

Price competition

Low costs are central to easyJet's business model, but it is not alone in this. It faces competition from both legacy carriers and other budget airlines, with Ryanair a particularly formidable competitor. In FY2014, easyJet's revenue per passenger was virtually unchanged from 2013, suggesting that it was difficult to increase fares significantly.

Passenger switching costs

There does not appear to be any conventional frequent flyer program for easyJet. The company does offer easyJet Plus. For an annual membership fee of £170 (\$262), customers gain access to benefits such as free allocated seating, fast-track security and priority boarding. This acts as loyalty scheme, since flying with a competitor would mean foregoing the benefits the fee has paid for.

Hub airport congestion

Hub congestion is an issue for easyJet. Its FY2014 annual report comments on the congestion at primary airports, but further states that "easyJet has a competitive advantage from its network driven by its well-balanced portfolio of slots at congested primary airports, which has taken a number of years to build up and cannot be readily replicated".

This suggests a coherent strategy for dealing with this constraint to growth.

Air travel carbon footprint

easyJet is unusual in having a specific carbon dioxide emission target. By 2017 it aims to have reduced emissions by 2.5% compared to 2012. It reported a decrease in per-passenger carbon dioxide emissions in 2014 in line with this commitment, which it attributes to the fuel efficiency of its fleet and its simple operations. However, it estimated its total carbon dioxide emissions in 2014 at 5.9 million tonnes, up from 5.5 million tonnes in 2013. The airline claims that the carbon footprint of its passengers is 22% smaller than for traditional airlines for a given route.

Overall, easyJet looks to be paying more than mere lip service to the idea that aviation's contribution to carbon dioxide emissions must decrease.

Profitability

The 2010-2014 period saw easyJet's net margin average out at 7.3%, considerably higher than the global industry figure, though not as strong as Air China or Ryanair. With little chance of substantial fare increases in this highly competitive market, it will be vital to maintain passenger volumes and continue to keep a tight rein on costs to ensure this high level of profitability continues.

Middle Eastern carriers

The threat from the Middle Eastern carriers is not all that great for easyJet, with its strong focus on short-haul travel within Europe, rather than long-haul intercontinental flights.

Lufthansa

One of Europe's oldest airlines, Lufthansa started operations under the name Deutsche Luft Hansa in 1926.

Table 12: Lufthansa, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue (\$m)	35,155	38,174	40,028	39,850	39,829
Net income/(loss) (\$m)	1,501	(17.3)	1,314	433	100
Employees	113,406	116,365	117,538	118,285	118,781
Net margin	4.3%	0.0%	3.3%	1.1%	0.2%
Net income / employee (\$)	13,236	-149	11,179	3,657	838

SOURCE: Company filings

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Emerging economies

Lufthansa has worldwide operations. In its Passenger segment in 2014, 47% of revenues were generated within Europe and a further 28% in the Americas. These two regions saw stagnation and modest growth, respectively, in revenue compared to 2013. Asia and Middle East/Africa accounted for smaller shares of the Passenger segment revenues, and declined in 2014 relative to 2013. This suggests that Lufthansa is failing to exploit the growth of demand in emerging economies. However, its partnership strategy may be a way to achieve this.

Alliances

The airline is a member of Star Alliance. In 2014, it began a joint venture with Air China, which should increase its exposure to the strongly-growing demand for air travel in China. In the same year, Air India joined Star Alliance, which gives Lufthansa and other members the opportunity to code-share with it and so gain access to the Indian airline market.

MarketLine data shows that over the 2010-2014 period, this market grew at an annualized rate of 13.6%, to generate revenues of \$8.4bn in 2014, while passenger volumes rose at 5.3% annualized.

Freight

Cargo accounted for 8% of Lufthansa's revenues in FY2014. The industry average is 9%, but Lufthansa has more diverse revenue streams than many airlines, with services such as MRO and catering bringing in additional revenue. If traffic revenue alone is considered, cargo accounts for 12%. The airline carries freight both in passenger planes and dedicated freighters.

In FY2014, passenger load factors were around 80%, but freight load factors were around 70%; while passenger volumes rose compared to 2013, freight volumes declined slightly. These figures suggest that Lufthansa is not fully exploiting its cargo abilities to take advantage of the rise in freight volumes worldwide.

Fuel prices

In FY2014, fuel accounted for 25% of Lufthansa's total costs, considerably lower than the global industry figure. This may be because non-traffic operations - which have no aviation fuel expenses associated with them - account for around 20% of total revenues: this is high by the standards of most airlines. By diversifying away from traffic operations, but into businesses closely related to the airline industry, Lufthansa should see profitability that is less vulnerable to volatile fuel prices. Additionally, the airline hedges fuel prices with a 24 month timeframe, and is investing in more fuel-efficient planes.

Price competition

"Increasing penetration of the Passenger Airline Group's core markets by low-cost carriers" is cited in Lufthansa's 2014 annual report as one of the key challenges for its business.

Lufthansa has a low-cost airline subsidiary, GermanWings, which means that it can benefit from the higher profit margins characteristic of the budget airline sector. This should offer some defense against price competition.

Passenger switching costs

Lufthansa operates a frequent flyer program called Miles & More. This allows customers to earn points through flying with Lufthansa or partner airlines, or buying goods and services from hotels, car rental providers, and other participating companies. This should weaken buyer power by encouraging loyalty to Lufthansa.

Hub airport congestion

Lufthansa has slots at certain airports prone to congestion, notably Düsseldorf and Frankfurt, and it makes use of major hubs. Should airport capacity remain unchanged, it may see constraints on its expansion. The company notes that the ban on night flights from Frankfurt (one of its main locations in Germany) has led to delayed flights.

Air travel carbon footprint

The company views the Single European Sky (SES) project as "by far the most important EU project for a comprehensive climate and sustainability policy for air transport". SES aims to harmonize air traffic control across Europe. In the view of Lufthansa, this would have several beneficial effects, including the reduction of carbon dioxide emissions since it should allow more stable flight plans and speed up connections. However, progress towards SES since its proposal in 2004 has been quite limited.

Upgrading its fleet to more modern and fuel-efficient planes is the main strategy used by Lufthansa to reduce its emissions.

Profitability

Lufthansa is typical of legacy airlines in its weak profitability. Over the 2010-2014 years, its average net margin was 1.8%, close to the global industry figure, and poor in comparison with budget carriers easyJet and Ryanair. The low profitability is notable because around 20% of revenues were from businesses such as MRO and catering, which are not as directly impacted by price competition and fuel prices.

The company is aware of this issue, commenting in its 2014 annual report that "the financial result for the financial year must be described as unsatisfactory, as it fell well short of the annual forecast.

It remains a necessity to structurally improve the profitability of the Lufthansa Group". In 2012 it launched its SCORE restructuring program. It is seeking economies by exploiting synergies in purchasing, coordinating flight plans between airlines, adjusting capacities and lowering staff costs through more efficient back-office processes. It is also seeking to reduce its pension liabilities.

Middle Eastern carriers

The German airline is very conscious of the threat posed by Middle Eastern carriers, which are encroaching on routes connecting Asia and Europe. As an airline offering medium- and long-haul flights, it is more exposed to this risk than the Europe-focused budget carriers. By increasing capacity on these routes, carriers such as Etihad are depressing airline yields. Lufthansa is responding by improving its service offering, and adjusting its class configuration to reduce unit costs.

Like many of the older legacy carriers, it is not happy about the possibility that these companies receive state aid. When speaking to analysts about his company's challenging 2014, Lufthansa CEO Carsten Spohr said that the German airline "can handle" discount operators like Ryanair that are on a level playing field, but added that "with the Gulf carriers it's different." Spohr did not elaborate on what was meant by this, but the insinuation is clear: he believes that Etihad (among others) is benefitting from state support that goes against free market rules.

Air China

Air China is the national flag carrier, headquartered in Beijing. It is owned by the Chinese state.

Table 13: Air China, key income statement indicators, 2010-2014

Airline	2010	2011	2012	2013	2014
Revenue (\$m)	13,422	16,013	16,186	15,976	17,106
Net income/(loss) (\$m)	2,007	1,285	784	531	692
Employees	n/a	n/a	59,328	64,854	68,553
Net margin	15.0%	8.0%	4.8%	3.3%	4.0%
Net income / employee (\$)	n/a	n/a	13,208	8,188	10,094

SOURCE: Company filings **MARKETLINE**

Emerging economies

Air China is ideally positioned to benefit from the growth in demand for air travel in China. In FY2014, domestic flights (excluding Hong Kong, Taiwan and Macau) accounted for 65% of its RPK volumes and 84% of its passengers. These were up 6.1% and 5.2% on 2013. In terms of total revenue, 64% was generated in China. These figures include data for certain majority-owned subsidiary carriers such as Dalian Airlines.

Although international passenger volumes increased more strongly than this, the domestic segment is likely to remain highly important to Air China and will benefit from the rise in personal incomes that China's sustained economic growth has led to. However, other emerging economies are less important for Air China. "Asia-Pacific and others" accounted for just 5.8% of total revenues in FY2014, with developed-economy markets such as Europe, North America, Japan and South Korea its more important international markets. As China's growth cannot continue at its recent rate for ever, it would be beneficial for the carrier to enter more developing markets, especially since its existing fleet includes long-haul airliners.

Alliances

As a Star Alliance member, Air China has code-share agreements with certain other airlines. It also has memoranda of understanding with Lufthansa, Air Canada, and Air New Zealand to extend their passenger offering.

Freight

Cargo accounted for 8% of Air China's FY2014 revenues, close to the global industry figure of 9%.

Although a relatively small contributor to total revenues, its cargo revenues are quite diverse, with 23%, 41%, and 20% generated in China, Europe, and North America, respectively. This should protect against economic slowdown in any one region. Furthermore, its cargo revenue showed double-digit year-on-year growth in 2014 in all regions where it operates, as did its capacity in terms of available tonne-km. This suggests that Air China is successfully exploiting the rise in global air freight demand.

Fuel prices

In FY2014, 35% of Air China's costs were due to fuel, only slightly above the global industry figure. Its strategy for dealing with fuel price volatility is hedging, which it began in 2001. It aims to re-establish hedging to protect against price fluctuations.

Additionally, fleet and engine upgrades led to an improvement in fuel efficiency per tonne-km in excess of 1.6% in FY2014, and further enhancements were obtained by using flight management computer (FMC) flight optimization.

Price competition

Air China's 2014 annual report noted intensifying competition in the industry. The company is responding by strategies such as upgrading its airliner fleet, expanding its domestic capacity in the Western and Central regions of China, and capturing growing demand in Japan and South Korea by deploying additional capacity there. In this way, even if it is difficult to increase fares, it can grow revenue by responding effectively to increased demand volumes.

Passenger switching costs

The frequent flyer program, PhoenixMiles, increased its membership to 33m in FY2014. This should weaken buyer power by making it more likely that customers in the scheme who are choosing an airline will opt for Air China.

Hub airport congestion

Air China uses several major hub airlines that suffer from congestion, including Beijing. It is not clear what strategy it has to deal with issues arising from this such as delays to flights, although the proposed new airport in Beijing should offer some relief in that particular city.

Air travel carbon footprint

In FY2014, the company launched its 13-5 Energy Conservation and Emission Reduction Plan. It continuously monitors fuel consumption by the airline. The fuel efficiency improvements mentioned above should also reduce emissions on a per-tonne-km basis, but if traffic volumes increase, this may not be enough to cut emissions in absolute terms.

Profitability

Over the 2010-2014 years, Air China displayed good profitability, especially when its status as a legacy airline is taken into account. Average net margin was 7.0%, comparable to the 7.3% achieved by budget airline easyJet, and well above the global industry figure of 1.8%. One contributory factor is likely to be the relatively low payroll costs achieved by Air China.

It is notable that net margin did steadily fall year on year during this period, even though fuel prices were lower in 2014. This suggests that Air China must continue to focus on cost control and increasing revenues in the years ahead.

Middle Eastern carriers

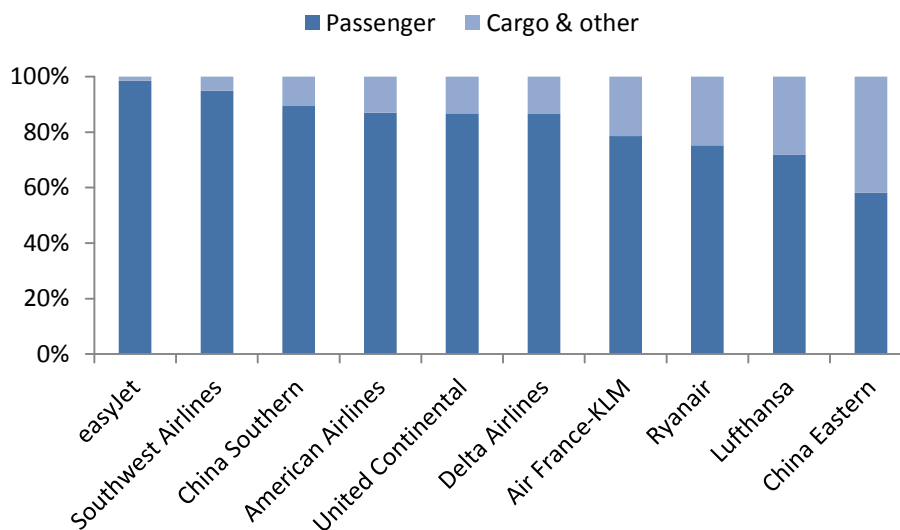
Whereas US and European legacy airlines are vocal in their criticism of the newer Middle Eastern airlines and the threat they pose, Air China appears less concerned. This may be because of its reliance on the domestic market, where foreign players generally have little impact.

COMPANY RANKINGS

In this section, the top ten airlines are compared in terms of revenue streams, cost structure, and profitability.

Diversity of revenues streams

Figure 7: Revenue streams, 2014



SOURCE: Company filings

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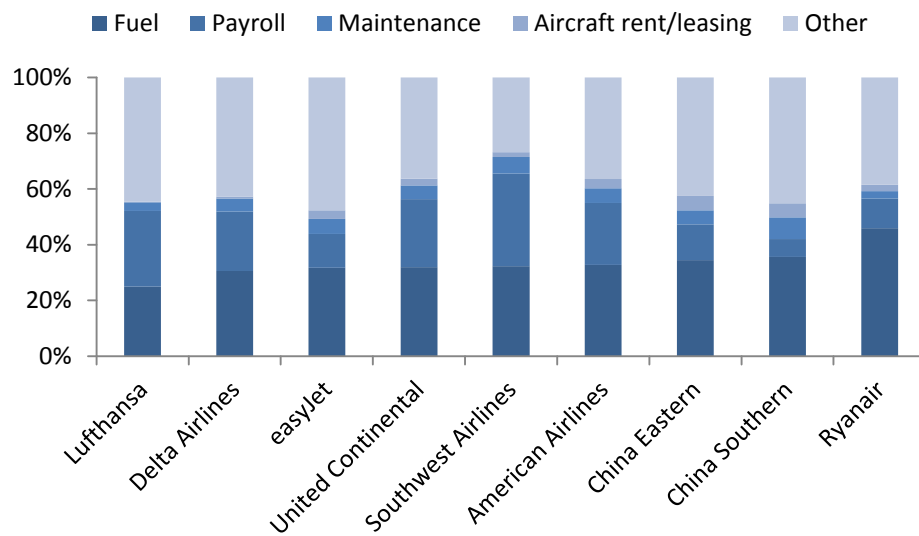
easyJet and Ryanair do not carry any cargo, in order to speed up airport turnaround. The apparently large non-passenger percentage for Ryanair reflects the fact that basic ticket sales (the passenger segment) are strongly supplemented by a variety of fees.

Lufthansa and China Eastern show the greatest genuine diversification away from passenger revenues. As well as air cargo, Lufthansa offers catering, MRO, and other services, while China Eastern has developed a logistics service.

For all these airlines, passenger traffic remains important, or very important, to their business model.

Cost structure

Figure 8: Cost structures, 2014



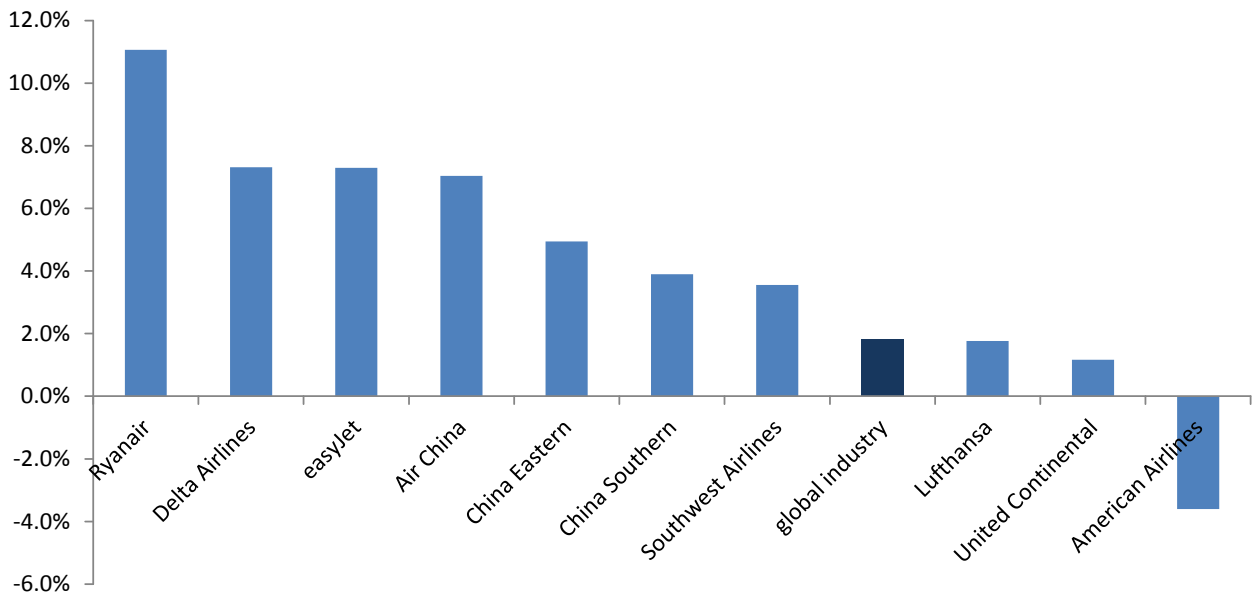
SOURCE: Company filings

MARKETLINE

For nine of the airlines, fuel was the most significant cost, followed by payroll and related staffing costs. The exception was Lufthansa, whose payroll costs were slightly higher than fuel. Both these costs can be difficult to control, but failure to do so impacts on profitability.

Profitability

Figure 9: Net profit margin, average 2010-2014



SOURCE: Company filings

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Over the 2010-2014 period, Ryanair is outstanding for its profitability, which averaged 11.1%. However, with the exception of American Airlines, all these carriers achieved positive margins, even if they had the occasional loss-making year. Notably, most outperformed the global industry figure. This shows that in general the leading companies are responding strategically and effectively to the challenges of intense competition, fuel prices, and more.

CONCLUSIONS

The major airlines are responding well to tough conditions

The global airline industry has low profit margins. Although demand for air travel has been growing steadily for many decades, the industry is highly competitive. In the short-haul market, the presence of budget carriers offering no-frills service at low price makes it difficult to increase fares. In the medium- and long-haul market, especially for Europe-Asia routes, Middle Eastern airlines such as Emirates, which may enjoy state subsidy, are expanding the total supply of seats, which also tends to suppress fare increases. While these competitive pressures make it tough to grow the top line, the high and volatile price of crude oil means that aviation fuel is a major component of cost. Even though oil prices have fallen in recent years, they are still higher than they were at the turn of the 21st century. Hence profits tend to be low.

In recent years, several airlines have faced bankruptcy, sometimes successfully restructuring. A spate of mergers and acquisitions has consolidated the industry, notably in the US. The three global airline alliances have grown their memberships, while joint ventures and agreements have been signed between airlines outside the alliances. These partnerships offer carriers network size economies. Demand for passenger air travel continues to expand, particularly in emerging economies as personal incomes rise and make it accessible to more consumers. Financial strategies such as hedging can reduce fuel cost volatility, while the technological advances of plane and jet engine manufacturers mean that airliners are steadily becoming more fuel-efficient. Airlines that invest in upgrading their fleets benefit from lower per-tonne-km fuel costs.

The ten airlines considered in this report, the world's largest by passenger-km volumes, are generally responding well to the tough market conditions. Fuel economy, and the related issue of reducing carbon dioxide emissions, are highly important to all the airlines. Aside from that, though, their strategic focus varies according to their location and their business model. They fall into three categories:

- Legacy carriers in developed economies. These focus on enhanced service provision and frequent flyer schemes to overcome the low inherent buyer switching cost and help ward off the threat of the Middle Eastern challengers. They generally operate spoke-and-hub routes, sometimes relying on regional airlines for the spoke-hub flights, and offer short-, medium-, and long-haul routes. They are generally keen to work within alliances and joint ventures to expand their offerings.
- Legacy carriers in China. Their revenues are currently dominated by domestic flights, where demand is rising steadily, but they are seeing faster growth in the smaller, international market. The benefits of alliances and partnerships will become increasingly apparent as their international revenues grow.
- Budget airlines. Although many budget airlines are relatively small, Ryanair and easyJet are examples in the top ten carriers considered here. They focus on short-haul flights within a particular region, and alliances and partnerships that would expand their effective networks are less important for them. Middle Eastern carriers with their medium- and long-haul focus are not perceived as a major threat. Also, they have little or no cargo revenues to avoid time-consuming loading and unloading. They tend to have fleets with a strictly limited range of aircraft models, to rationalize maintenance costs. Competing almost exclusively on price, they may not bother to introduce frequent flyer schemes.

Over the 2010-2014 period, most of these airlines have positive average net margins, and have outperformed the global industry as a whole. The results show the importance of senior management having a deep understanding of their particular business model, identifying the most relevant opportunities and threats, and formulating strategic responses. But the next few years, in which oil prices are likely to start rising again, will put their current strategies to the test.

APPENDIX

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MarketLine Industry Profile – Oil & Gas

MarketLine Case Study - Etihad Airways: Flying high on the journey to global superpower status

MarketLine Case Study - Cheap but no longer nasty: Evolution at Ryanair

MarketLine Case Study - Lufthansa: The SCORE program – change for success?

MarketLine Case Study - Europe's legacy carriers: Take offs delayed by strong head winds

MarketLine Case Study - Flying high: EasyJet's strategy for success Going head to head with legacy airlines

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