case three

The US Airline Industry in 2007

TEACHING NOTE

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■ SYNOPSIS ■

At the beginning of 2007, the US airline industry showed clear signs of emerging from the crisis that had gripped it since September 2001. After five years of excess capacity, competition from low-cost carriers, a raft of new security measures, rocketing fuel costs, and widespread bankruptcy, 2006 marked a return to profitability for most of the major carriers. Contributing to this turnaround were growth in passenger numbers, cost cutting and capacity reduction by major airlines, and a spate of mergers and acquisitions. The key question facing the industry is now: what about the future? Does the US airline industry have sound prospects of earning a reasonable return on its invested capital over the next five years?

As the case makes clear, the woes of the industry during 2001–5 were unusual only in their severity. The industry's profit performance since deregulation in the early 1980s has been abysmal – in many years the industry as a whole has made a loss, while among the larger airlines, only Southwest has earned a return on its capital in excess of its cost of capital.

To provide a basis for understanding the factors that drive competition and profitability in the industry, the case outlines the history of the industry, focusing on deregulation in 1978 and what that meant for competition during the period since then. Once the regulation of fares and entry was abandoned, the case shows how the fundamental economics of the industry transformed competitive behavior. New entry, excess capacity, high exit barriers, limited opportunities for product differentiation, and high fixed costs combined to encourage aggressive price competition.

The case also shows how the strategies of the airlines attempted to moderate ruinous price competition. Mergers, frequent flier programs, building dominant positions at particular hubs, and using predatory pricing to threaten low-cost entrants were all means by which the major airlines attempted to tame competition.

Looking ahead, the case asks whether vigorous competition and low profitability are an inevitable result of the nature of airline economics, or whether the evolving structure of the industry and the strategies of the airlines offer the prospect of a continuation of recent financial health.

■ TEACHING OBJECTIVES ■

I wrote this case to allow students to gain experience in applying the basic tools of industry analysis to a familiar and easy-to-analyze sector. I have long used *Crown Cork and Seal* as my favored case in industry analysis, but decided that it was time for me to update to something more contemporary.

The airline industry is highly suitable for analyzing the relationship between industry structure, competition, and profitability for several reasons:

- The industry is a disaster in terms of its financial performance. This immediately raises some interesting questions: is this because the airlines are badly managed (Southwest, after all, earns quite respectable profits), or is it the fault of bad industry economics?
- The industry offers a relatively simple application of the Porter five forces analysis.
- The industry's profit performance changes over time: it was profitable in 1998–2000 and again in 2006. This allows us to see how changes in industry structure and competitive conditions have an impact on profit performance.
- The case shows how the strategies of players in the industry can help reduce competitive pressure and boost profitability. The case also shows how difficult it is for industry players to prevent destructive competition when demand is weak and excess capacity prevalent.

■ POSITION IN THE COURSE ■

This case is ideal for introducing the analysis of industry and competition.

■ ASSIGNMENT QUESTIONS ■

1. Assess the overall financial performance of the US airline industry during the past 20 years.
2. To what extent can the industry's low average profitability during this period be attributed to the structure of the industry? Which of Porter's five forces has had the biggest impact in depressing industry profitability?
3. What factors have caused the upturn in profitability since 2004/5? To what extent have the strategies of the airline companies contributed to the recent improvement in financial performance?
4. What is the outlook for industry profitability during the five-year period 2007–11?

■ READING ■

R. M. Grant, *Contemporary Strategy Analysis* (6th edn.), Blackwell Publishing, 2008, Chapter 3.

■ CASE DISCUSSION AND ANALYSIS ■

I have taken two approaches to teaching this case:

1. An historical approach, where I follow the history of the industry since the days of regulation and ask students about the key structural features of the industry at each stage of the industry's development and their implications for competition and profitability. Such discussions follow the following pattern:
   - Regulation. What were the main features of the industry's regulatory structure during 1945–78? What were the main dimensions of industry structure and competition that were subject to regulation? What were the implications for competitive behavior in the industry?
   - Deregulation. What were the consequences of deregulation for industry structure and competitive behavior? Were the economists who supported deregulation right about the "contestable" nature of the industry? Is this an industry where entry and exit are easy?
   - Following deregulation, why did the industry display such dismal financial performance, with profitability generally low and bankruptcies frequent?
   - What has caused profitability to improve during 2005–6? To what extent can the revival of profitability be attributed to the strategies pursued by the airlines?
   - What structural changes in the industry do you anticipate over the next five years (i.e., 2007–11) and what will be the implications of these for the overall profitability of the US airline industry?
2. An emphasis on industry profitability following deregulation and an inquiry into the characteristics of industry structure that have produced this poor profitability.

My preference is for the latter approach, which I typically find is more direct and more tightly focused around the key analytic framework. So, let me expand upon this approach.

Industry Performance

During the 28 years since deregulation, overall industry profitability has been depressingly low. Industry return on investment during the 1980s averaged 6.8%; during the 1990s, 5.1%; and during 2000–6 it was –2.1% (Table 3.2). How bad is this? I ask students for an appropriate benchmark – possibilities are the average for all industries (e.g., average ROI for the S&P 500) or the industry cost of capital. We have no data on cost of capital for the airline industry, but it's worth while to ask students for a rough-and-ready estimate. Thus, during the 2000s:

- Risk free rate (return on 30 year T-bond): approx. 4%.

- Market equity risk premium: approx. 5%.
- Airline industry beta: about 1.3 (airlines are a cyclical industry with high financial leverage).
- This implies an equity cost of capital of 10.5%.
- Cost of debt: about 7%, less 40% tax rate = 4.2%.
- Assume 2:1 debt/equity ratio: WACC = 6.2%.

Thus, even when the industry is apparently profitable (e.g. in 2006), it is often earning negative *economic* profits, i.e. return on capital is less than cost of capital. The frequency bankruptcies in the sector underline this grim reality.

Why Has Industry Performance Been So Poor?

Despite assigning readings on the analysis of industry structure and competition, this question typically elicits a variety of responses. I try to move quickly away from notions that poor industry profitability has been decreed by God or is the fault of management (though I do like to return later to the role of management in perpetuating the conditions of intense competition).

One argument that tends to arise (and can prove troublesome) is that profits are low because costs are high. This issue typically arises in relation to fuel costs. To what extent has low profitability since 2001 been the result of high oil prices? In industries where competition is strong, industry-wide movements in costs tend to be passed on to consumers. In the airline business, rising fuel prices tend to result in rising fares – and they may be passed on directly in the form of fuel surcharges. Empirically, there is not much evidence that oil price movements are correlated with airline industry profitability. Consider Table 3.2. In 2006 oil prices were sky-high, yet it was the industry's best year since 2000. In 1986, oil prices collapsed (down to $8 a barrel at one point), yet 1986 was the second least profitable year of the decade. More generally, there is little evidence to suggest that industries where costs are rising quickly (healthcare, management consulting, cigarettes, video games) have lower profitability than industries where costs are falling (telecommunication services, PCs).

Reverting to a structural analysis of competition, I adopt one of two approaches:

1. Present the five forces framework then get the students to fill in the boxes, or
2. Create a list of points on the board and then organize these under the headings of the five forces.

Either way, we emerge with something like Figure 3.1 (see next page). Among the key points that I bring out in this analysis are:

1. *Supplier power.* There's a lot of monopoly and duopoly power upstream. The unions and the airports are effectively monopolists – the unions (especially the pilots) have used this power to keep wages and benefits high and impose restrictive working practices that keep productivity low. The airplane manufacturers are duopolists – how much supplier power they possess depends critically upon the balance of supply and demand. When the plane manufacturers are suffering from excess capacity, bargaining power is with the airlines – they can easily delay buying and extend the lives of their planes.

2. *Industry rivalry.* The main competitive force in this industry is rivalry between the airlines. We know this is very strong – look at the frequent price wars that break out. The key to understanding this intense rivalry is the *combined* effect of the different structural factors. The prime driver is excess capacity – the airlines are always willing to compete on price in order to fill empty seats. How low can prices fall below average cost? Very low. Because of the preponderance of fixed costs, airlines will, in principle, be prepared to sell seats at any price that covers average variable cost and makes a contribution to overhead. (I like to ask the class what percentage of total costs is fixed for the major airlines – it must be in excess of 95%. Once the schedule has been set then most labor costs, fuel costs, capital costs are fixed.) This excess capacity problem is perpetuated by the long-lived assets (especially aircraft) and failure of bankrupt airlines to exit the industry due to the protection offered by Chapter 11. (Indeed, relieved of debt payments and contractual obligations to employees, and hungry for cash flow, the bankrupt airlines – United, Delta, US Airways during 2002–6 – tend to be leaders in fare cutting.)

3. *Entry.* Much of the case over deregulation was based on arguments for "contestability" – if airlines could enter and exit individual routes and regional/local markets easily, then the industry would establish levels of prices and profits that would approximate to those in perfect competition. Were the proponents of contestability correct? Barriers to entry are not especially high – most capital equipment can be leased, and so can pilots and crews. However, while the capital costs of entry may be low, putting together the whole range of resources and capabilities needed to operate an airline (including gates and landing slots) tends to be difficult. Also, aggressive

AmEx, but mostly small)
- Some big customers (e.g. large corporations)
- Customers price sensitive (switching costs low, price transparency high)

Figure 3.1

competition from established airlines increases the costs and difficulties of entry. Whatever the *ex ante* arguments, the fact is that new entry has been a continuing feature of the industry's evolution since deregulation, with a number of new start-up airlines entering during 2000–4.

4. *Buyer power.* The biggest change during the past decade on the buyer side has been the growth of online sales and the increased transparency of airline prices made possible by the internet. More informed customers are also more price sensitive customers. In terms of bargaining power, the rapid consolidation of the travel agent business, the increased desire by companies to seek preferential deals with airlines, and the rise of big online travel agents (Expedia, Travelocity) have put increased downward pressure on fares. Finally, cost cutting among businesses and other organizations has meant a decline in their willingness to allow employees to travel in first and business classes.

5. *The combined impact of the different competitive forces.* Although rivalry between the airlines has been the major competitive force depressing prices and profits, it is important to note that within the five forces framework, the competitive forces interact with one another in a complementary way. Thus, while industry rivalry provides the primary mechanism for competition, it is the ability of new entrants to come into the industry (bringing with them additional new capacity) that can trigger destructive price competition, while the pressure from price-sensitive buyers can exploit to the maximum the willingness of the airlines to offer special deals to fill empty seats.

6. *The relevant industry/market.* As with all industry analysis, a critical issue concerns the relevant boundaries of the industry. The US market for passenger air transport comprises a number of distinct markets: every city pair is a separate market in terms of demand-side substitutability. Competitive conditions differ hugely between them – some are monopolies in terms of direct flights (Washington National to White Plains, NY). Others are intensely competitive (LA–San Francisco). Thus, in analyzing competition within the US airline industry, we are in effect generalizing and averaging across many separate markets. It could also be argued that, from a broader perspective, the US airline industry is too small a unit of analysis – US airlines also compete in international air transport and there are linkages between domestic and international routes. Both these points have validity. I stress that the appropriate boundaries for an industry are a matter of judgment (and convenience). In the case of the US airline industry, it is useful to consider the domestic market as separate from the international market (the companies competing are different), but it is often useful to take a more disaggregated analysis and consider competitive conditions in specific regional and local market segments.

The Recent Upturn in Profitability, 2005–6

To explain the revival in airlines' profits from the bleak period September 2001 through 2005, the key external factor appears to be strong growth in the demand for air travel. However, the biggest influence may be the strategies pursued by the airlines. These included:

- *Capacity reduction*. The financial woes of 2001–5 encouraged cutbacks in schedules and the substitution of smaller for larger planes on many routes. With UAL (United) and Delta in Chapter 11 bankruptcy and other airlines anxious not to enter (or in the case of Continental and US Airways, re-enter), the established airlines were reluctant to invest in new capacity.
- *Mergers and alliances.* Mergers, acquisitions, and alliances (e.g., code-sharing agreements) had long been a feature of industry evolution. Following US Airways' 2005 merger with America West, ATA acquired North American Air and Airtran acquired Midway. The elimination of competitors inevitably tends to reduce competitive pressures – however, it is noteworthy that industry concentration during 2002–5 fell (see Table 3.5).
- *Product differentiation.* The tendency over time has been for airline seats to become commodities and attempts at differentiation have been failures (except in first and business classes). However, one differentiation strategy has been immensely successful – frequent flier schemes. These have encouraged customer loyalty and provided incentives for alliances, as well as creating an additional revenue scheme for the airlines.
- *Regional concentration*. Much more successful than mergers and acquisitions at controlling competition has been the concentration by each airline on a few major airports. Although motivated primarily by efficiency, the hub-and-spoke system has had the effect of consolidating capacity and routes at a few airports – sometimes creating the near-monopolization of gates and slots at some airports (see Table 3.4).
- *Forward integration*. The airlines have increasingly taken power from retailers (especially travel agents) by expanding their own direct sales and reservation services (both telephone and internet based) and creating specialized online ticket agencies (e.g., Orbitz was set up to compete with Travelocity and Expedia).

Future Prospects

What is the outlook for competition and profitability over the next five years? As of spring 2007, the industry outlook remained rosy: the air transport association forecast 2007 operating profits of around $4 billion – a substantial improvement on 2006.

However, the recent upturn is primarily the result of demand growing faster than capacity, resulting in unusually high load factors. Will such favorable conditions persist? Several factors are likely to be important:

- The critical factor will be the balance between demand growth and capacity growth. If the US economy runs out of steam, demand may grow at slower rates than during 2002–6. But what about capacity? The real risk is that the return to profitability for the industry and the emergence of several airlines from bankruptcy may encourage a new wave of capacity additions. We know, not just from the airline industry, but from many other high fixed cost industries that excess capacity fuels price wars and industry-wide losses.
- Industry consolidation. Will the trend towards to mergers and acquisitions continue – and will the competition authorities allow it? Continued financial weakness of all the major airlines makes consolidation attractive – particularly, it offers potential for cost reduction.
- However, the prospects of any reduction in the number of airlines competing are offset by the prospects for continuing entry into the US airline industry. In addition to the future new low-cost airlines is the possibility that overseas carriers might be permitted to compete on US domestic routes.
- What about the benefits of continued cost-cutting by the major airlines? Whether the airlines reduce costs by pruning overheads and running costs (e.g. American) or setting up low-cost subsidiaries (United), it seems likely that the result will be mainly to reduce the competitive advantage of the budget airlines (Southwest, JetBlue, etc.) rather than to increase industry-wide profits. The ability of the "legacy carriers" to reduce costs depends greatly upon their relations with their unions. The post-9/11/01 crisis encouraged unprecedented concessions from the unions. If the airlines regain profitability, will the unions revert to their traditional roles?

■ KEY TAKE-AWAYS FROM THE CASE DISCUSSION ■

1. To understand why the level of competition and profitability in an industry is what it is, analyzing industry structure does work! In particular, the Porter five forces model provides a systematic and useful framework for analyzing the impact of industry structure on competition and profitability.

2. The Porter five forces model is not just useful in explaining the past and the present; its real value to managers is:
   a) *Predicting the intensity of competition and levels of profitability in the future*. If we can predict the changes in industry structure that are likely, then we can evaluate whether these changes will tend to increase or reduce the intensity of competition in the industry.
   b) *Suggesting strategies that can moderate the forces of competition in order to increase overall industry attractiveness.* Over the past two decades, the airlines' competitive strategies have sought to raise entry barriers, increase product differentiation, and increase seller concentration in local/regional markets. To what extent might mergers, capacity reduction, and attempts to weaken the power of the unions be successful in improving the balance of competitive forces?

3. The Porter five forces analysis (like most other strategy frameworks) is not an algorithm that provides clear and precise answers. The five forces framework is a means of organizing our analysis of the many factors influencing competition and profitability in an industry. It helps us to identify the key structural factors that drive competition and predicts whether each of these factors will tend to increase or reduce the intensity of competition. However, these different factors interact with one another and it difficult to predict the overall impact on competition and the competition of multiple factors acting together. Thus, where some factors (e.g., mergers) are tending to moderate competition while others (e.g., increased price sensitivity of passengers) are tending to increase competition, predicting the overall impact on profitability is difficult. Ultimately, predicting the net effect of counteracting forces is a matter of judgment.