



# Point-to-Point<sup>®</sup>

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## Global airline deleveraging is driving down risk

By Kostya Zolotusky, Managing Director, Capital Markets Development, Boeing Capital Corporation



Careful observers of airplane financing trends have noted over the years that lenders have been placing greater emphasis on the value of airplanes as assets, and relying less on airline credit worthiness as the basis for funding airplane purchases. The reason was simple: The value of airplane assets had proven very solid, both through cyclical industry downturns and a punishing series of economic shocks, including geopolitical conflicts, spiking oil prices, regional currency crises, the SARS epidemic, and even the financial turmoil of the global recession. Airplane assets have recently become even more valuable components of financier portfolios around the world as the number of signatories to the Cape Town Treaty, which ensures the rights of aircraft creditors, continues to expand.

While aircraft collateral has greatly expanded the scale and scope of aviation finance, airline credits have remained an important part of the overall industry financing structure. This raised the question of which side of the airplane-asset/airline-credit equation investor confidence would settle in the long term.

### Solidifying airline credit

Historically, many investors shied away from funding airplane purchases because the aviation industry is cyclical and airline profitability notoriously volatile. The airplane investment community tended to be limited to a relatively small group of specialists who had learned how to manage the risk attendant to that volatility. But in the past few years, new players have been entering the airplane financing market, many without deep experience in the aviation industry.

To better understand the evolving aircraft financing market, BCC analyzed the airline business environment. We looked at the many variables that contribute to airline success or failure, including management strategy, labor costs and commitments, industry cyclicality, regulatory issues, environmental concerns, and revenue-versus-cost considerations. We identified the role of leverage in the airline capital structure as crucial to this understanding.

We analyzed the various participants in the industry: airlines, investors and financiers, airplane and engine manufacturers, and all the companies that support the industry, such as maintenance providers, caterers, and airport operators. When we compared industry

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## Clear direction emerges with New Engine 737

*Ed. Note: Mike Bair is vice president of Advanced 737 Product Development for Boeing Commercial Airplanes and is responsible for planning the future of Boeing's single-aisle airplane.*

On several occasions this year, I've joined our Boeing Capital team in their efforts to help the financial community understand where our product strategy is heading, particularly as it applies to a 737 replacement.

As some of you've may have heard me describe, Boeing has been evaluating two potential options for the next single-aisle airplane: to improve on the 737 with new, more fuel-efficient engines that could enter service mid-decade, or a new small airplane with a planned entry into service in 2019.

As you now know, Boeing has launched the new engine variant: the 737 MAX. Arriving at that decision required balancing a complex range of factors. In addition to daily discussions with a wide array of customers, we made a thorough assessment of options, including timing and production system readiness.

Teams had been pursuing the two options, and we had made significant progress on both. However, it became clear that customers needed more certainty on our direction sooner – they are ready to move on fleet planning decisions. While we knew we would have the technology for a new airplane, we did not see a clear path to address the risks associated with maturing a production system that could quickly ramp up by the end of the decade.

The 737 MAX is the best choice for our customers and for Boeing. This direction not only delivers that certainty customers were asking for, but it also ensures that Boeing will continue to have the most capable and fuel efficient airplane in this market segment.

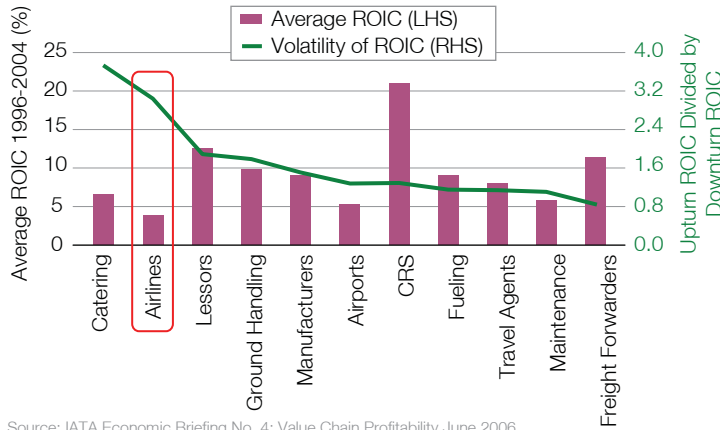
With the technology we're going to invest in that airplane, it will live on for 15, 20 years. Adding new engines to the 737 will also provide 10-12 percent greater fuel efficiency to our customers in the near term. Compared to our competitors, it will provide a 7% advantage in operating costs per seat. This is the best, most cost-effective solution for our customers and for Boeing.



BCA's Mike Bair – speaks at a BCC event in London

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participants in terms of profitability and return on investment, airlines came out on the bottom. When we compared the volatility, the equivalent of investment risk, for these participants, airlines topped the list.



Source: IATA Economic Briefing No. 4: Value Chain Profitability June 2006

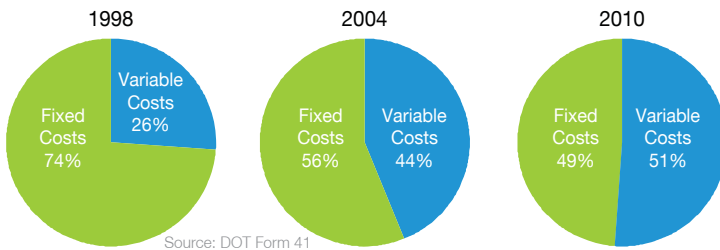
Compared to other aviation industry participants, airlines had an unenviable combination of high volatility and low average return on investment credit.

### The focus on airline leverage

High risk and low return on investment is not the formula for investor confidence. So we decided to analyze the role of airline leverage. We divided airline leverage into two categories: operating leverage and financial leverage. Operating leverage is to cover all the infrastructure costs necessary to keep the airplanes in the air, the tickets being sold, and the payroll being paid. Financial leverage for most airlines entails primarily the debt required for the purchase and ownership of airplanes.

On the operating leverage side, airlines traditionally owned all the aspects of the business that pertained to operations. This included internal services, such as the reservation systems, catering, and airplane maintenance. These are fixed costs that do not decrease appreciably if the airline reduces operations to match fluctuations in passenger demand. Fixed costs typically amounted to three-quarters of the cost of doing business for an airline.

### Reducing fixed costs

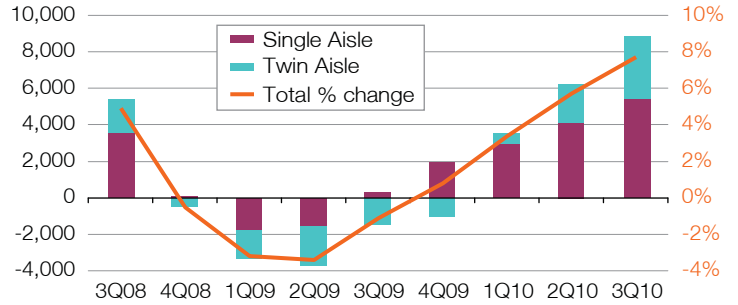


Source: DOT Form 41

Airlines have aggressively reduced fixed costs as a percentage of total cost during the past decade and a half.

In the late 1980s, airlines recognized that owning all the disparate aspects of their operations created a very difficult business structure. Because such a high proportion of their costs were fixed, airlines could not reduce costs by cutting back operations or reducing capacity when economic down-turns reduced passenger demand and airline revenues. Airlines therefore

began to aggressively outsource their operating infrastructure. The results are astonishing. Today, fixed costs at airlines typically add up to slightly less than half the total cost of doing business.

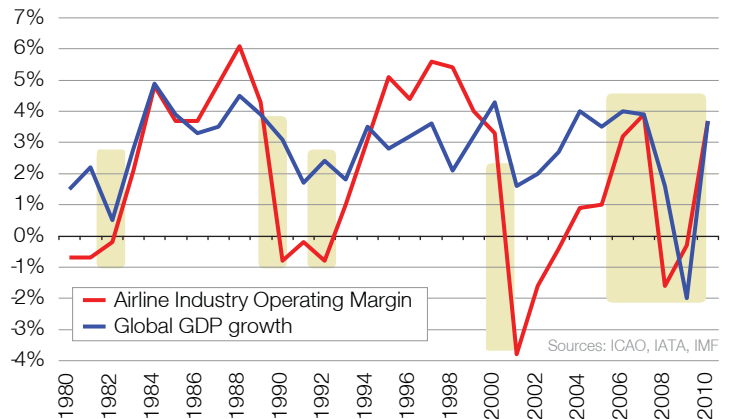


Source: Innovata 2010, commercial jets >= 90 seats

The world's airlines dramatically reduced capacity at the onset of the global economic crisis, greatly reducing the impact to airline margins and enabling airlines to quickly respond to resurgent demand.

This is a tremendous achievement by the management teams running the world's airlines. Transforming fixed costs to costs that vary in proportion to actual demand has given airlines the flexibility and the incentive to manage capacity.

As a result, for the first time in the history of commercial aviation, when the economic downturn of 2008 hit, airlines could cut operations to reduce costs when passenger demand sagged. In a dramatic reversal of precedent, airline margins closely tracked or even slightly outperformed the global GDP changes during the recession. In all previous economic slides, the inflexible fixed cost structure of the airlines exaggerated the effects of economic turmoil, driving margins to sink far below the depths of global GDP decline. This is strong evidence that reducing fixed costs has allowed airlines to limit airline exposure to the risk of market cyclical.



Sources: ICAO, IATA, IMF

Fluctuations in airline operating margins have historically vastly exaggerated variations in global GDP growth. Successful deleveraging enabled airlines to respond to the recent global economic crisis with margins that matched or beat the swings of the global GDP.

### Managing financing costs

Airlines have been making equally encouraging advances in managing financial leverage. Airlines are able to accumulate a large amount of leverage precisely because they own airplanes.

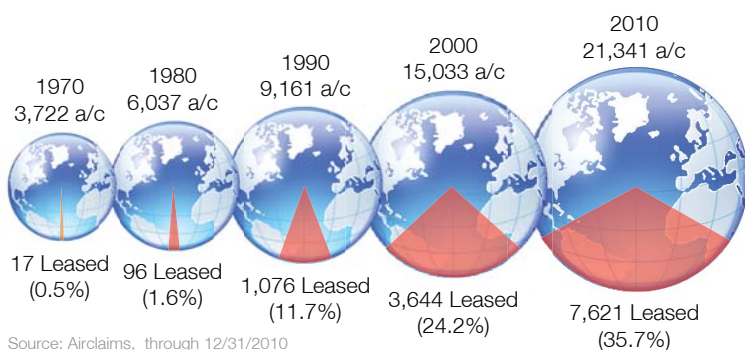
Airplanes are a solid investment. So airlines have been able to borrow heavily on the value of their fleet, even though the airline business as a whole ranks among the highest in terms of risk.

But the readily available capital was a double-edged sword. Airline financial leverage amplified the effects that any variation in revenue had on profitability. When the economy slid, airline profitability suffered massive losses. When there was an economic uptick, airline profitability surged.

Airlines are pursuing two strategies to reduce their financial leverage. First, they are outsourcing the debt by leasing many of their airplanes, rather than buying them. Second, they are reducing their borrowing by making larger down payments.

### Outsourcing leverage to lessors

Boeing analysis of airline economics has long indicated that, for most airlines, the decision to buy or lease airplanes is neutral in terms of the total economic value of the airline. Over the past two decades, the growing share of the global fleet that is on operating lease supports this finding. The number of leased airplanes in the global fleet is rapidly approaching 50 percent of the world's total operational fleet. That is precisely what would be expected if the buy/lease decision is economically neutral.

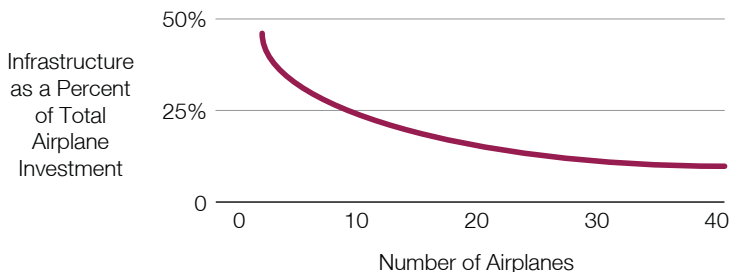


The percentage of the global commercial fleet on operating leases has been growing steadily since 1970. Currently more than a third of operating airplanes on operating lease. The proportion should reach 50 percent in the near future.

### Organic deleveraging

Our industry has long believed that airlines needed leverage to expand their fleets to gain a competitive advantage over smaller airlines. In addition, economies of scale bring down operational cost per passenger as the fleet gets larger.

However, airlines learned that once the number of airplanes



Infrastructure costs as a percentage of total airplane investment level off when the fleet size reaches about 50 airplanes. Economies of scale, therefore, are not scalable beyond that point.

in the fleet gets to about 50, further economies of scale are not very scalable. Consequently, airlines began to focus on the scope of their business. Scope is the airline's ability to better utilize its assets and customer base. For example, by increasing airplane load factors and scheduling more flights per airplane each week, airlines can earn more revenue with the same assets. For the past 10 years, airlines have been achieving higher load factors and greater airplane utilization than had ever been considered sustainable.

In addition, airlines have come to recognize that the captive audience occupying seats is an asset that can generate revenue. Beyond charging for checked luggage, airlines have made selling movies, food, and other products and services on board an integral part of their operations. Before the passenger even reaches the airport, the airline can earn ancillary revenue from each passenger by selling "clicks" to hotels, restaurants, entertainment, tourist attractions, and car rental sites on their online reservation systems.

These revenue enhancements are helping airlines increase the cash on hand, which gives them greater flexibility to manage financial leveraging. Airlines around the world have been aggressively deleveraging and have significantly less debt than was typical of airlines a decade and a half ago.

### Girding against future shocks

There has been a material reduction in publicly listed airline leverage since early 2000. We asked airline CFOs the reason for their deleveraging. The near-unanimous reply was, "Never again will my business be in the precarious position it was in after 9-11."

After 9-11, a lot of strong, healthy airlines came to the brink of insolvency. As an industry, airlines began to deleverage. And they held true to their resolution even through the years 2004-to-2006, when capital was more abundant and credit easier to obtain than ever before in history.

During the most recent test of airline resolve, the financial crisis and economic recession which began in 2008, it would have been natural and even justifiable for airlines to borrow in order to defend against the most severe and unpredictable financial crisis since the Great Depression. Yet airlines maintained relatively low leverage, compared to the pre-9-11 level of indebtedness.

### A more flexible asset/credit balance

Today, the cash position and debt profile of most public airlines reflects those efforts. For the industry this means a future in which airplane financing is structured on a healthy balance between airplane asset value and credit worthiness of the airline that operates the asset.

This new balance will give airlines much greater flexibility to weather the inherent volatility of the industry. With lower leverage, airlines are less exposed to shocks from outside the industry. Significantly, financiers are realizing that lower leverage makes the airline business less risky. Credit rating agencies look at volatility and risk. Lower risk merits higher credit ratings, freeing the way for more capital investment. ■

**Team Farewells** – *Point-to-Point* is a result of editorial and production collaboration, and we bid farewell to two of our longtime contributors. Writer Jeff Wood is retiring after giving voice to numerous subjects since the publication's first days. Graphics specialist Warren Carrow is similarly forsaking print production duties for the joy of retirement. We wish them our best!

## Meet the MAX Family

Boeing in late August unveiled the 737 MAX, the name of the new engine variant of the market-leading 737 twinjet, after its launch was reaffirmed by the company's board of directors. The new family of aircraft – 737 MAX 7, 737 MAX 8 and 737 MAX 9 – builds on the strengths of the Next-Generation 737. "The 737 MAX offers airlines the right solution and the best choice for creating the most successful future with improved profitability," said Nicole Piasecki, vice president of Business Development and Strategic Integration for Boeing Commercial Airplanes. "The 737 MAX will deliver maximum efficiency, maximum reliability and the Boeing Sky Interior will continue to offer maximum passenger comfort. We call it the 737 MAX because it optimizes everything we and our customers have learned about designing, building, maintaining and operating the world's best single-aisle airplane," Piasecki added. Airlines will benefit from the 737 MAX's seven percent advantage in operating costs over future competing airplanes as a result of optimized CFM International LEAP-1B engines, more efficient structural design and lower maintenance requirements. Its forebear is the world's most popular and reliable commercial jet transport, with more than 9,000 orders to date. More information about 737 MAX is available at [www.newairplane.com](http://www.newairplane.com) and in this video: [http://www.youtube.com/watch?v=i\\_kKD6g53AA](http://www.youtube.com/watch?v=i_kKD6g53AA). ■



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Along with being the most fuel efficient in its class, the 737 MAX will have the lowest operating cost, while also meeting customer needs for range, payload, standardization, reliability and fleet compatibility. It extends the incredible franchise of the 737 program well into the next decade.

Since the start of our journey to design the new 787, the financiers have been an active part of our dialogue around where our products should head, so you can continue to expect to hear more from us as the 737 MAX progresses. And as always, we appreciate your feedback. ■

## Dreamliner Receives FAA, EASA Certification



Boeing received certification for the all-new 787 Dreamliner from the U.S. Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA) during a ceremony August 26 at the company's Everett, Wash., facility. FAA Administrator Randy Babbitt (right) presented Capt. Mike Carriker, 787 chief pilot (center), and Mike Sinnett, 787 vice president and chief project engineer, with the U.S. Type Certificate. Both Carriker and Sinnett have worked on the program since its inception. EASA's executive director, Patrick Goudou, presented the airplane's European Type Certificate. "Certification is a milestone that validates what we have promised the world since we started talking about this airplane," said Boeing Commercial Airplanes President and CEO Jim Albaugh. "This airplane embodies the hopes and dreams of everyone fortunate enough to work on it. Their dreams are now coming true." Boeing will deliver the first 787 to launch customer All Nippon Airways (ANA) on September 26 at its Everett, Wash. factory. It will fly from there September 27 to Tokyo. ANA is scheduled to begin regular passenger service November 1 from the city's Haneda Airport to the cities of Okayama and Hiroshima. ■

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