



Point-to-Point[®]

FINANCIAL TRENDS IN COMMERCIAL AVIATION

Spring 2010, Issue 16

www.boeing.com

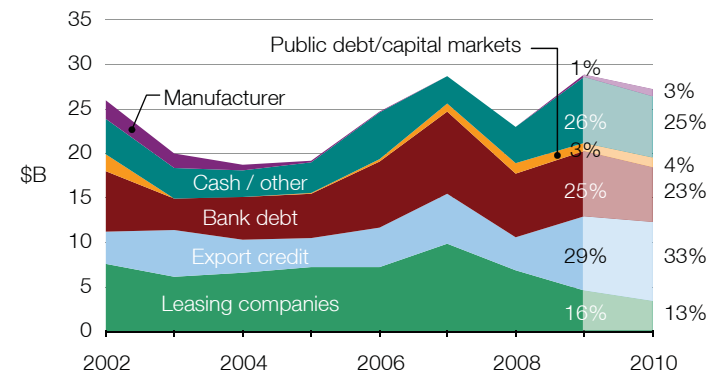
The Morphing Landscape of Airplane Finance

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



Market turmoil wrought by the current financial crisis is propelling a metamorphosis in the four primary sources of aircraft finance. The roles of commercial bank debt, lessors, the U.S. capital market, and export credit agencies are transforming at a rate unseen in a generation.

The landscape of airplane financing is rapidly morphing as the traditional sources of delivery funding respond to the economic environment. Commercial banks in the United States and Europe are being more circumspect about lending. Vigorous capital markets are emerging in the fast-growing economies of Asia-Pacific and the Middle East. Airplane leasing companies can no longer depend on ready capital from their parent companies. And export credit rules are in flux.



Deliveries 376 281 285 290 394 441 375 481 460-465*

Revenue \$26B \$20B \$19B \$19B \$25B \$29B \$23B -\$29B

*2010 Boeing Commercial Airplanes deliveries guidance announced January 27, 2010

Regional banks and re-emerging capital markets are challenging the dominance of the traditional sources of airplane financing.

Bank debt evolves as regional banks enter the market

Over the past two decades, European banks were the primary providers of commercial aircraft debt. Aircraft portfolios of these institutions are performing exceptionally well through the current downturn. The same cannot be said of most European banks that own those portfolios. The current financial crisis has hit European

(continued on page 2)

Meet the President: Mike Cave

Ed. Note: Effective January 1, Boeing Capital Corporation has a new president – Michael J. “Mike” Cave. Cave, 49, is BCC’s fourth president since the Boeing product financing unit was created from the financing units of Boeing and McDonnell Douglas following the 1997 merger. Cave is a 27-year veteran of both the Douglas and Boeing airplane organizations. He talked with Point-to-Point about his new assignment.



Q. What do you bring to BCC?

A. First, I bring a genuine appreciation for the quality of my team and the importance of our mission. On a more personal note, I offer the benefit of many varied but relevant experiences. I’ve been a CFO of Douglas and at Boeing Commercial and from that I understand the business of business and about how transactions go together. My experience in running Boeing Commercial’s marketing department will be helpful in our outreach activities. From being in airplane services and airplane programs, I know about airplanes themselves. Given all that, I’ve said for years that my perfect job would be at the intersection of airplanes and money, and that’s where I find myself at BCC.

Q. Your predecessor was a major force behind BCC’s comprehensive investor outreach efforts. Will those efforts continue with your support?

A. Absolutely. It’s a primary and high-leverage role for us. We bring sources of financing together with users of financing. We also look to develop new solutions to expand financing possibilities that bring creative, available and affordable financing for our customers. Underpinning any successful financing is the value of the airplanes themselves, so our work in the appraiser community is very important for us, our customers and airplane investors and we’ll stay very focused there. We’re starting as well to work with the rating agencies for capital markets-based transactions to ensure that they have an appropriate level of confidence in airplanes as investment-grade assets. This will translate into better pricing for our customers.

Q. The aircraft financing environment is more stable in 2010 than it was a year ago. Does that make BCC’s job easier?

A. Underpinning the demand for our products is the basic global economic situation. I’m not ready to declare that system to be predictable or stable, although there are many signs that things

(continued on page 4)

banks hard and is severely limiting their ability to continue doing business even in the sectors where they are doing well, like aircraft finance. These pressures will result in realignment of the global commercial aircraft bank debt landscape.

North American banks were the primary financiers of worldwide aircraft deliveries during the 1960s and 1970s. Japanese banks assumed the major role in the 1980s, to be succeeded by European banks when Japan's economy faltered in the early 1990s.

Originally encouraged to enter airplane financing by European governments interested in facilitating the sale of Airbus products, European banks soon recognized the excellent performance of their airplane portfolios and diversified into the broader airplane financing market, becoming dominant players.

Many European banks will continue to play a leading role in airplane financing. However, the current challenges to world banking institutions are extending the opportunity for regional banks to strengthen their airplane portfolios. As a result, airplane financing is becoming much more geographically diverse, mirroring the increased diversity of the airplane market itself.

First among the emerging entrants to the airplane finance market, China's banks began financing airplane deliveries into China in 2001. Today they finance \$4–\$6 billion worth of airplane deliveries per year. Chinese banks have recently branched into the world market, providing financing for deliveries to airlines in the Republic of Korea, Germany, France, the United Kingdom, the United States, and Australia.

Banks in the Middle East, after successfully financing deliveries within the region, have started to partner with Western aircraft financiers. The partnerships of ACG/CAIF and DVB with the National Bank of Abu Dhabi are recent examples.

Japan's banks continue to dominate finance for deliveries into Japan and play a significant, though less dominant role in the global market.

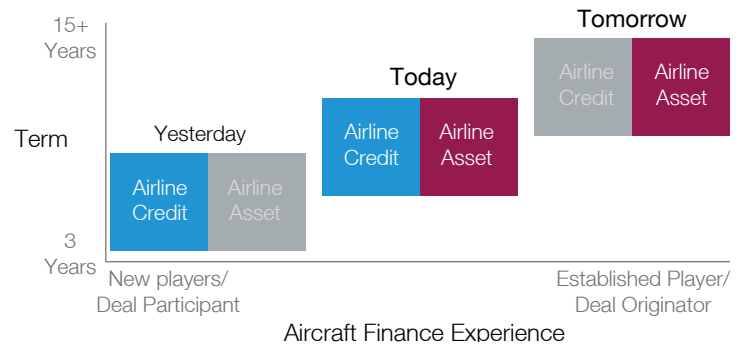
Australian banks have also started to expand beyond financing for Australian airplane deliveries. Westpac and ANZ, for example, have financed deliveries to the Asia-Pacific region and Macquarie has also entered the global market.

In addition, a multitude of regional banks around the world—including Russia, India, and South Africa—are providing financing to their own regional airlines. In aggregate these regional developments are establishing a new, globally diversified commercial bank debt market for aircraft.

The shifting transaction basis

For several years, we have noted that airplane asset value is becoming as important as airline credit worthiness as the basis for airplane finance transactions. However, managing finance risk on the basis of the aircraft asset value requires significant experience and airplane expertise. Many financiers entering the airplane finance market do not have that experience and expertise. Consequently, the emphasis will likely swing back toward airline credits for the next few years.

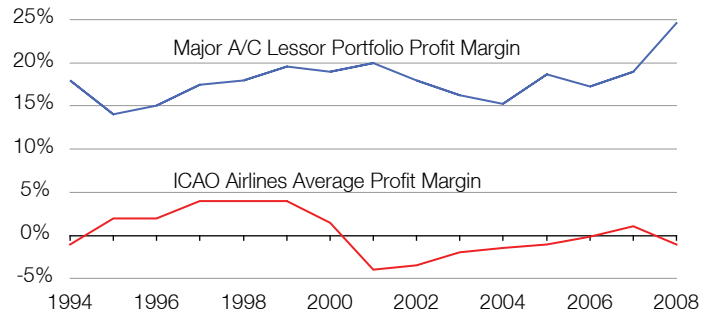
Seasoned airplane financiers recognize that the relatively short credit horizon of an individual airline is not an adequate basis for pricing the risk of an airplane finance transaction that typically extends over a term of 10 years or longer. Airplane residual value forecasts, which have logged a solid record on horizons out to 25



Today, the relative emphasis of airplane asset value to airline credit worthiness has taken a few steps back toward “Yesterday”. However, as new entrants become seasoned in the market and the banking systems regain liquidity, the scale will tip back toward airplane asset value.

years, are an important resource for structuring long-term risk.

Airline credit is inherently more familiar to commercial bankers than airplane asset value, so new lenders tend to build their portfolios around the credits of the airlines. Commercial banks that are new to airplane finance derive their experience primarily from their own regional airlines – sometimes with implied assurance of government support.



Over the long term, airplanes have delivered much better return than airline equities.

Emphasizing airline credit over aircraft collateral will make it easier for first-tier airlines and more difficult for second-tier airlines to access capital. Airlines without premier credit ratings are thus likely to increase the demand for operating leases.

Dynamic regulatory environment

Complicating the situation, the regulatory mood has swung toward increased regulation in response to systemic banking concerns. Boeing is working with the Aviation Working Group to ensure a healthy, viable finance industry and promote adoption of sensible regulatory structures to avert a recurrence of the circumstances that lead to the most serious upheaval in the memory of most investors. Any regulatory effort aimed at the airplane finance sector must take into account the fact that airplane portfolios at banks and other investment groups have performed better than most other investment classes.

The rise and transformation of the lessors

Leasing grew from a very small slice of the airplane finance pie in 1970 to a very significant contributor by 2009. Guinness-Peat Aviation, which virtually invented the leasing business model, focused on asset risk arbitrage, managing the risk exposure of

airplane financing by understanding and accurately forecasting airplane residual value.

Airlines with viable business models, but not the ability to obtain credit for airplane purchases, created a very lucrative leasing market for Guinness-Peat and a number of other companies, including ILFC that developed similar business models.

Guinness-Peat's capital structure proved to be its weak link. The company was funding itself short-term, while its aircraft obligations were long-term. A sudden hiccup in the financial markets made it impossible for the company to refinance itself and the whole entity collapsed into the arms of GECAS.

The acquisition of the Guinness-Peat by GECAS and of ILFC by AIG introduced a new component into the lessor business model – credit arbitrage.

Companies like GECAS, ILFC and, later, Bouillon Aviation Services and CIT used the strong credit of their parent institutions, rather than the collateral value of their airplanes, to access very inexpensive debt. Credit arbitrage not only accelerated the growth of lessors, but significantly boosted liquidity in the industry because the lessors borrowed primarily in the capital markets – not from the commercial banks from which the airlines borrowed.

The financial storm of 2007 hit the lessor parent companies very hard. The challenges at GE, AIG, and CIT made headlines. Lessor parent companies are shrinking their balance sheet exposure as the financial crisis subsides, which is drastically curtailing the credit arbitrage model. Without the funding made available by credit-risk arbitrage, airplane lessor growth will depend on the strength of individual lessor balance sheets and aircraft-secured borrowing.

Even as lessors become capital consumers rather than capital providers—competing for the same resources as airlines – they are evolving into an important distribution channel for commercial banks. In the near term, commercial banks will tend to focus more heavily on first-tier airlines. In terms of credit, a healthy lessor looks like a first-tier airline. Yet the lessor can lease airplanes to second- and third-tier carriers that banks would be reluctant to finance. A lessor is in a much better position than a bank to recover the asset and redeploy the aircraft with minimal revenue disruption, should the airline have a problem. Demand from lower tier airlines is likely to boost the market for leased airplanes.

Today, about half the global fleet is owned by two major lessors, ILFC and GECAS. As smaller lessors enter the market and regional lessors become global lessors, we will see a greater diversity in portfolio sizes and the biggest players will command smaller shares of the market. We can see this in the Chinese lessors, which have played a very important role in providing operating leases to Chinese airlines. Some may follow the lead of Bank of China Aviation in offering their services globally.

Lessors will continue to play a crucial role in airplane finance, though their capital structures will be different from those of the past 20 years. Capital markets, commercial banking, and export credit agencies will remain fertile sources for airplane leasing capital over the near- and mid-term horizon.

Evolving global capital markets

The role of capital markets in airplane finance mushroomed in 1994 with the advent in the U.S. of the Enhanced Equipment Trust Certificate (EETC). EETCs provide a greater degree of certainty to

airplane financiers by clarifying the rights of lenders in case of a bankruptcy or default under section 1110 of the U.S. Bankruptcy Code. This clarification facilitated the issuance of nearly \$10 billion per year in airplane financing during the late 90s and early years of this decade.

The market has not approached that peak since, because the U.S. Bankruptcy Code covers only U.S. airlines and U.S. airlines have not taken a large number of deliveries since 2001. However, the performance of EETC bonds as investment instruments has proven exceptional. Since 1995, more than 99.9 percent of A-tranche EETCs have performed flawlessly.

Principal and interest were paid in a timely manner, even by airlines that filed for bankruptcy. Of the \$12.5 billion of A-tranches that went through bankruptcy – in some instances multiple times – the recovery rate for principle and interest has been 99.7 percent, an extraordinary performance for a fixed-income instrument.

In a major development this year, airplanes guaranteed by the U.S. Ex-Im Bank were funded in the U.S. capital market. Previously, airlines relied on commercial banks to finance Ex-Im guaranteed airplanes. Now the U.S. capital markets have greatly expanded the liquidity of export credit guaranteed financing, helping bring down the cost of funding of all Ex-Im guaranteed airplane transactions.

This year also saw the first Islamic bond (sukuk) secured by aircraft. About \$500 million worth of bonds were issued, secured by 16 airplanes. This is a very important development in expanding globally aircraft capital markets.

Scherer leads policy development in dynamic regulatory environment

With looming issues like the potential customer impacts from the new Aircraft Sector Understanding (ASU), Boeing Capital has appointed Scott Scherer to a new position to strengthen its participation in global policy and regulatory issues. Scherer, as vice president for strategic regulatory policy and BCC senior vice president, is putting full-time focus on an area where



he worked successfully before while also serving as the company's aircraft financial services leader. Tim Myers, formerly BCC's vice president for structured financing with AFS, has replaced Scherer in that assignment. Myers has a solid and extensive financing background and has worked in the industry since the mid 80s. Scherer has played a global role for Boeing and the broader aircraft financing community on several issues, including ASU and the Cape Town international treaty that reduces costs and risks for aircraft financiers. "These issues are significant enough that we asked Scott to move from his role of leading inside Boeing to that of leading outside," said BCC president Mike Cave. "If we're going to have fundamental changes in the regulatory framework, it's imperative that they be measured and thoughtfully brought out. Scott's expertise, credibility and work as co-chair of the Aviation Working Group (AWG) and with other associations will be invaluable to industry's success in doing that." ■

Boeing is working closely with the Aviation Working Group to establish structures similar to the U.S. EETC, with its well-defined creditor protections, in the global airplane market. The Cape Town Treaty is a significant step toward that end. As the number of treaty signatories continues to increase around the world, airplane financing through global capital markets is the next frontier.

Export credit is changing also

Long a stabilizing influence on the industry, export credit is also transforming. The Large Aircraft Sector Understanding (LASU), an agreement facilitated by the Organization for Economic Cooperation and Development (OECD), set the ground rules for government loan guarantees by export credit agencies in Europe and the U.S. in 1992. Several years ago, the OECD's desire to bring Canada, with Bombardier, and Brazil, with Embraer, into the global airplane market required revisions to this agreement. The result is the Aircraft Sector Understanding (ASU), which establishes different credit pricing structures for regional and large airplanes.

Boeing strenuously opposed that bifurcation, arguing that it would not be workable in the future, when those companies began to manufacture larger airplanes. The future has arrived. Bombardier asked to classify its C-series aircraft—which is the same size as some airplanes built by Boeing and Airbus—as a regional jet. The ASU system, in essence, collapsed because participants could not agree on that classification. The OECD is currently working to come up with a single-tier pricing system.

Also at issue is “home country rule,” a LASU precedent that participating export credit agencies would not support financing of aircraft into their own markets or the markets of other participating export agencies. For example, the U.S. Ex-Im Bank would not finance export of airplanes into Germany, France, or other Airbus nations and vice versa.

The governments and export credit agencies of recent entrants into the global airplane market do not agree to be bound by this precedent. This is a very serious point of contention, because it could set the treasuries of airplane producing nations into competition to funnel loans toward their own finance entities. Resolution of this issue is complicated by the imminent entry of additional airplane producing countries, such as Japan, China, and Russia. It is not at all clear how they will use their own treasuries to support the marketing of their products around the world.

In short, we're back at the drawing board to craft an agreement by which export credit can be governed after 2010.

After the dust settles

The market disruptions that began in the summer of 2007 presented us with monumental challenges. Today, it is fair to say that aircraft finance has weathered this storm exceptionally well, relative to most other asset finance classes. With long-term demand for airplanes remaining strong, aircraft financing is reinventing itself to be able to deliver the next generation of sound aircraft investment opportunities. ■

(continued from page 1)

are improving. A lot of financing comes from leasing companies, which are going through a large transformation. We need to watch how that plays out as that could lead to some instability. At the same time, we're confident that it'll play itself out in a measured way. There is also a lot of regulatory reform coming out of the financial crisis, and the law of unintended consequences can run amok here without industry leadership. We need to be sure that regulatory reform is targeted and appropriate and doesn't splash over to areas like ours that weren't cause of or a casualty of the global economic crisis.

Q. BCC accurately called the financing market conditions for 2009? Do you expect to do the same for 2010?

A. I do. We remain in a unique position in that we don't compete with financial institutions and don't have to worry about our pricing, so people can talk to us. We can be fairly objective and gather information from a lot of outside sources. We are also uniquely able to add up our backlog one customer at a time and size how it looks from the bottom up. We can synthesize a pretty good picture of how things are going to turn out. We don't see a lot of things changing from 2009 so we're counting on many of those factors to continue this year.

Q. What advice do you have for your airline customers for dealing with the current financing environment?

A. I'd offer they shop around and become knowledgeable of all the alternatives they have because every day there are new regional financing institutions emerging and new products developing. Markets that you may have thought were closed to you are reopening. Be knowledgeable. And ask us to help you.

Dreamliner flight test fleet passes 500-hour mark



Boeing's fleet of four 787 Dreamliner test airplanes continues to amass accomplishments on the way to its first delivery in the fourth quarter 2010. As of April 28, the Dreamliner fleet had completed more than 175 flights for a total of more than 526 hours in the air. Meanwhile, the fleet's progress allowed the U.S. Federal Aviation Administration to grant expanded type authorization, clearing the way for FAA personnel to participate in future test flights and data collection. Boeing also finalized the airplane's aerodynamic configuration based on test performance. Extreme-weather testing was underway on the third flight-test Dreamliner at a U.S. Air Force facility at this writing.

Please direct questions or feedback to the following:

Drew Magill, Director - Marketing
Boeing Commercial Airplanes
206-766-2109

Kostya Zolotusky, Managing Director
Capital Markets Development
Boeing Capital Corporation
425-965-4053

www.boeing.com