

Financing used aircraft carries unique risks. These risks are related to age, technical issues, credit risk of lessees and residual value. Karen Floersch discusses how experienced lessors minimise such hazards.

Side-stepping the pitfalls of used aircraft financing

All operating lease companies must account for some level of asset and credit risk, but lessors of used aircraft face both sets of risk at an elevated level. These lessors depend for more of their return or profit on the future residual value of the aircraft at the end of the lease. This asset risk may also be accompanied by a heightened lessee's credit risk.

Age risk

One of the major risks in used aircraft leasing is age. One lessor comments that the economic useful life of a new aircraft is two to three times as long as a typical economic cycle. Therefore, "A new aircraft returned in a recession can wait for the markets to come back. By contrast, a used aircraft may not have an economically useful life on the other side of the chasm of a major recession".

As an aircraft gets older, technical aspects play a much larger role in the asset risk management of the transaction. Lessees will avoid aircraft approaching a major airframe check or engine shop visit, although this is hard to do. If the heavy maintenance occurs during a lease term, the lessee foots the bill. Depending on the age and condition of the aircraft, a C check for a 737-300 averages \$300,000 and a D check will be about \$1.5 million. Heavy maintenance checks on widebodies will be double those figures. Engine shop visits will be \$1.3-2.0 million.

Other technical issues, such as the

availability of parts, and reliability, also become more influential.

Another area of concern for lessors of older aircraft will be Federal Aviation Authority Airworthiness Directives (ADs) and increasingly stringent noise regulations, especially in Europe. Noise compliance issues also increase asset management costs and reduce the market for older aircraft. This, in turn, puts downward pressure on lease rates.

Credit risk

Lessees of older aircraft tend to be the weaker airline credits, which can leave a lessor vulnerable on two levels. Areas of concerns are whether the lessee will pay its monthly lease rentals and whether the deal will go to term. Other concerns focus on maintaining the aircraft and whether there are sufficient reserves to compensate for a lack of proper maintenance.

Experienced lessors can protect themselves against these risks with proactive asset management.

Good lease management closely monitors the maintenance schedule of the asset, timely payment of lease rentals, taking the aircraft back at the end of the lease and its redeployment.

The aircraft operator is responsible for maintenance standards. The lessor tries to ensure there is money set aside to cover expected maintenance costs, with reserves established for this purpose.

Negotiations on reserves are critical if the lessee is a small carrier with

limited financial resources. Lessors will show less flexibility on the reserves for weaker credit airlines.

To cover for rising maintenance costs, lessors may set higher reserves or a security deposit, which may even exceed monthly rentals. For example, a lessee paying lease rentals of \$54,000 a month for a DC-9-30 may have to pay a security deposit of \$115,000. In some cases, the lessor may agree to allow the lessee to 'run out' maintenance condition on the aircraft to lease termination, after which it will be scrapped.

Return conditions are also negotiated and depend on the asset and lessee. CIT Group's senior vice president airline marketing, Frank Pray, suggests a returning asset should not only be in a condition to be deployed by another lessee, but should also be maintained to be operated for another year or two.

Lessors usually assign a higher lease rate factor to older aircraft to accommodate higher asset and credit risk. Although lease rate factors will ultimately depend on the aircraft type, specifications, and lessee credit, a rough guide is that older aircraft (that is, approaching 20 years and above) will have monthly lease rate factors of 2-2.5% of aircraft value. For example, a used narrowbody with a market value of \$5 million can get a monthly lease rate of \$100,000-125,000. Companies that specialise in particular types may be in a position to command higher lease rate factors.

Some aircraft types carry the risk of reduced market appeal, lease rates and residual value because of impending environmental legislation. This will influence lessors' buying actions in terms of price and financing.



Cost of acquisition

The major costs involved in acquiring a used aircraft are funding, equity, book depreciation and transaction or management costs.

Cost of funding will vary according to the lessor and its parent, the source of funding and the asset. For example, GATX says its funding costs are derived from its credit standing, not its collateral. GATX sources most of its funding on an unsecured basis, typically medium-term notes and commercial paper.

Smaller lessors were reluctant to disclose the cost of their funding, although Jan Melgaard, of Sigma Aircraft Management, says lessors of used aircraft will generally pay more for their debt, typically LIBOR plus 1.5%.

CIT's Pray comments that the cost of money has gone up by 200-250 basis points in the past 12-24 months.

The second highest cost for lessors is the book depreciation of the asset. When a lessor acquires a used aircraft a greater portion of its costs will come from book depreciation. As one lessor explains, "a 15-year-old aircraft, which has a remaining life expectancy of 25 years, will be depreciated over just 10 years.

In terms of tax depreciation, US lessors of used aircraft apply the same accounting standards as for new aircraft. A seven-year double-declining balance, switching to straight-line for aircraft with predominant use in the US is applied. A 12-year straight-line reducing balance method is used for aircraft without predominant US use.

Lessors estimate that these charges

will amount to no more than 1% of the overall transaction costs.

In an example, provided by C-S Aviation, of the transaction costs for a \$20 million asset, it estimates that the repayment cost for \$15 million of debt would be about \$2.1 million per annum. This is based on a 12-year full payout financing at a 10% interest rate. Depreciation, at 4% per annum, would be \$800,000, and transaction costs at 0.75% per annum would total \$150,000.

Return on investment

Most operating lessors of used aircraft will be looking for an internal rate of return of 20-30% from their portfolio, which will be wider-ranging in terms of aircraft types and asset age.

Unlike the mega-lessors, some used aircraft specialists, such as Pegasus, will hold or manage (via securitisation) an aircraft for its entire useful life.

Robert Brown, senior vice president of finance at Pegasus, says one of the keys to achieving their return targets is, "how we finance ourselves and how to retire, or write down our debt". He explains that there is a debit period, where costs are high and may exceed profit, and a profit period, in every aircraft's useful life. "In the first, or debit period, there is the amortisation of the debt, but once fully amortised, there follows the second period or 'green time,' which is just pure cash/profit through the remainder of the aircraft's useful life," adds Brown.

For those lessors whose strategy it is eventually to sell the aircraft in their portfolio, there is no fixed timeframe in

which to recoup investment in used aircraft. Jim Walsh, chief executive officer and chief financial officer of C-S Aviation, states that "as long as our basic projections for the transaction are being met, we make more money the longer an asset is out there earning. What we look for is the right opportunity to sell an aircraft at a profit".

GATX Flightlease says it reviews its fleet constantly to stay on top of values. It looks at projected lease revenues and the residual value to see what it will be worth at the end of two years. GATX will also consider market conditions, the age of the aircraft and the market cycle.

Acquiring used aircraft

Every aircraft purchased on the secondary market must be approached with a full understanding of its market value. Nevertheless, there are other factors that are just as important in the acquisition process.

Ariel Aviation's Neil Whitehouse suggests that four 'rights' must be met when purchasing a used aircraft: 1) the right aircraft type, 2) purchased at the right time, 3) at the right price, and 4) with the right technical conditions.

Whitehouse emphasises that this last point is particularly important. It is not enough to have selected the right aircraft type at a good price. If the specification profile of the aircraft includes 'oddball engines' or avionics, it will almost certainly have a negative effect on its residual value and its marketability. In other words, unique is bad, generic is good.

The condition of the aircraft is also important. Gary Kincaid, director of marketing for C-S Aviation, says that when C-S acquires its freighter candidates, the two key items it looks for are the condition of the aircraft and traceability of records.

Indeed, the majority of lessors have a preference for acquiring narrowbody aircraft. The fact is that older widebody aircraft are a bigger asset risk. As passenger aircraft they tend to have shorter economic lives than narrowbodies and their reconfiguration costs are also high. Most lessors of used aircraft typically do not acquire widebodies until it is economically viable for them to be converted to freighters.

On the other hand, Pegasus' Brown believes that, "today is a good time to invest in widebodies. Not a lot have been ordered and there is a potential future shortage". Brown says Pegasus normally acquires its aircraft from airlines in sale-leaseback transactions. The widebodies it favours are the 767-300ER, MD-11F and

747-400s. Out of its current portfolio of 210 aircraft, Pegasus has about 20-30 widebodies, including 747s, 767s and 777s.

Popular aircraft

The A320 family and the Boeing 737NGs are still the top choices for an operating lessor's portfolio. These are Stage 3 narrowbodies with good operating economics and a large user base. Limited availability for lease or sale keeps A320 and 737NG lease rates and residual values firm.

A new 737-800 commands higher lease rentals of around \$345,000 per month compared with \$332,000 per month for the A320.

Another favourite of the lessors is the 757-200, although this market has softened a little over the past year. Lessors like the 757 for its range advantage over the A321, and the fact that the 757 is the largest narrowbody. Moreover, as the natural successor to the

727, he says it has the potential to be a great freighter aircraft.

For a 15-year-old non-ETOPS 757, lease rentals range from \$250,000-320,000 and from \$300,000-350,000 for the ETOPS version. In GATX's recent EAST 2000 securitisation programme, appraised values for a Rolls-Royce-powered ETOPS 757-200 with a 1987-89 vintage averaged \$34-35 million.

At these values it is still premature for most operating lessors to convert a 757 into freighter configuration and hope to make a profit. Until then it will be the airlines or the manufacturer who are more likely to undertake these costs, such as Boeing's purchase of 44 Rolls-Royce-powered 757s from British Airways. Boeing reportedly paid \$14-15 million a piece for the 1983-89 vintage aircraft and, once converted, they will all be leased to DHL.

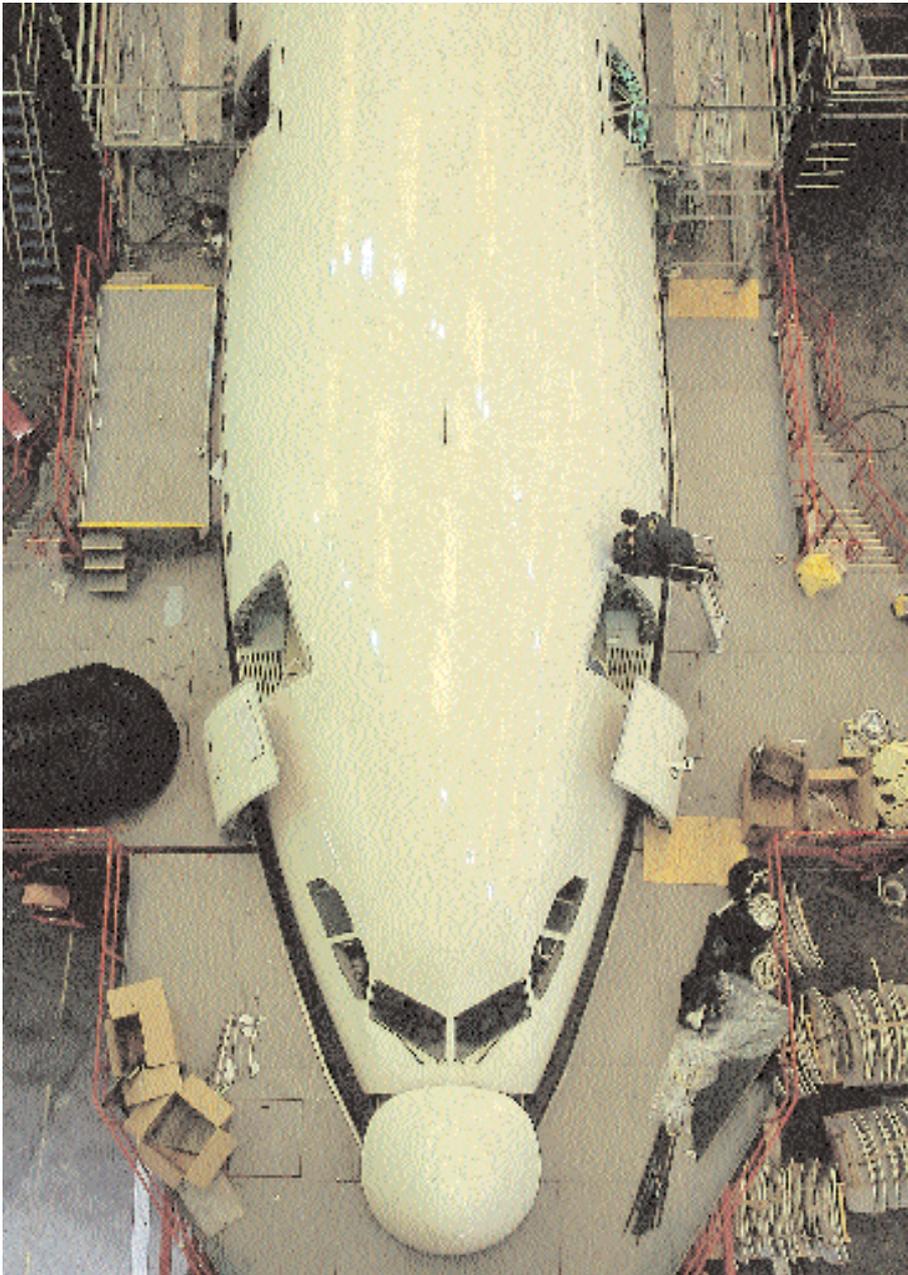
Airclaims reports strong lessor involvement in the 767, with leasing activity rising in the past 12 months, even though monthly lease rates have softened in the past year, especially for the younger 767s. Airclaims' chief analyst, Les Weal, suggests a five-year-old 767-300ER would attract a lease rental of \$550,000, which is approximately a 5% decrease on the previous year, and a 10-year-old -300ER would fetch a rental of \$425,000.

Although the General Electric CF6-80A2/C2B engine version of the 767 powers more aircraft (478 units with 55 customers) than the PW4000 version, the later type is well-distributed among 40 operators. A 10 to 14-year-old 767-300ER (maximum take-off weight of 380,000lbs) with Pratt & Whitney engines would command a current market half-life of \$43-49 million. If less than 10-years-old it would be higher at \$51-73 million.

The 767-200 is also targeted as the next big freighter conversion programme. As with the 757, used 767-200s are still too pricey for most lessors.

Other freighter aircraft favoured by lessors include the DC-10-30F and the MD-11F. Valued at \$15 million, the DC-10-30Fs is a better buy. The DC-10-30 has a good lessee spread and is valued for its long-haul abilities and efficiency. The DC-10-30 passenger version commands lease rates of \$175,000-250,000 and the freighter rentals of \$150,000-260,000.

In contrast, MD-11Fs aged five years or older have a current market half-life value of \$63-80 million and those aged less than five years will fetch



Most lessors will only buy widebodies when they are low enough in value to justify freight conversion. This means widebodies are usually acquired at an older age than narrowbodies.

Certain types may be out of reach of lessors' financing capacity, since their acquisition costs are too high compared with the market lease rates they can generate.

\$81-94 million. Passenger MD-11s sell for about \$50-74 million.

Lease rates for MD-11Fs range from \$500,000-600,000. Avitas has placed the passenger version of the MD-11 on 'lease watch'. Avitas' director of asset valuation, Doug Kelly, believes that as more MD-11s are converted to freighter, and the user base of the passenger version shrinks, passenger aircraft lease rates will be made vulnerable.

Less popular aircraft

As more 737NGs come on stream (over 500 have been delivered), lease rentals for the 737 classics have been coming under pressure, particularly for newer 737-300s. Whereas two years ago, a 737-300 classic fetched an average lease rate of \$275,000-300,000 per month, today a 1990 vintage -300 will be leased out at \$195,000-200,000, and a 1985 at less than \$150,000.

CIT's Pray says that the 737-400, in particular, has been marginalised by the 737-800 (the most popular NG737 among operating lessors) due to the -800's superior size and range. He adds that the CIT Group has identified the 737 classics as aircraft to be disposed of in the future.

Ariel Aviation's Whitehouse points out that the heavy discounting of the 737NGs by ILFC and GECAS may cause future problems for those lessors who have 737 classics on their books at higher values than NGs.

Cargo conversions of the 737-300 also seem unlikely. Avitas' Kelly says that as long as the 727-200F is bigger and faster than the 737-300, and unless the FAA pushes for their retirement, a freighter version of the 737 has little chance of success.

Market opinion is also divided about the MD-80. Some lessors, such as C-S Aviation, believe that the MD-80 would be a good candidate for cargo conversion. Kelly suggests that apart from Airborne, which has used them in cargo configuration, they will probably never be as popular as the 727 freighter conversions.

Niche aircraft

The 727 is still perceived by many lessors as a niche aircraft, better left to



the experts, such as Pegasus Capital Corp. Pegasus dominates the market with 60 in its portfolio.

Pegasus' Robert Brown says his company is convinced that the 727 freighter, in particular, has a long life ahead. He points out that freighters are low-utilisation aircraft and converting the 757 is still a costly option. This conviction is backed up by Pegasus' order for 10, plus 10 options, of the Super 27 727 re-engine programme, at an average cost of \$8.6 million a piece (list price).

The Super 27s will be marketed to current 727 operators looking for better performance. Brown says a re-engined 727 is not only Stage 3 compliant, but also offers greater payload range. Some of these will be converted into freighters and some kept in passenger configuration for the charter market.

The 727 is currently attracting lease rates of \$150,000-160,000 and a higher rental of \$180,000 for the freighter version. The re-engined 727s can bring in monthly lease rentals of \$200,000 or more. The 727's residual value will be in the -217 engines, which can fetch \$2.2-2.4 million each from those who need spares.

C-S Aviation has made a market for A300B4 freighters with its portfolio of 24 A300B4-200Fs. Although the A300B4 freighter was readily accepted in the European cargo market, it has yet to be embraced by the US carriers.

All of C-S' A300B4s are currently on lease. With current availability of the freighter at an all-time low (just one or two available for lease), monthly lease rentals are averaging \$213,000. The

aircraft's value is also being established by C-S Aviation's sale of two freighters to TNT and another two to HeavyLift.

C-S is also working on a securitisation programme for the remaining portfolio early next year. Based on the market sales and appraisals for the proposed securitisation programme, C-S Aviation's vice president for marketing, Gary Kincaid, says the A300B4F's average value is \$16-17 million.

Unpopular aircraft

The least popular aircraft according to operating lessors are 747s (with the exception of the 747-400), DC-9s, L-1011s and all Stage 2 equipment.

DC-9 availability has trebled over the past 12 months. Airclaims' Weal expects many of these to be scrapped as the economic cost of maintaining a DC-9 exceeds the asset's value. Specialist operating lessors (such as ALG) will be the buyers of this type with a view to leasing them out as much as possible before parting out.

The 747-100/-200/-300s also face an uphill battle, with well over 80 units available, again many of these in store.

The slide in the fortunes of younger 747s, such as the -300, have been dramatic. Avitas' Kelly says that, "five years ago we forecast a \$40 million price for a 1985 vintage 747-300. Today that same aircraft would be worth just \$16 million". The 747 is also put at a disadvantage by having a small operator base, which will typically acquire new aircraft, rather than lease in used. 