

# Business jet free-fall ends

After tremendous growth in the 1990s, the business jet market stalled in the early years of this decade, leading to fears of permanent market deflation. Last year, however, saw a hopeful recovery, with double-digit growth in the value of deliveries over 2003. While highly reassuring, the angle of this upturn may prove disappointing.

### Boom or bubble?

The significance of last year's business jet market growth must be understood in its historical context. In the second half of the 1990s, after 30 years of sluggishness, a mature market almost quadrupled in size. Prior to 1995, the business jet market had never been worth more than \$3.5 billion annually, in today's dollars. The market began to grow that year, and by 1997 it had risen to \$6.7 billion. In 1999, manufacturers delivered 653 jets worth \$10.5 billion, and the market continued to grow, rising to 726 planes worth \$11.4 billion in 2000.

If the new dedicated business jetliners are included (Airbus's A319CJ and Boeing's 737 BBJ), the market in 2001 (the peak year of the boom) was worth \$12.6 billion. Of the world total of 13,913 busi-

ness jets delivered during the market's 41-year history, about 40%, or 5,470 planes, were delivered in the last 10 years (by Teal Group's counting).

Interestingly, thanks to this growth, the market for business jets came to be worth more than the world combat aircraft market. This happened for the first time in the history of aviation in 1999, when the fighter market fell to \$10.3 billion, just below the \$10.5-billion business jet market. Predictably, this situation was reversed in 2003, when the world's fighter manufacturers delivered 227 planes worth \$10.4 billion. The 1990s were a great combination of peace and wealth.

Inevitably, too, the business jet market stumbled, deflating to 661 jets worth \$9.4 billion in 2002, and 492 jets worth \$7.2 billion in 2003. Since there had been no precedent for the growth experienced in the 1990s (in this market or almost any other mature industrial market), there was no way to predict what the floor would be. Would the low point be about 50% of the peak market point (typical of any cyclical market for capital-intensive goods), or was the industry headed back to pre-1995 levels? Was all that spectacular growth just a bubble?

This fear was rooted in the other major economic events of the era. Corporate jets, after all, had come to be held in high esteem because of what might be termed a "cult of productivity," a belief that economic progress lies with more efficient use of capital and labor resources. This same phenomenon, of course, greatly benefited dot-com and telecommunications companies—they were valued, and indeed overvalued, as a source of productivity.

And as with these companies, there may have been some serious overinvestment going on. Fractional ownership certainly provided a productive use of business jets, and did manage to bring many new customers to business aviation, helping to grow demand. But very little, if any, profits were generated. Again, as with the dot-com and telecom companies, rich investors were helping to subsidize demand.

Fears like these had some validity. But at the end of the day the majority of business jets, unlike many communications and information technology investments, were doing productive work. Despite a relatively high inventory of jets available for sale, most business aircraft are being put to productive use.

The market's return to growth in 2004—to 562 jets worth \$8.7 billion—validates the idea that the new, large, post-1995 business jet market is here to stay. The level of its further growth over the next few years, and the question of when it will return to its 2001 peak level, is debatable. But the market's free-fall is over. The idea that this impressive transformation of a key aviation segment was a mere bubble is now dead.

### How strong a recovery?

Looking ahead, one problem is that the leading indicators of market recovery look uncertain at best. Used aircraft availability and pricing have made only modest progress since late 2001. The average asking price of almost every class of aircraft remains stubbornly below the level of the market peak, in late 2000.

However, used jet availability does show some signs of hope. According to AMSTAT (Aviation Market Statistics), inventory levels fell by over 1.1% between December 2004 and March. This inventory of about 1,800 planes now constitutes just over 13% of the fleet, down from a peak of 16% in 2002 (a normal, healthy



market typically exhibits availability rates in the 10% range). Medium jets have shown a particularly encouraging drop in availability, falling by 5.9% between mid-January and late February.

The most important leading indicator, of course, is the broader economy. While the correlation is far from perfect, business jet demand tends to rise and fall along with corporate profits and the Dow Jones industrial average. The economy can be described as reasonably sound right now, but there are too many doubts about the next few years to reliably indicate a continued robust outlook, with specific concerns focused on energy prices, currency weakness, and trade and budget deficits.

Another concern about the market recovery revolves around tax incentives that might have inflated demand in 2004. Earlier that year, Congress passed an extension allowing for another year's bonus depreciation on new fixed-asset purchases. This allows a first-year federal tax deduction of 50% of an aircraft's purchase, on top of other available depreciation. It applies to any aircraft purchased by a U.S. taxpayer in 2004 and entering service any time before December 31 of this year.

As with easy aircraft finance terms and price reductions, favorable tax rule changes like this provide a one-time market boost (or, in the case of the 2004 legislation, extend a one-time market boost for another year). They also convince aircraft customers to make planned future purchases more immediately, thereby effectively stealing demand from the future.

According to the General Aviation Manufacturers Association, aircraft purchaser surveys indicate "that bonus depreciation has been directly responsible for generating over \$2 billion worth of new airplane orders since its enactment last May [2004]." While this is a strong boost for an industry that had been under considerable pressure, it also casts doubt on what the current recovery would look like if the bonus depreciation act had not pulled this demand forward. It also raises questions about how much growth will be left in the future when the bonus depreciation effect ends.



### Can technology help?

Perhaps the biggest brake on future market growth involves new technology. Its stimulating effects during the last 10 years were enormous and, based on current prospects, will be hard to replicate.

The past decade offered almost infinite possibilities. An unprecedented 15 new business jet models arrived in 1995-1999. The total unit value of these new models was especially high—they included some very expensive machines. The industry gained some exciting new products. Business jets like the Gulfstream V (now G500/550) and Bombardier Global Express for the first time offered transpacific range and the biggest cabins yet built. Dassault upgraded its entire product line with the 50EX, 2000EX, and 900EX. Cessna's Citation X became the fastest civil aircraft in production, and with the Concorde's retirement, the fastest civil jet in service. The CitationJet, powered by Williams International/Rolls-Royce's FJ44, extended the entry-level part of the market, helping to make business jets more affordable. Raytheon introduced new composite material-based aircraft such as the Premier One and Horizon.

Looking out over the next five years, and back at the previous 10, there is a big change under way. New models, with new features and capabilities,

stimulate demand and make the business jet industry exciting. Yet very little excitement is on the horizon.

On the positive side, Dassault in 2006 will deliver its new Falcon 7X, a high-end product with numerous impressive features. The industry's first fly-by-wire aircraft, it features a new technology wing and 5,700-n.mi. range. It should engender a new Falcon Trijet family, including models that could compete with today's high-end segment. If nothing else, 7X variants should ultimately replace the current trijet models, the Falcon 50 and 900 series.

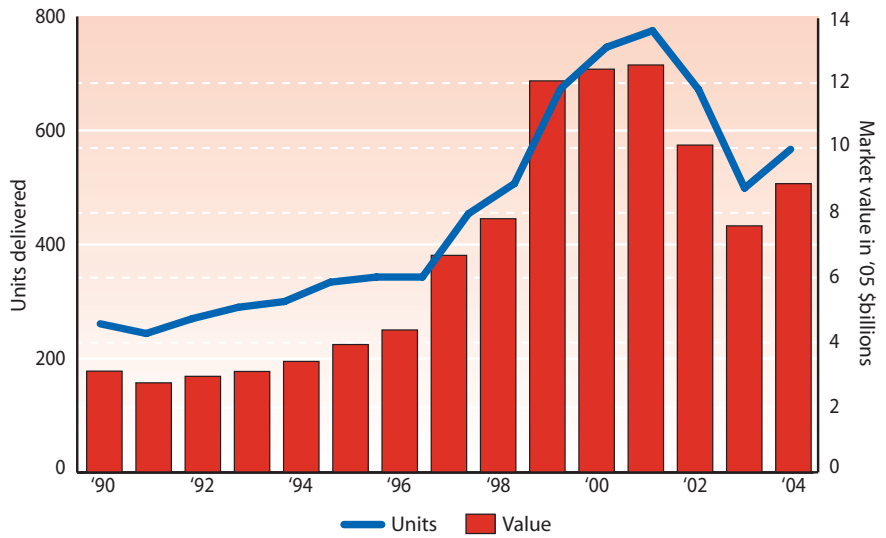
But the other new business jet products are relatively uninteresting and derivative. In fact, most revolve around taking an existing aircraft and giving it a new name, with minor cockpit and interior improvements.

It is not difficult to see why business jet development has lost its magic. Prof-

*Dassault's Falcon 7X is the industry's first fly-by-wire aircraft.*



**A REASSURING RECOVERY**



itability is increasingly the overriding concern. The current industry environment is bottom-line driven. Companies are reluctant to approve expensive new product development programs on their own. They need a clear business case, to sell the idea to their boards and ultimately to the equities markets that buy and judge their stock. Boeing faces the same situation right now in launching the 787 Dreamliner.

Crucially, Dassault, the one company with a new product, is the only business jet manufacturer that does not need to explain itself to equities markets and other sources of finance. Its shares are almost entirely held by the Dassault family or EADS.

An uncertain market environment also has a chilling effect on new manufacturers. Only big companies have the resources and critical mass to develop new aircraft, and to withstand market down-

turns. And the aviation industry in general has always been hostile to newcomers. Since 1960, only one all-new entrant—Embraer—has succeeded in delivering more than one civil jet per month on a sustained basis. This hostility helps stifle innovation.

But the uncertain market cannot be blamed for the paucity of new business jet models and technology. The broader market forces that caused this paucity are unlikely to diminish.

**Microjet controversy**

All of the above trends—the desperate search for business jet market expansion, the bias against startup companies, and the increasing difficulty of new product launches—can be seen in the controversy over microjets. For years, this exciting new concept has waited patiently. But the next few years will be crucial in determining if the idea has a chance.

Noting the success enjoyed by Cessna's CitationJet family and other Williams International FJ44-powered jets, numerous designers have proposed even smaller planes, powered by single engines, and, in some cases, two smaller engines.

To succeed, the new light jets can choose either of two paths. First, they can seek to be part of a new air taxi service

partner (such as Nimbus, proposed for the Eclipse jet). Yet this is a difficult prospect. Any such service would need to start with hundreds of planes and scores of bases to avoid flying money-losing “deadhead” flights—non-revenue-producing trips incurred by the need to fly clients to locations where there might not be another client waiting for a plane.

The alternative option is for the manufacturers to realign their cost assumptions with the more modest owner-operator market. But those who pursue that path will find that their advertised prices (in the range of \$1.2 million for the Eclipse and others) will rise considerably. The current prices assume mass production, which is unachievable with a sole reliance on owner-operators. The \$1 million-\$2 million segment is historically a no-man's land—most customers either need a real business jet (starting at around \$5 million) or are hobbyists, owning part shares of \$180,000 Skyhawks.

The segment in between these figures—the high-end owner-operator market—is quite modest. Each year sees deliveries of a few hundred PC-12s, TBM 700s, Caravans, and a few others. Many of these go to cargo and air ambulance markets, where light jets would not be wanted because of their insufficient cabins.

If investors succeed in creating an air taxi service, one or more light jet designs could succeed, helping the business jet market to resume its once-impressive growth rate. But it is also possible that, despite all the publicity and attention, the very light jet market will support just a few hundred inexpensive aircraft per year. The Cessna Mustang will go ahead because it was proposed by one of the established manufacturers, and because the price—\$2.5 million—makes no assumptions about mass production. Probably another player will succeed as well, making the most of a limited but new market. In short, microjets will not provide the next revolutionary stimulant that transforms the industry.

In all, the business jet market may be stable, and possibly growing again. However, some key conditions that produced the terrific growth seen in 1995-2001 are missing today.

**Richard Aboulafia**  
Teal Group  
raboulafia@tealgroup.com

*The Cessna Mustang is expected to be one of the success stories in the very light jet market.*

