

Aerospace and Defense

Business Jet Monthly - September 2010

This report contains our industry delivery projections plus data on market share and the used market. The industry is an important driver for many companies we cover, including Bombardier, Embraer, General Dynamics, Honeywell, Rockwell Collins, Spirit AeroSystems, and Textron.

- Demand outlook little changed, though heavy jet demand might be a bit better.** Elevated used inventory, attractive used pricing, and macro uncertainty continue to hold down demand for new business jets. As a result, OEMs are eating further into their backlogs, and if these don't stabilize in the coming quarters, further rate cuts seem likely. The risk is not the same across all categories, however, and the degree to which demand for new heavy jets continues to outpace light jets—even as we move further into a cycle in which light jets took a pounding early on—is striking. Bombardier's Q2 provided further supporting datapoints as Learjet and Challenger backlogs continue to decline while the Global backlog appears to have ticked up recently and is about flat year-to-date. We're not ready to say that large business jets are out of the woods as orders remain anemic overall, and the next two quarters will be crucial in determining whether further rate cuts are necessary.
- Used inventory increased 20 bps.** Inventories as a % of the active fleet increased to 11.8% in Aug from 11.6% in July. All three categories—Heavy (+30 bps), Medium (+20 bps), and Light (+20 bps)—exhibited increased inventories. We believe this increase is a bump in the road and expect that inventories—which fell ~300 bps from July 2009 to July 2010 but remain high in historical terms—will continue to decline gradually. By OEM, Hawker Beechcraft (-30 bps) and Bombardier (-10 bps) saw decreasing inventory levels, while Embraer (+170 bps), Dassault (+60 bps), Cessna (+50 bps), and Gulfstream (+30 bps) drove the increase. 14 of 23 tracked models witnessed higher inventories, 8 saw declines, and G500/550/V was flat.
- Average asking price increased 1.3% in August.** Prices reached ~\$11.4 mln after staying at ~\$11.2 mln for three consecutive months. Prices are down 8% YTD. The Aug price increase was driven by Heavy jets (+2.7%), while Medium (-0.7%) and Light jets (-0.2%) saw modest price contractions. While prices are down to 1997 levels, the need for more inventory to clear means there could be some additional downward momentum ahead. 11 of 23 tracked models saw higher prices, 9 saw price contractions, and 3 were flat.
- Flight ops still growing but not convincingly.** Flight ops increased 7.7% y/y in July compared to 14.3% in June. This marked the first single digit y/y growth in 2010, and comps will get tougher in 2H. On a seasonally adjusted basis, flight ops were flat sequentially and have yet to move above the March level. Business jet usage is improving slowly, and there is still a long way to go as July flight ops were 19% below peak. The pace of the recovery is likely limiting aftermarket sales somewhat, though Q2 numbers were good and the pickup in utilization we've seen should support further sales growth.

See page 34 for analyst certification and important disclosures, including non-US analyst disclosures.

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Business Jet Delivery Forecast

Table 1: Aircraft Deliveries, 1995-2012E

JPM Delivery Forecast, 2012E-2014E

| | 12E | 13E | 14E |
|---------|-----|-------|-------|
| Total | 669 | 801 | 851 |
| w/ VLJs | 917 | 1,086 | 1,161 |

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010E | 2011E | 2012E |
|------------------------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|------------|------------|------------|--------------|--------------|-------------|-------------|------------|------------|
| Bombardier | | | | | | | | | | | | | | | | | | |
| Challenger 601-3R,604 | 24 | 32 | 34 | 36 | 42 | 38 | 41 | 31 | 24 | 29 | 36 | 29 | 35 | 44 | 36 | 35 | 29 | 25 |
| Challenger 300 | - | - | - | - | - | - | - | - | 1 | 28 | 51 | 55 | 51 | 60 | 33 | 28 | 21 | 30 |
| Challenger 800 | - | - | - | - | - | - | - | - | - | 4 | 18 | 12 | 17 | 7 | - | 12 | 10 | 12 |
| Global Express | - | - | - | 3 | 32 | 35 | 30 | 17 | 14 | 20 | 14 | 22 | 25 | 27 | 25 | 27 | 24 | 25 |
| Global 5000 | - | - | - | - | - | - | - | - | - | 4 | 17 | 18 | 23 | 25 | 26 | 26 | 24 | 25 |
| Learjet 40 | - | - | - | - | - | - | - | - | - | 17 | 21 | 26 | 23 | 21 | 14 | 8 | 5 | 8 |
| Learjet 45 / 45X | - | - | - | 7 | 43 | 71 | 63 | 27 | 17 | 22 | 30 | 30 | 34 | 27 | 19 | 11 | 7 | 10 |
| Learjet 60 | 23 | 24 | 32 | 32 | 35 | 29 | 17 | 12 | 9 | 18 | 15 | 23 | 23 | 26 | 13 | 11 | 7 | 10 |
| Learjet 85 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| <i>Discontinued Models</i> | 19 | 13 | 21 | 22 | 24 | 28 | 17 | 9 | 2 | - | - | - | - | - | - | - | - | - |
| Total | 67 | 68 | 79 | 100 | 173 | 207 | 180 | 101 | 70 | 129 | 188 | 213 | 226 | 247 | 173 | 158 | 127 | 145 |
| Cessna (Textron) | | | | | | | | | | | | | | | | | | |
| Citation Mustang | - | - | - | - | - | - | - | - | - | - | - | 1 | 45 | 101 | 125 | 70 | 70 | 75 |
| Citation Jet/CJ1 | 42 | 44 | 63 | 64 | 59 | 56 | 61 | 30 | 22 | 20 | 18 | 25 | 34 | 20 | 14 | 4 | 6 | 10 |
| Citation Jet/CJ2 | - | - | - | - | - | 8 | 41 | 86 | 56 | 27 | 23 | 37 | 44 | 56 | 21 | 18 | 20 | 25 |
| Citation Jet/CJ3 | - | - | - | - | - | - | - | - | 6 | 48 | 72 | 78 | 88 | 40 | 20 | 20 | 30 | |
| Citation Jet/CJ4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15 | 25 | 25 |
| Citation Encore | - | - | - | - | 6 | 37 | 36 | 21 | 24 | 17 | 14 | 23 | 28 | 5 | 9 | 10 | 15 | |
| Citation Excel | - | - | - | 15 | 39 | 79 | 85 | 81 | 48 | 55 | 62 | 73 | 82 | 80 | 44 | 20 | 15 | 20 |
| Citation Sovereign | - | - | - | - | - | - | - | - | - | 9 | 46 | 57 | 65 | 77 | 33 | 15 | 15 | 20 |
| Citation X | - | 7 | 28 | 30 | 36 | 37 | 34 | 31 | 18 | 15 | 14 | 12 | 17 | 16 | 7 | 4 | 4 | 4 |
| <i>Discontinued Models</i> | 73 | 78 | 90 | 91 | 82 | 66 | 48 | 41 | 31 | 25 | 21 | 18 | - | - | - | - | - | - |
| Total | 115 | 127 | 181 | 200 | 216 | 252 | 306 | 305 | 196 | 181 | 249 | 309 | 388 | 466 | 289 | 175 | 185 | 224 |
| Dassault | | | | | | | | | | | | | | | | | | |
| Falcon 50/EX | 8 | 1 | 10 | 13 | 11 | 18 | 13 | 10 | 8 | 5 | 5 | 5 | 2 | 1 | - | - | - | - |
| Falcon 900B/C | 10 | 8 | 7 | 5 | 8 | 6 | 6 | 4 | 3 | 3 | 1 | - | - | - | - | - | - | - |
| Falcon 900DX | - | - | - | - | - | - | - | - | - | - | 2 | 4 | 10 | 4 | 1 | - | - | - |
| Falcon 900EX | - | 3 | 16 | 15 | 16 | 23 | 21 | 17 | 10 | 15 | 16 | 16 | 18 | 19 | 17 | 16 | 18 | 20 |
| Falcon 2000 | 10 | 21 | 18 | 14 | 34 | 26 | 35 | 35 | 12 | 11 | 6 | 6 | 1 | 3 | 1 | - | - | - |
| Falcon 2000EX | - | - | - | - | - | - | - | - | 16 | 29 | 21 | 30 | 33 | 18 | 3 | 3 | - | - |
| Falcon 2000LX | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 23 | 21 | 23 | 27 |
| Falcon 7X | - | - | - | - | - | - | - | - | - | - | - | 6 | 21 | 32 | 40 | 41 | 45 | |
| Total | 28 | 33 | 51 | 47 | 69 | 73 | 75 | 66 | 49 | 63 | 51 | 61 | 70 | 72 | 77 | 80 | 82 | 92 |
| Embraer | | | | | | | | | | | | | | | | | | |
| Phenom 100 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 93 | 103 | 125 | 155 |
| Phenom 300 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 17 | 35 | 40 |
| Legacy 600 | - | - | - | - | - | - | - | 8 | 13 | 13 | 14 | 27 | 35 | 33 | 18 | 14 | 16 | 20 |
| Lineage 1000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 3 | 4 | 4 |
| <i>Discontinued Models</i> | - | - | - | - | - | 2 | 5 | - | - | - | - | - | - | - | - | - | - | - |
| Total | - | - | - | - | - | 2 | 5 | 8 | 13 | 13 | 14 | 27 | 35 | 35 | 115 | 137 | 180 | 222 |
| Gulfstream | | | | | | | | | | | | | | | | | | |
| G100 / G150 | 6 | 11 | 6 | 14 | 9 | 11 | 5 | 9 | 5 | 9 | 12 | 20 | 32 | 39 | 11 | 14 | 12 | 20 |
| G200 / 250 | - | - | - | - | 1 | 6 | 25 | 15 | 19 | 13 | 14 | 22 | 27 | 30 | 8 | 11 | 11 | 15 |
| G300 / 350 | - | - | - | - | - | - | - | - | 8 | 5 | 12 | 12 | 13 | 12 | - | - | - | - |
| G400 / 450 / G IV / IVSP | 26 | 24 | 22 | 32 | 39 | 37 | 36 | 29 | 13 | 19 | 14 | 16 | 20 | 20 | 30 | 31 | 28 | 18 |
| G500 | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| G550 / G V / VSP | - | 3 | 29 | 29 | 31 | 34 | 35 | 32 | 28 | 32 | 37 | 43 | 46 | 55 | 45 | 45 | 42 | 40 |
| G650 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 8 | 20 |
| Total | 32 | 38 | 57 | 75 | 80 | 88 | 101 | 85 | 74 | 78 | 89 | 113 | 138 | 156 | 94 | 101 | 101 | 113 |
| Hawker Beechcraft | | | | | | | | | | | | | | | | | | |
| Premier I | - | - | - | - | - | - | 18 | 29 | 29 | 37 | 30 | 23 | 54 | 31 | 16 | 10 | 8 | 8 |
| Hawker 400XP | 30 | 29 | 43 | 43 | 45 | 51 | 25 | 19 | 24 | 28 | 53 | 53 | 41 | 35 | 11 | 11 | 15 | 15 |
| Hawker 800/XP | 26 | 26 | 33 | 48 | 55 | 67 | 55 | 46 | 47 | 50 | 58 | 64 | 67 | 88 | 51 | 33 | 36 | 48 |
| Hawker 4000 | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 20 | 21 | 26 | 32 |
| <i>Discontinued Models</i> | 8 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 64 | 58 | 78 | 91 | 100 | 118 | 98 | 94 | 100 | 115 | 141 | 140 | 162 | 160 | 98 | 75 | 85 | 103 |
| Other Very Light Jets | | | | | | | | | | | | | | | | | | |
| Diamond D-Jet | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10 |
| HondaJet | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 8 |
| Total | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 18 |
| Grand Total w/o VLJs | 306 | 324 | 446 | 513 | 638 | 740 | 765 | 659 | 502 | 579 | 732 | 862 | 974 | 1,033 | 628 | 553 | 565 | 669 |
| <i>% change</i> | <i>14%</i> | <i>6%</i> | <i>37%</i> | <i>15%</i> | <i>24%</i> | <i>16%</i> | <i>3%</i> | <i>-14%</i> | <i>-24%</i> | <i>15%</i> | <i>26%</i> | <i>18%</i> | <i>13%</i> | <i>6%</i> | <i>-39%</i> | <i>-12%</i> | <i>2%</i> | <i>18%</i> |
| Grand Total w/ VLJs | 306 | 324 | 446 | 513 | 638 | 740 | 765 | 659 | 502 | 579 | 732 | 863 | 1,019 | 1,136 | 846 | 726 | 760 | 917 |
| <i>% change</i> | <i>14%</i> | <i>6%</i> | <i>37%</i> | <i>15%</i> | <i>24%</i> | <i>16%</i> | <i>3%</i> | <i>-14%</i> | <i>-24%</i> | <i>15%</i> | <i>26%</i> | <i>18%</i> | <i>18%</i> | <i>11%</i> | <i>-26%</i> | <i>-14%</i> | <i>5%</i> | <i>21%</i> |

VLJs include: Cessna Mustang, Diamond D-Jet, Embraer Phenom 100, and HondaJet.

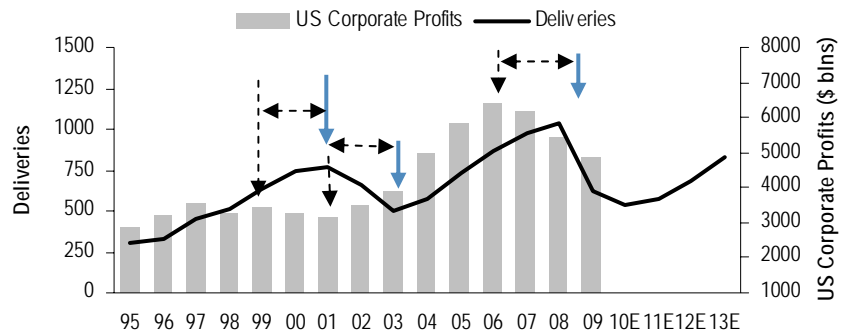
Source: GAMA, Company reports and J.P. Morgan estimates.

Macro Drivers & Market Cycle

Demand for business jets is largely a function of corporate profits. During the last cycle, deliveries peaked in 2001 after US corporate profits reached a high in 1999, while deliveries bottomed out in 2003 after profits fell to cyclical lows in 2001. The downturn itself lasted for 2 years before positive growth returned in 2004 (see Figure 1). At the same time, global profits peaked in 2000 as the downturn in US profits did not fully affect global profits for a year. Global profits resumed minimal growth again in 2002, with more substantial growth following in 2003 as deliveries hit their low point (Figure 2).

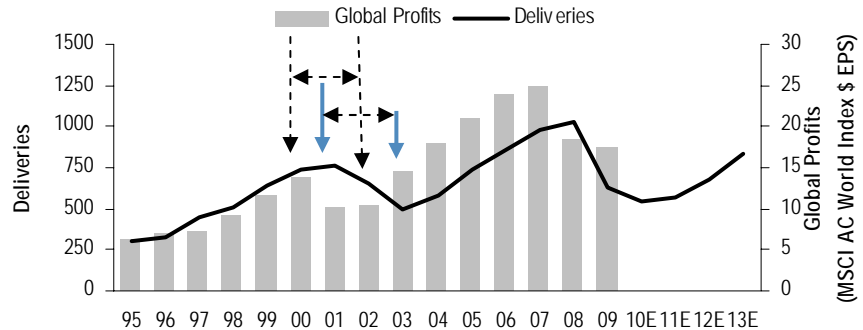
Business jet deliveries lag US corporate profits by 2 years on peak-and-trough basis.

Figure 1: US Corporate Profits vs. Business Jet Deliveries (# of aircraft), 1995-2013E



Source: GAMA, BEA, J.P. Morgan estimates. Excludes Very Light Jets as delineated in Table 1.

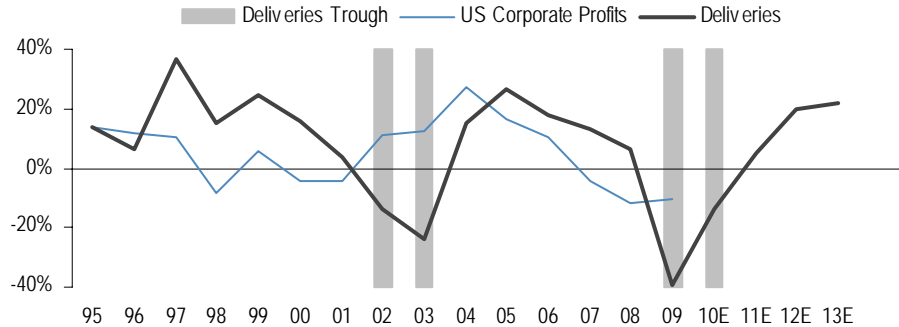
Figure 2: Global Corporate Profits vs. Business Jet Deliveries (# of aircraft), 1995-2013E



Source: GAMA, BEA, MSCI, J.P. Morgan estimates. Excludes Very Light Jets as delineated in Table 1.

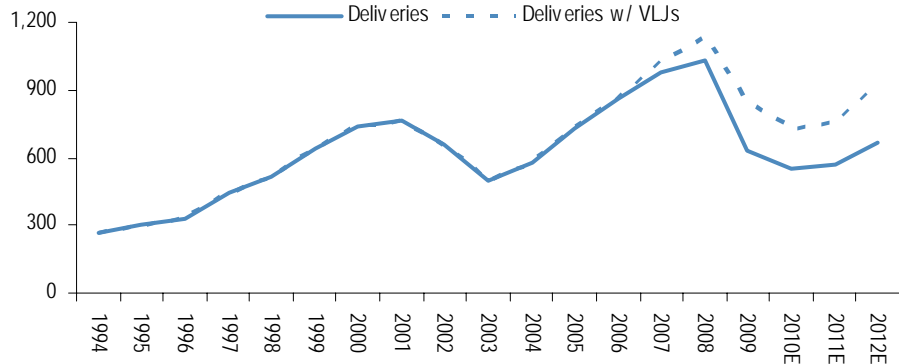
US corporate profits peaked in 2006, and business jet deliveries (excluding VLJs) peaked two years later once again, in 2008. Business jet deliveries declined 39% in 2009, steeper than last cycle's 14% initial drop-off, with OEMs cutting production rates across all categories of jets. We foresee another decline of 12% in 2010 followed by a modest increase in 2011, though visibility is limited.

Figure 3: US Corporate Profits vs. Business Jet Deliveries (% chg. y/y), 1995-2013E



Source: GAMA, BEA, J.P. Morgan estimates.

Figure 4: Impact of VLJs on Total Deliveries

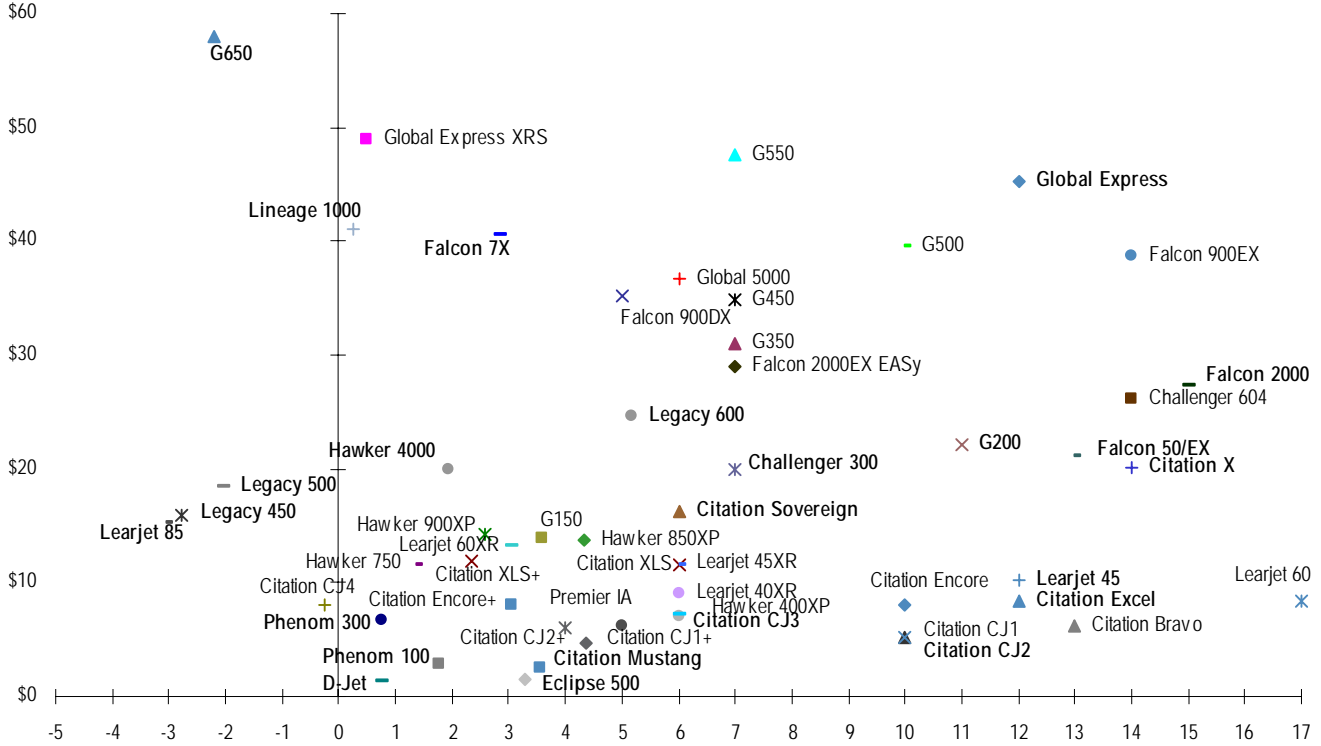


Source: GAMA, Company reports and J.P. Morgan estimates. Very Light Jets, as delineated in Table 1, include Cessna Mustang, Diamond D-Jet, Embraer Phenom 100, and HondaJet.

Competitive Positioning, New Launches

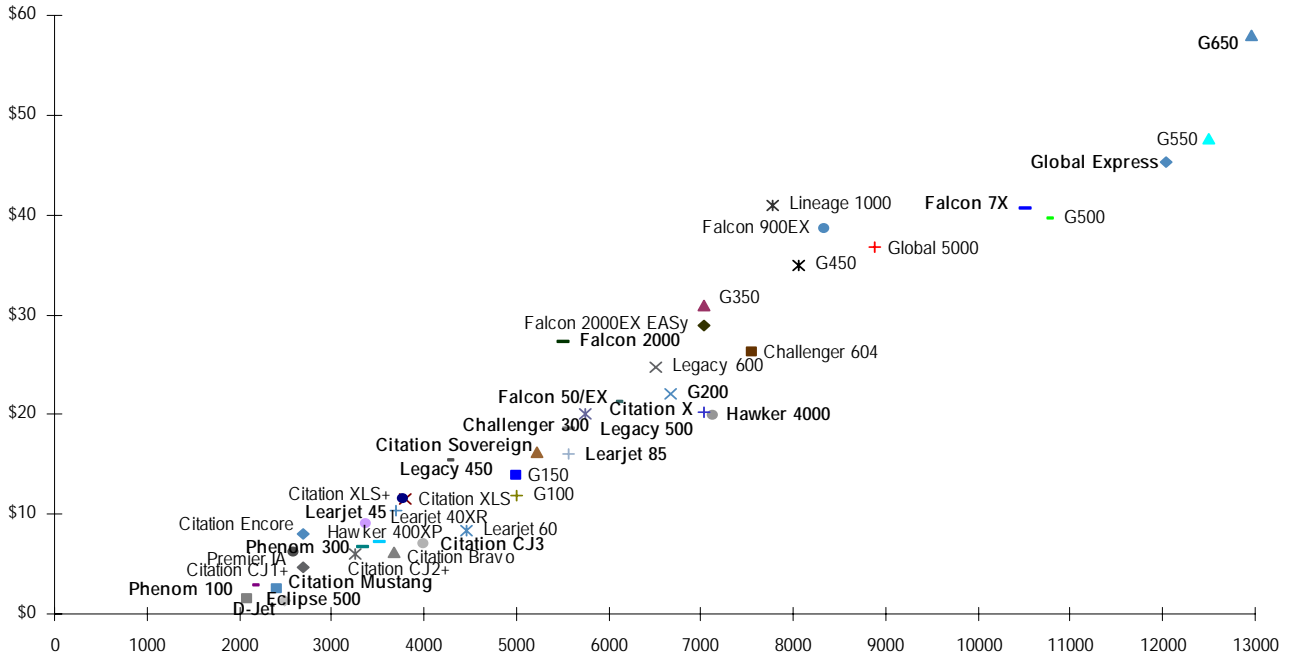
We believe companies developing new models are poised to fare better during and after the turmoil. A number of new product launches remain in the pipeline across segments, especially in the very light jet and midsize portions of the market. G650 and Lineage 1000 should help Gulfstream and Embraer gain share in the heavy jet market. In the mid-size category, a number of new products have either come to market or were recently launched, including the Hawker 4000, Embraer Legacy 450/500, G250, and (eventually) Dassault's SMS. In the VLJ segment of the market, Embraer has begun delivering the Phenom 100, while Diamond and Honda continue developing new offerings. The duration and intensity of the downturn could lead OEMs to revisit their plans for new products, however. Cessna has already canceled the Citation Columbus, though we still see a possibility this aircraft comes back.

Figure 5: Price (\$MM) vs. Age (years)



Source: JetNet, J.P. Morgan estimates. Note: **Bold** indicates clean sheet design, non-bold indicates derivative models.

Figure 6: Price (\$MM) vs. Range (km)



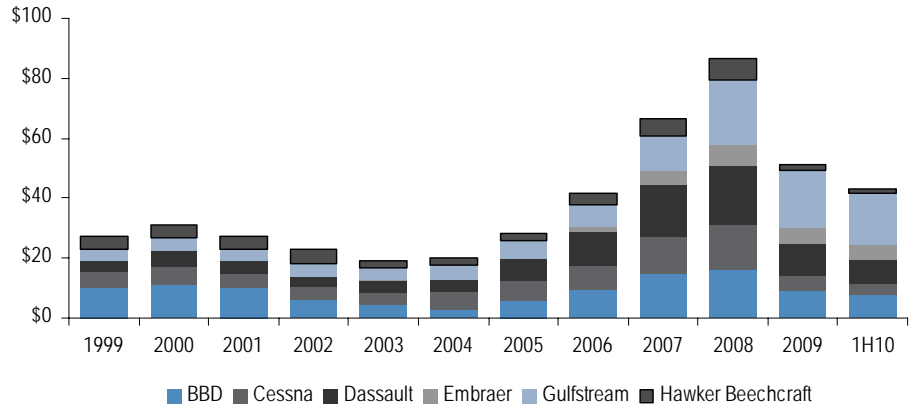
Source: JetNet, J.P. Morgan estimates. Note: **Bold** indicates clean sheet design, non-bold indicates derivative models.

Industry Financial Data

In this section we provide comparative industry data for backlog deliveries, estimated book-to-bill, and profitability.

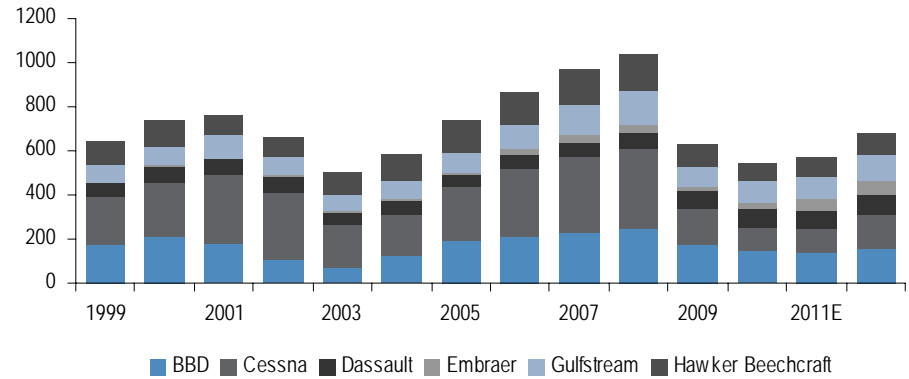
Figure 7: Industry Backlog by Company, 1999-1H10

\$ in billions



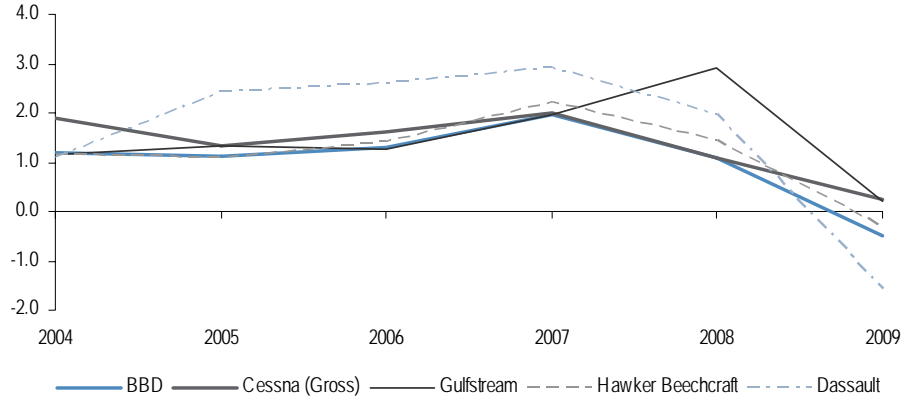
Source: Company data, J.P. Morgan estimates.

Figure 8: Industry Deliveries by Company, 1999-2012E



Source: Company data, GAMA. Note: Excludes VLJs.

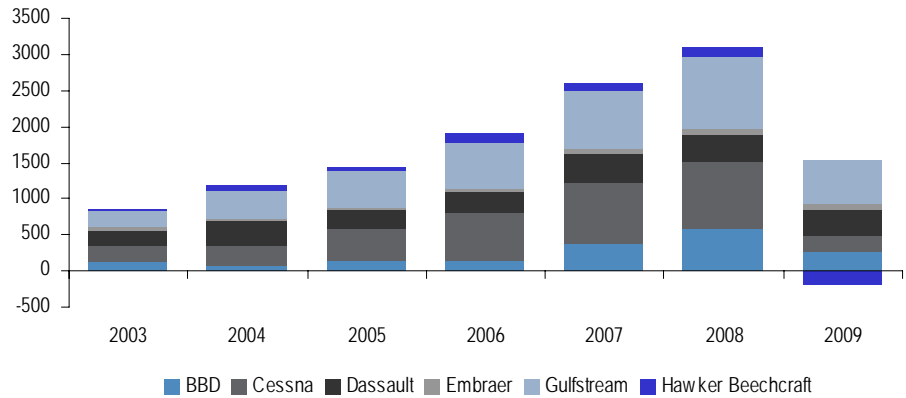
Figure 9: Book to Bill Ratio by Company, 2004 – 2009



Source: Company data, J.P. Morgan estimates. Data as available.

Figure 10: Industry EBIT by Company, 2003-2009

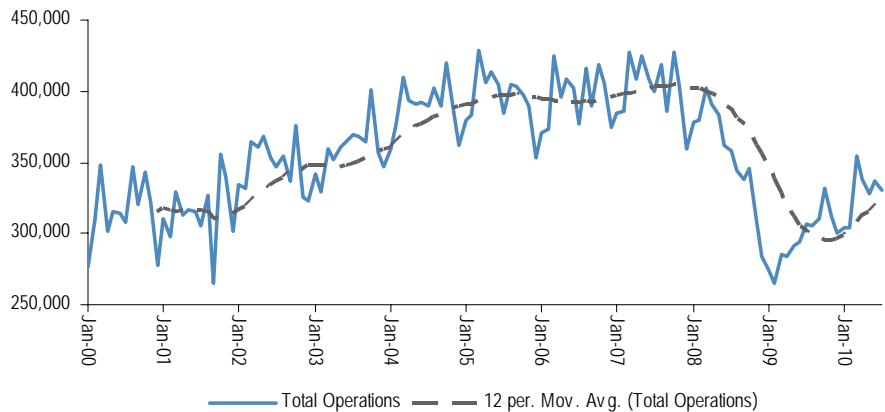
\$ in millions



Source: Company data, J.P. Morgan estimates.

Figure 11: Monthly Flight Operations – Business Jets

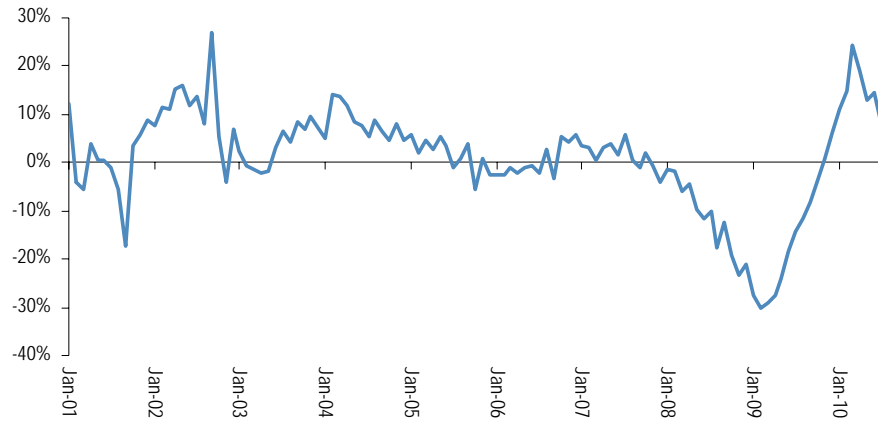
Takeoffs and landings



Source: FAA, J.P. Morgan estimates.

Figure 12: Change in Monthly Flight Operations – Business Jets

% change, y/y



Source: FAA, J.P. Morgan estimates.

Table 2: Historical Fleet Size

| | Total | Heavy Jets | Medium Jets | Light Jets |
|------|--------|------------|-------------|------------|
| 1988 | 5,331 | 497 | 1,414 | 3,420 |
| 1989 | 5,591 | 588 | 1,480 | 3,523 |
| 1990 | 5,851 | 649 | 1,550 | 3,652 |
| 1991 | 6,095 | 706 | 1,599 | 3,790 |
| 1992 | 6,347 | 761 | 1,666 | 3,920 |
| 1993 | 6,606 | 815 | 1,738 | 4,053 |
| 1994 | 6,856 | 868 | 1,809 | 4,179 |
| 1995 | 7,176 | 960 | 1,887 | 4,329 |
| 1996 | 7,475 | 1,043 | 1,962 | 4,470 |
| 1997 | 7,901 | 1,151 | 2,074 | 4,676 |
| 1998 | 8,397 | 1,284 | 2,190 | 4,923 |
| 1999 | 9,029 | 1,482 | 2,335 | 5,212 |
| 2000 | 9,780 | 1,722 | 2,496 | 5,562 |
| 2001 | 10,572 | 1,956 | 2,663 | 5,953 |
| 2002 | 11,289 | 2,154 | 2,799 | 6,336 |
| 2003 | 11,840 | 2,337 | 2,913 | 6,590 |
| 2004 | 12,440 | 2,511 | 3,055 | 6,874 |
| 2005 | 13,143 | 2,714 | 3,259 | 7,170 |
| 2006 | 13,997 | 2,957 | 3,488 | 7,552 |
| 2007 | 15,072 | 3,212 | 3,803 | 8,057 |
| 2008 | 16,342 | 3,476 | 4,260 | 8,606 |
| 2009 | 17,199 | 3,773 | 4,426 | 9,000 |

Source: JetNet.

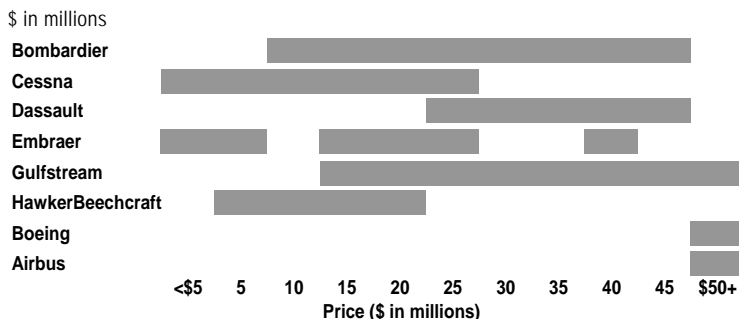
Quick Reference Specification Table

Table 3: Business Jets Quick Reference Guide

| Model | Make | Engine | Avionics | Range (km) | Seating | Price (\$M) |
|-----------------------|-------------------|------------------------|----------------------------|-------------|---------|-------------|
| SF50* | Cirrus Design | Williams | Garmin | 1,900 | 5-7 | 1.72 |
| D-Jet* | Diamond | Williams | Garmin | 2,500 | 2-5 | 1.9 |
| Eclipse 500* | Eclipse | P&W Canada | Garmin/Honeywell/IS&S | 2,084 | 2-4 | 2.15 |
| PiperJet* | Piper Aircraft | Williams | Garmin | 2,400 | 6 | 2.2 |
| Mustang | Cessna (Textron) | P&W Canada | Garmin | 2,130 | 4 | 2.5 |
| Phenom 100 | Embraer | P&W Canada | Garmin | 2,148 | 4-6 | 2.9 |
| HondaJet* | Honda | GE-Honda | Garmin | 2,185 | 6-7 | 3.9 |
| Citation CJ1+ | Cessna (Textron) | Williams / Rolls-Royce | Rockwell Collins | 2,696 | 6 | 4.6 |
| Citation CJ2+ | Cessna (Textron) | Williams / Rolls-Royce | Rockwell Collins | 2,989 | 6 | 5.2 |
| Citation Bravo | Cessna (Textron) | P&W Canada | Honeywell | 3,685 | 7 | 6.1 |
| Premier I | Hawker Beechcraft | Williams | Rockwell Collins | 2,590 | 6-7 | 6.2 |
| Phenom 300 | Embraer | P&W Canada | Garmin | 3,333 | 6-7 | 6.7 |
| Citation CJ3 | Cessna (Textron) | Williams / Rolls-Royce | Rockwell Collins | 4,001 | 6 | 7.1 |
| Beechjet 400XP | Hawker Beechcraft | P&W Canada | Rockwell Collins | 3,519 | 7-9 | 7.2 |
| Citation Encore+ | Cessna (Textron) | P&W Canada | Rockwell Collins | 2,696 | 4-6 | 8.1 |
| Learjet 40 | Bombardier | Honeywell | Honeywell | 3,378 | 6-7 | 9.0 |
| Learjet 45 | Bombardier | Honeywell (Garrett) | Honeywell | 3,704 | 8 | 10.3 |
| Citation XLS+ | Cessna (Textron) | P&W Canada | Rockwell Collins | 3,805 | 8 | 11.6 |
| Learjet 60 | Bombardier | P&W Canada | Rockwell Collins | 4,461 | 6-10 | 8.3 |
| Hawker 800 | Hawker Beechcraft | Honeywell | Rockwell Collins | 5,560 | 6-14 | 13.8 |
| G150 | Gulfstream (GD) | Honeywell | Rockwell Collins | 5,000 | 6-8 | 14.0 |
| Legacy 450* | Embraer | Honeywell | Rockwell Collins | 4,260 | 2-8 | 15.3 |
| Citation Sovereign | Cessna (Textron) | P&W Canada | Honeywell | 5,222 | 8-12 | 16.2 |
| Learjet 85* | Bombardier | TBD | TBD | 5556 | 8 | ~16.0 |
| Legacy 500* | Embraer | Honeywell | Rockwell Collins | 5560 | 2-10 | 18.5 |
| Challenger 300 | Bombardier | Honeywell | Rockwell Collins | 5,741 | 8-9 | 20.0 |
| Hawker 4000 | Hawker Beechcraft | Pratt & Whitney | Honeywell | 5,753 | 8-14 | 20.0 |
| Citation X | Cessna (Textron) | Rolls-Royce (Allison) | Honeywell | 7,040 | 10 | 20.1 |
| Falcon 50/EX | Dassault | Honeywell | Rockwell Collins | 6,083 | 9-12 | 21.2 |
| G200 | Gulfstream (GD) | P&W Canada | Rockwell Collins | 6,667 | 8-10 | 22.1 |
| G250* | Gulfstream (GD) | Honeywell | Rockwell Collins | 6,300 | 8-10 | 24.0 |
| Legacy 600 | Embraer | Rolls-Royce | Honeywell | 6,504 | 13 | 24.7 |
| Challenger 605 | Bombardier | GE | Rockwell Collins | 7,491 | 12 | 26.2 |
| Challenger 800 Series | Bombardier | GE | Rockwell Collins | 4,683-6,546 | 15-90 | 28.0 |
| Falcon 2000DX/EX | Dassault | P&W Canada | Honeywell | 6,019-7,037 | 8-12 | 29.0 |
| G350 | Gulfstream (GD) | Rolls-Royce | Honeywell | 7,038 | 11-14 | 31.0 |
| G450 | Gulfstream (GD) | Rolls-Royce | Honeywell | 8,055 | 11-14 | 34.9 |
| Global 5000 | Bombardier | Rolls-Royce | Honeywell/Rockwell Collins | 8,889 | 8-16 | 36.8 |
| Falcon 900DX/EX | Dassault | Honeywell | Honeywell | 7,593-8,333 | 8-19 | 37.0 |
| G500 | Gulfstream (GD) | Rolls-Royce | Honeywell | 10,740 | 14-19 | 39.6 |
| Falcon 7X | Dassault | P&W Canada | Honeywell | 10,500 | 8-19 | 40.6 |
| Lineage 1000 | Embraer | GE | Honeywell | 7,778 | 19 | 41.0 |
| Global Express | Bombardier | Rolls-Royce | Honeywell/Rockwell Collins | 12,038 | 10-24 | 45.3 |
| G550 | Gulfstream (GD) | Rolls-Royce | Honeywell | 12,500 | 14-19 | 47.6 |
| G650* | Gulfstream (GD) | Rolls-Royce | Honeywell | 12,964 | 11-18 | 58.0 |
| BBJ1 | Boeing | CFM | Rockwell Collins/Honeywell | 11,293 | 19-149 | 58.0 |
| ACJ/A318 Elite | Airbus | CFM / IAE | BFE | 9,630 | 48-134 | 61.5 |
| BBJ2 | Boeing | CFM | Rockwell Collins/Honeywell | 10,334 | 19-189 | 69.5 |

Source: Company reports, Teal Group, Business & Commercial Aviation. Note: * represents in development aircraft.

Figure 13: Product Pricing Span by Company



Source: Company data, Business & Commercial Aviation, J.P. Morgan estimates.

Overall Market Trends

Market Share

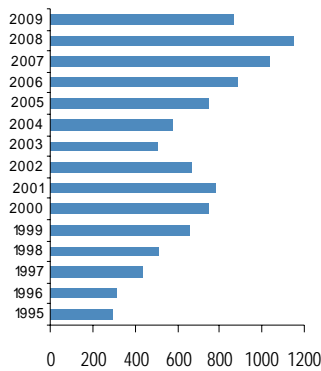
Deliveries decreased 14% in Q2

The six major business jet OEMs plus Boeing and Airbus delivered 191 business jets in 2Q10, down 14% from 223 deliveries in 2Q09 but 16% more than the previous quarter. Embraer gained 300 bps of market share by volume, driven by Phenom 100 (+20) and 300 (+4). Dassault gained 200 bps of market share by volume, driven by 2000LX (+8) and 7X (+7). Cessna continued losing share, falling 390 bps in 2Q10, and its market share is down about 1,400 bps in the last four quarters. Bombardier lost 110 bps due to fewer Medium and Heavy jet deliveries, while Gulfstream and Airbus gained 70 bps and 20 bps, respectively. Hawker lost 90 bps, primarily due to fewer 800s, while Boeing market share was flat.

Market size by value decreased 9% y/y

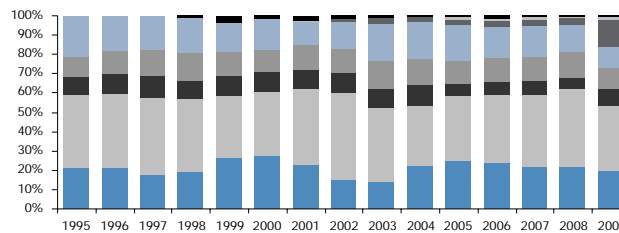
Revenues from shipments decreased 9% in 2Q10 compared to a year ago, slightly less than the 14% decrease in volumes. The reason for the smaller decline by value was a mix shift toward Heavy jets as Light and Medium jets drove the decline in volumes while higher value Heavy jet volumes were flat. On a TTM basis, Dassault, Gulfstream, and Airbus gained 330 bps, 70 bps, and 60 bps, respectively, while Bombardier and Cessna lost 220 bps and 190 bps, respectively. Embraer, whose share gains by volume (+190 bps) came from the Phenom 100 VLJs, was flat by value. Hawker lost 50 bps, while Boeing was flat.

Market Size - by Volume



Source: Teal Group, J.P. Morgan estimates.

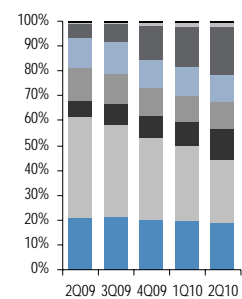
Figure 14: Market Share by Volume, 1995-2009



Bottom to Top : Bombardier, Cessna, Dassault, Gulfstream, Hawker Beechcraft, Embraer, Airbus, Boeing

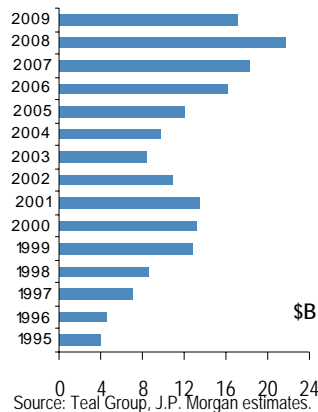
Source: Teal Group, J.P. Morgan estimates.

Figure 15: LTM



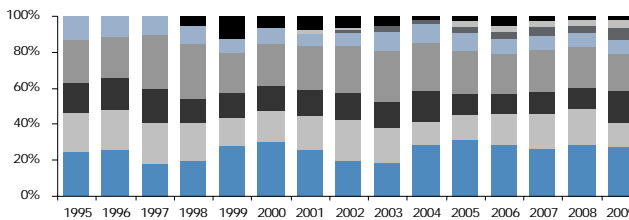
Source: Teal Group, J.P. Morgan est.

Market Size - by Value



Source: Teal Group, J.P. Morgan estimates.

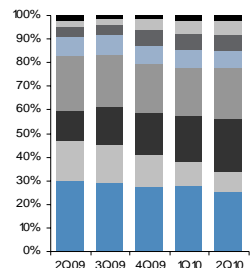
Figure 16: Market Share by Value, 1995-2009



Bottom to Top : Bombardier, Cessna, Dassault, Gulfstream, Hawker Beechcraft, Embraer, Airbus, Boeing

Source: Teal Group, J.P. Morgan estimates.

Figure 17: LTM

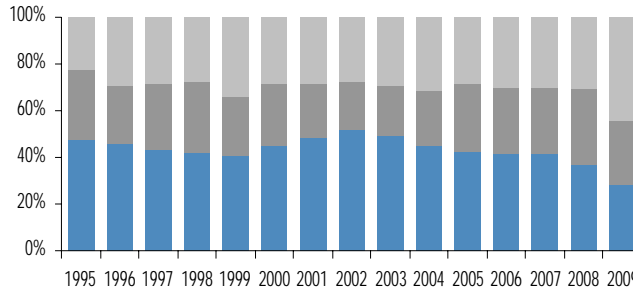


Source: Teal Group, J.P. Morgan est.

The 2Q10 delivery mix was again tilted to larger jets, while the Medium and Light jet markets struggled. Three of the six major OEMs reported significantly fewer deliveries in 2Q10, while Dassault and Embraer deliveries increased meaningfully. Cessna remained under pressure as deliveries declined by 41 jets compared to 2Q09 to 43 aircraft but increased from 31 deliveries last quarter. The decline in Cessna was driven by fewer deliveries of all models except Encore+, while CJ4 deliveries started in 2Q10. Embraer delivered 40 aircraft (21 in 2Q09) including 35 Phenom 100s (+20) and four Phenom 300 (+4), while the company did not deliver any Legacy 600s (-5). Dassault delivered 13 more units compared to a year ago driven by 2000LX (+8) and 7X (+7). Bombardier deliveries decreased by 15 units to 35 aircraft due to decreases across models, primarily in Larger and Medium jet models. Gulfstream deliveries increased by 2 units to 28 as the company delivered 2 more mid-size jets. Hawker delivered 11 fewer jets, primarily driven by 800s (-8). Airbus (+1) and Boeing (flat) delivered 3 jets and 1 jet, respectively.

By category, for 2Q09 Heavy jets gained a substantial 320 bps of market share by volume, resulting in a 1,680 bps gain over the last four quarters. Light jets lost 160 bps of market share in 2Q10 and 1,180 bps in the last four quarters. Medium jets also lost 160 bps of share by volume, with 500 bps loss in the last four quarters. Similarly, by value, Heavy jets gained 240 bps at the expense of Medium (-150 bps) and Light (-80 bps). Heavy jets now have 77% market share by value and 52% by volume.

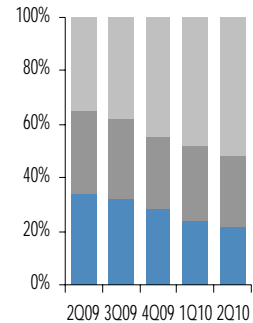
Figure 18: Category by Volume, 1995-2009



Bottom to Top : Light, Medium, Heavy

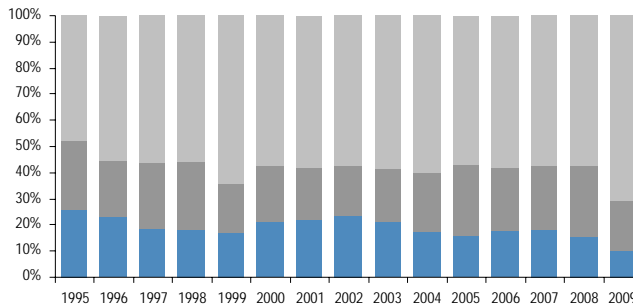
Source: Teal Group, J.P. Morgan estimates.

Figure 19: LTM



Source: Teal Group., J.P. Morgan est.

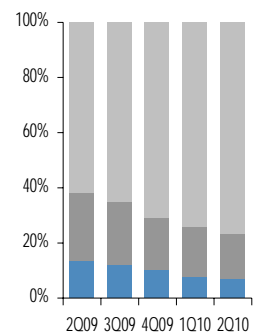
Figure 20: Category by Value, 1995-2009



Bottom to Top : Light, Medium, Heavy

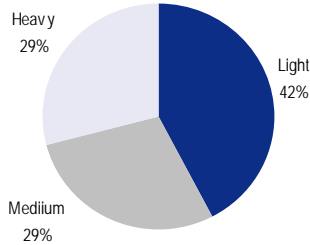
Source: Teal Group, J.P. Morgan estimates.

Figure 21: LTM



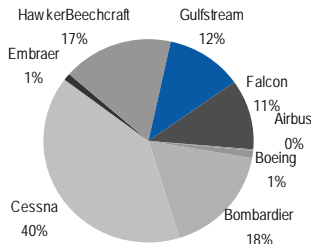
Source: Teal Group, J.P. Morgan est.

Active Fleet in Operation - Breakdown by Class



Source: JetNet.

Active Fleet in Operation - Breakdown by Manufacturer



Source: JetNet.

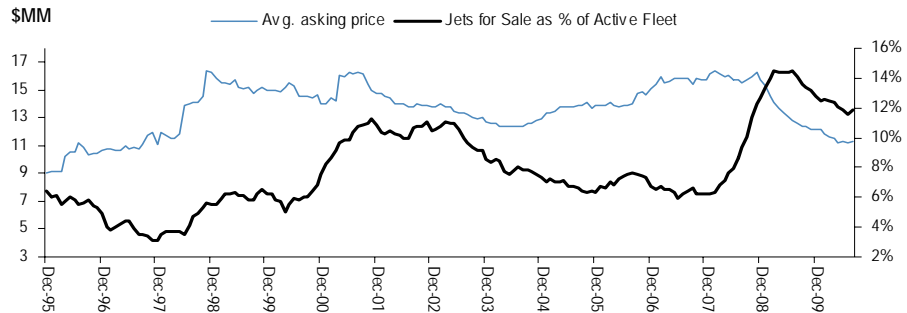
Note: We only consider active platforms in this section (major OEMs)—either clean sheet designs or platforms currently out of production but that have in-production derivatives.

Used Market

Used jet inventories increased 20 bps, asking prices up 1.3%

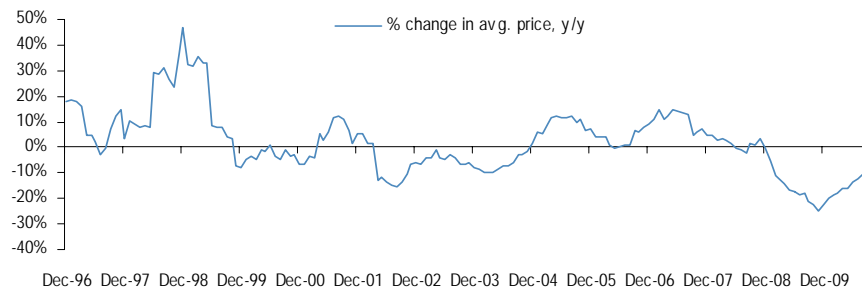
- Used jet inventory, measured by ‘aircraft for sale as % of active fleet,’ increased 20 bps to 11.8% in August, marking the second increase in the last 13 months. Inventories remain 260 bps below the Jul-09 peak of 14.5%. All three business jet categories—Heavy (+30 bps), Medium (+20 bps) and Light Jets (+20 bps)—contributed to the increase. 14 of 23 tracked models exhibited increases in inventory levels, 8 models saw decreases, and G500/550/V remained flat.
- Average asking price increased 1.3% to ~\$11.4 mln after remaining at the ~\$11.2 mln level for the three preceding months. Prices are still very low from a historical perspective but could see further pressure with inventories remaining at an elevated level. The price increase in August was driven by Heavy jets (+2.6%), while Medium (-0.7%) and Light jet (-0.2%) prices decreased modestly. 11 of 23 tracked models witnessed increased prices, 9 models saw price contractions, and 3 remained flat.
- We believe the modest increase in inventories, after five straight monthly declines, was just a bump in an otherwise downward trend. The increase in prices was driven by Heavy jets and was a breather after multiple steep declines since Dec-08. We expect prices to continue moving down, pressured by high inventory levels, though these declines should be fairly modest. Inventories are still at historically high levels and should continue declining, though it will likely take some time to get back to more normal levels.

Figure 22: Average Asking Price and % of Active Fleet for Sale



Source: JetNet, J.P. Morgan estimates.

Figure 23: % Change in Average Asking Price



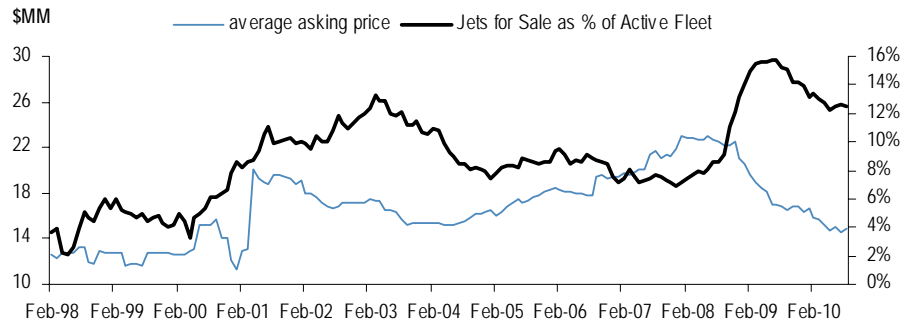
Source: JetNet, J.P. Morgan estimates.

Used Market by Company

Inventories increased for most OEMs; pricing improved modestly

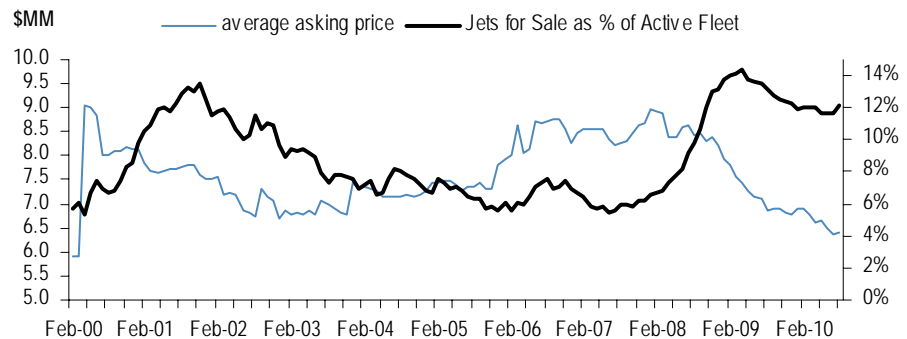
- All major OEMs except Hawker Beechcraft and Bombardier experienced increases in inventory levels in August. Hawker Beechcraft saw a decrease of 30 bps as all its models posted lower inventories. Bombardier inventories were down 10 bps, primarily driven by Learjet 40/45 and Global Series. Embraer Legacy 600 inventories increased 170 bps, while Dassault exhibited an increase of 60 bps as all its models reported higher inventories. All Cessna models except V/Ultra/Encore/Encore+ also saw increased inventories, driving a 50 bp increase overall. Gulfstream inventories increased 30 bps. Hawker Beechcraft continued to exhibit the highest inventories (13.0%), closely followed by Bombardier (12.5%), Dassault (12.2%), and Cessna (12.1%). Gulfstream had the lowest inventory at 8.6% and Embraer was at 11.5%.
- Business jet prices increased 1.3% in August after falling 8.2% in the four preceding months. The increase was driven by Heavy jets (+2.6%), while Medium (-0.7%) and Light jets (-0.2%) registered modest price contractions. By OEM, Hawker Beechcraft (-1.8%) was the only model to see prices decrease, while Embraer Legacy 600 remained flat. Bombardier saw a price increase of 2.4% driven by Global Series, while Gulfstream prices increased 1.5% driven by the high value G500/550/V. Dassault witnessed a price increase of 1.3%, while Cessna prices (+0.3%) were essentially flat.

Figure 24: Bombardier



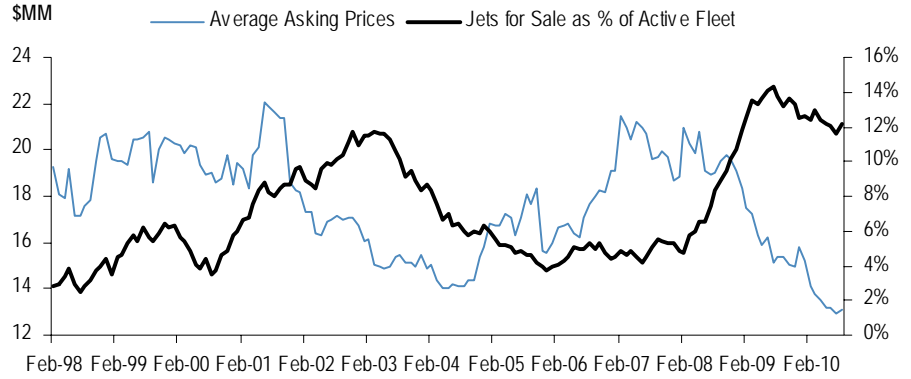
Source: Jetnet and J.P. Morgan estimates.

Figure 25: Cessna



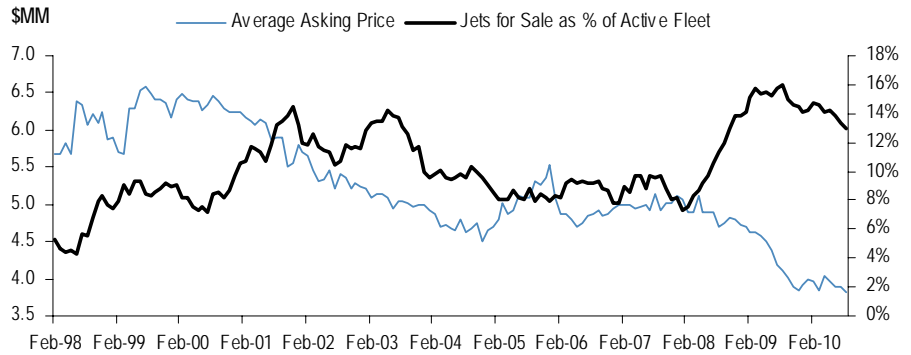
Source: Jetnet and J.P. Morgan estimates.

Figure 26: Dassault



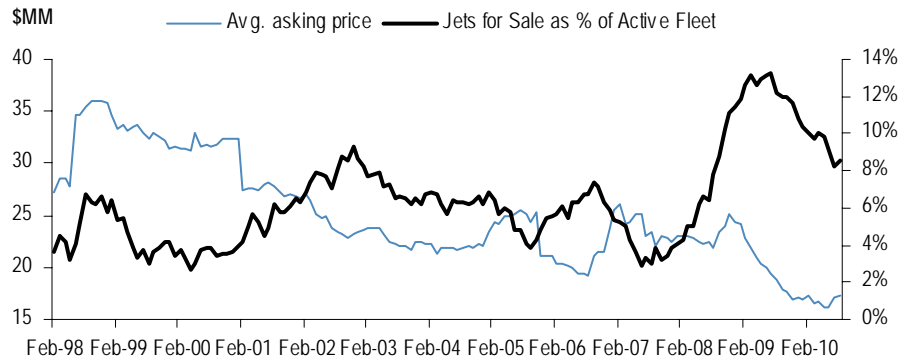
Source: Jetnet and J.P. Morgan estimates.

Figure 27: Hawker Beechcraft



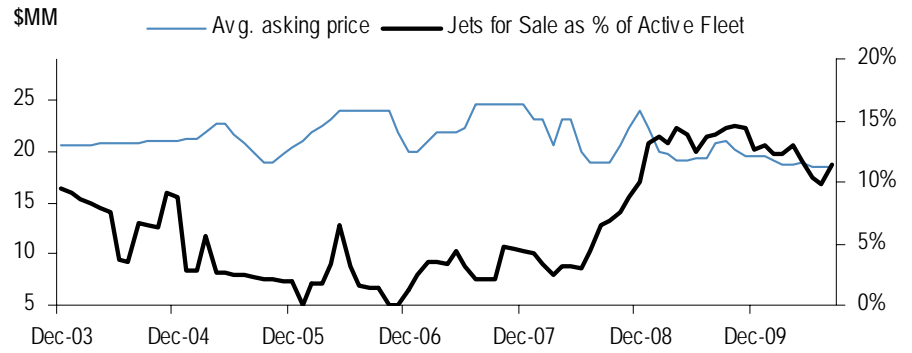
Source: Jetnet and J.P. Morgan estimates.

Figure 28: Gulfstream



Source: Jetnet and J.P. Morgan estimates.

Figure 29: Embraer



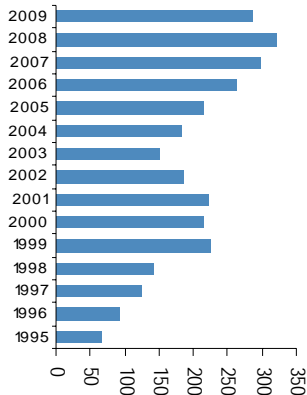
Source: Jetnet and J.P. Morgan estimates.

Heavy Jets

Market Share Trends

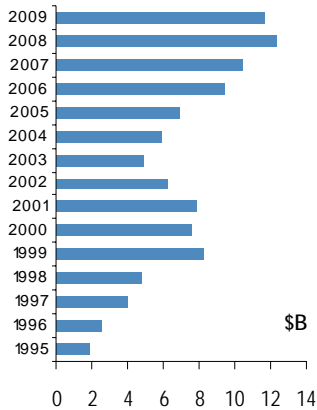
- 2Q10 Heavy jet deliveries remained flat at 75 compared to 2Q09 but decreased 4% compared to last quarter. The increase in Dassault deliveries was offset by Bombardier and Embraer. Dassault delivered more 2000LX (+8) and 7X (+7), while 900 deliveries decreased slightly (-2). Bombardier saw decreases in deliveries across models, including Global Series (-7) and Challenger 600 (-2), while Challenger 800 deliveries were flat. Embraer delivered 5 fewer Legacy 600s and delivered one Lineage (equal to 2Q09). Gulfstream deliveries remained flat for all models. Airbus deliveries increased to 3 compared to 2 in 2Q09, while Boeing delivered one aircraft, unchanged from 2Q09.
- By volume, on a trailing twelve months basis, Dassault (+440 bps) gained significant market share at the expense of Bombardier (-300 bps) and Embraer (-170 bps). Airbus gained 30 bps of market share, while Gulfstream and Boeing share remained flat. Cessna and Hawker Beechcraft do not participate in the Heavy jet market.
- Similarly, by value, Dassault (+390 bps) and Airbus (+50 bps) gained market share, while Bombardier (-310 bps) and Embraer (-110 bps) lost share. Gulfstream (-10 bps) and Boeing were essentially flat.

Market Size – by Volume



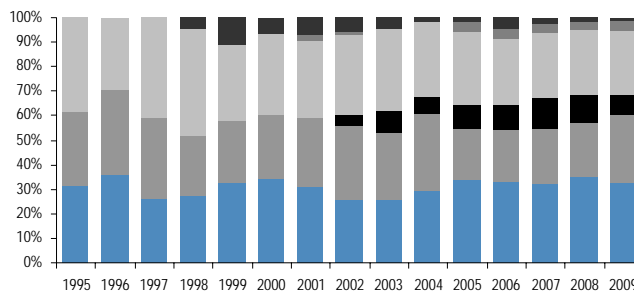
Source: Teal Group, J.P. Morgan estimates.

Market Size - by Value



Source: Teal Group, J.P. Morgan estimates.

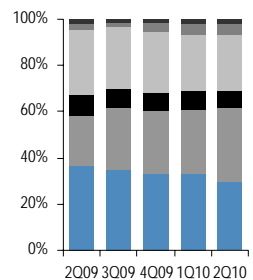
Figure 30: Market Share by Volume, 1995-2009



Bottom to Top : Bombardier, Dassault, Embraer, Gulfstream, Airbus, Boeing

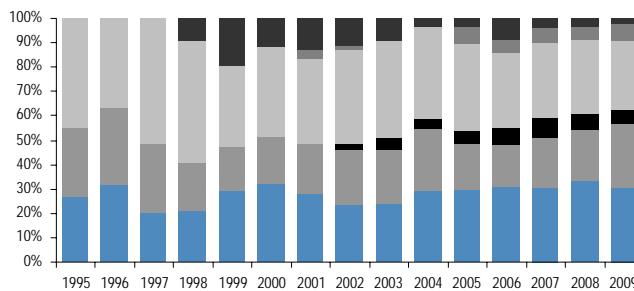
Source: Teal Group, J.P. Morgan estimates.

Figure 31: LTM



Source: Teal grp., J.P. Morgan est.

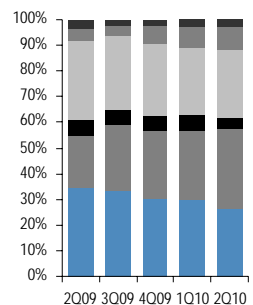
Figure 32: Market Share by Value, 1995-2008



Bottom to Top : Bombardier, Dassault, Embraer, Gulfstream, Airbus, Boeing

Source: Teal Group, J.P. Morgan estimates.

Figure 33: LTM



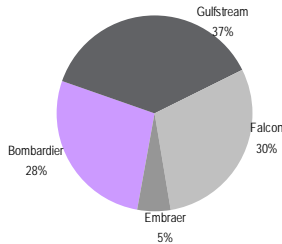
Source: Teal grp., J.P. Morgan est.

Used Market Trends

Used jet inventories increased 30 bps; asking prices up 2.6%.

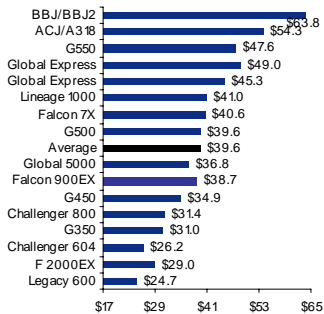
- Used jet inventory, measured by 'aircraft for sale as % of active fleet,' increased 30 bps to 9.4% in August after declining for 12 straight months. Heavy jet inventories are still down 330 bps from the July peak of 12.7%. The increase in inventories was driven by Legacy 600 (+170 bps), Falcon 900 (+130 bps), G300/350/400 (+40 bps), and Falcon 2000 (+20 bps), while Challenger 601-3R/604/605 and Global Series saw a decline of 10 bps each. G500/550/V inventories were flat.
- Average asking price increased 2.6% to \$20.3 mln in August and has remained in the \$19.5-20.5 mln range for the last six months. However, prices are still 33% down from the peak of \$30.5 mln in Nov-08. The August price increase was driven by Global Series (+9.1%), G500/550/V (+8.3%), and Falcon 900 (+7.2%). G300/350/400 (-5.7%) and Falcon 2000 (-4.9%) witnessed decreases in price, and Legacy 600 and Challenger 601-3R/604/605 were flat.
- Favorable: Global Series.
- Mixed: G500/550/V had increased prices and flat inventories, while Legacy 600 had flat prices and higher inventories. Challenger 601-3R/604/605 had decreased inventories and flat prices, while Falcon 900 had higher prices and inventories.
- Unfavorable: Falcon 2000 and G300/350/400.

Active Fleet in Operation: Breakdown by Manufacturer



Source: JetNet

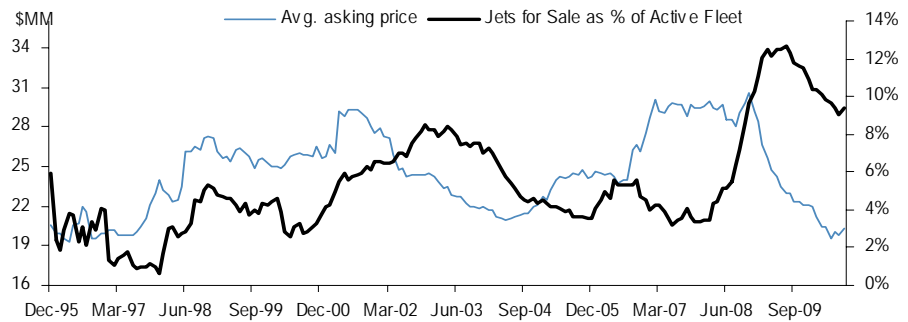
Product Price Points



Source: Company reports, Teal Group, Textron Fact book, Business & Commercial Aviation

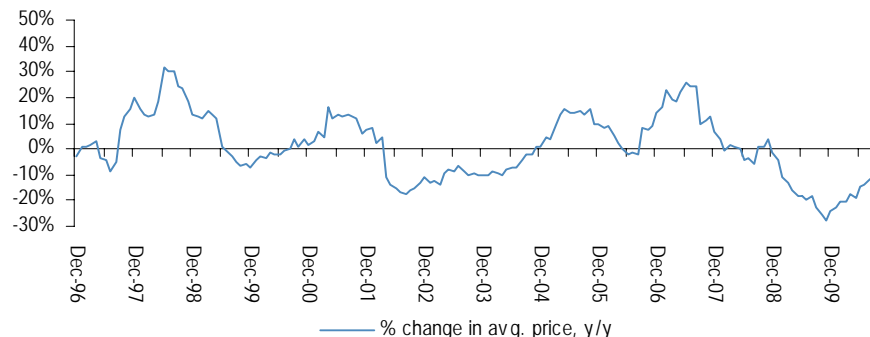
Note: We only consider active platforms in this section (major OEMs)—either clean sheet designs or platforms currently out of production but that have in-production derivatives.

Figure 34: Average Asking Price and % of Active Fleet for Sale



Source: JetNet, J.P. Morgan estimates.

Figure 35: % Change in Average Asking Price



Source: JetNet, J.P. Morgan estimates.

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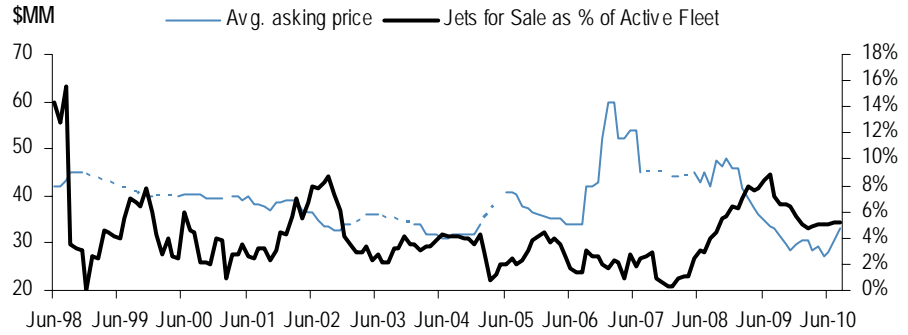
Model Specs & Product History

Model G500/ G550
 Manufacturer Gulfstream (GD)
 Engine Rolls-Royce
 Avionics Honeywell
 Range 10740/ 12500 km
 Passengers 14-19
 List price \$38 M/ \$47.8 M

| | 96-'99 | 00 | 01-'02 | 03-'07 |
|-----------|--------|----|--------|--------|
| GV | | | | |
| 500/550/V | | | | |
| G500 | | | | |

G500/G550/V

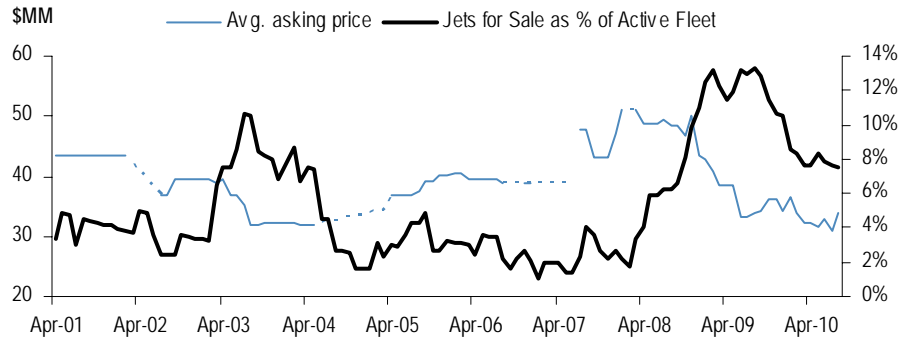
Figure 36



Source: JetNet, J.P. Morgan estimates.

Global 5000/Express/Express XRS

Figure 37



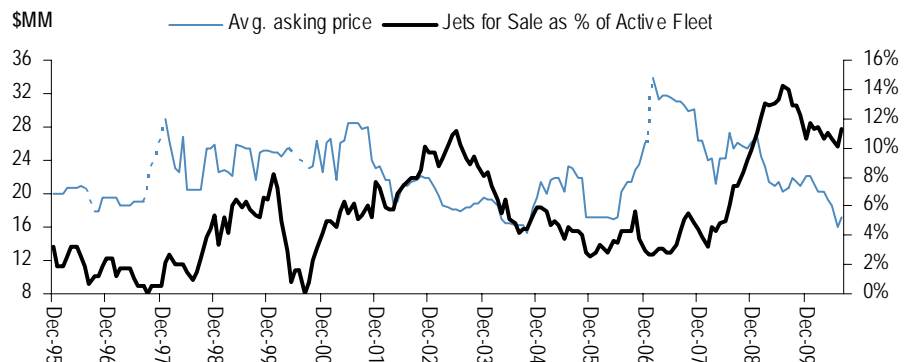
Source: JetNet, J.P. Morgan estimates.

Model Global 5000/ Express
 Manufacturer Bombardier
 Engine Rolls-Royce
 Avionics Honeywell
 Range 8889/ 12038 km
 Passengers 8-16/ 10-24
 List price \$35 M/ \$45.3 M

| | 98 | 99-'03 | 04 | 05 | 06 | 07 |
|---------|----|--------|----|----|----|----|
| Express | | | | | | |
| 5000 | | | | | | |
| XRS | | | | | | |

Falcon 900/900B/900C/900DX/900EX

Figure 38



Source: JetNet, J.P. Morgan estimates.

Model Falcon 900EX
 Manufacturer Dassault
 Engine Honeywell
 Avionics Honeywell
 Range 8333 km
 Passengers 8-19
 List price \$35 M

| | 86-'95 | 96-'99 | 00-'02 | 03 | 04 | 05 | 06 | 07 |
|---------|--------|--------|--------|----|----|----|----|----|
| 900/ B | | | | | | | | |
| 900C | | | | | | | | |
| DX | | | | | | | | |
| EX | | | | | | | | |
| EX EASy | | | | | | | | |

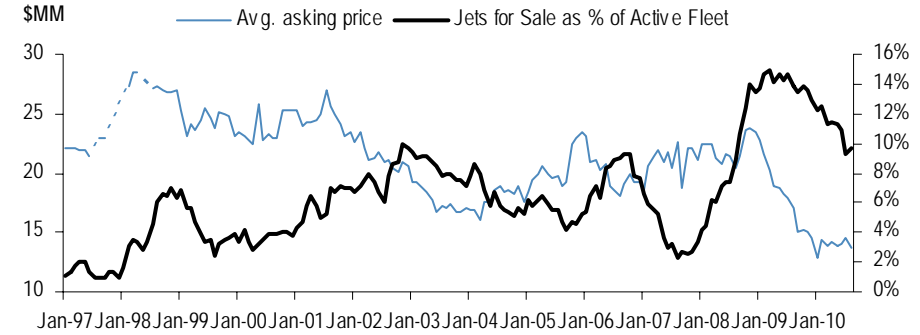
Model Specs & Product History

| | |
|--------------|--------------------|
| Model | G350/ G450 |
| Manufacturer | Gulfstream (GD) |
| Engine | Rolls-Royce |
| Avionics | Honeywell |
| Range | 7038/ 8055 km |
| Passengers | 11-14 |
| List price | \$27.5 M/ \$33.5 M |

| | 86-'99 | 00 | 01-'02 | 03-'07 |
|------|--------|----|--------|--------|
| GIV | [Bar] | | | |
| ALL | [Bar] | | | |
| G400 | [Bar] | | | |

G300/G350/G400/G450/IV/IVSP

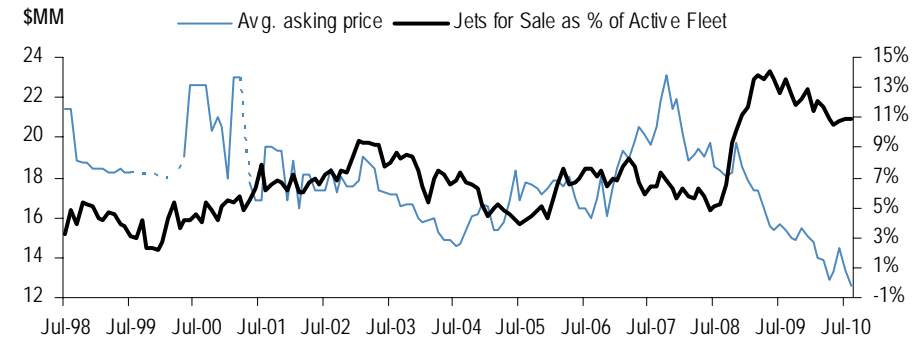
Figure 39



Source: JetNet, J.P. Morgan estimates.

Challenger 601-3R/604/605

Figure 40



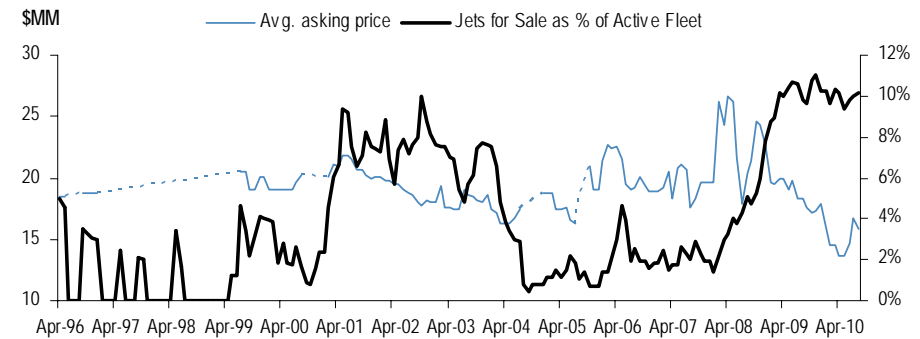
Source: JetNet, J.P. Morgan estimates.

| | |
|--------------|------------------|
| Model | Challenger 604 |
| Manufacturer | Bombardier |
| Engine | GE |
| Avionics | Rockwell Collins |
| Range | 7551 km |
| Passengers | 9-18 |
| List price | \$26.2 M |

| | 95 | 96 | 97 | 98-'05 | 06 | 07 |
|--------|-------|----|----|--------|----|----|
| 601-3R | [Bar] | | | | | |
| 604 | [Bar] | | | | | |

Falcon 2000/2000EX

Figure 41



Source: JetNet, J.P. Morgan estimates.

| | |
|--------------|---------------|
| Model | Falcon 2000EX |
| Manufacturer | Dassault |
| Engine | P&W Canada |
| Avionics | Honeywell |
| Range | 7037 km |
| Passengers | 8-12 |
| List price | \$26.2 M |

| | 95-'01 | 02 | 03 | 04 | 05-'07 |
|---------|--------|----|----|----|--------|
| 2000 | [Bar] | | | | |
| EX | [Bar] | | | | |
| EX EASy | [Bar] | | | | |

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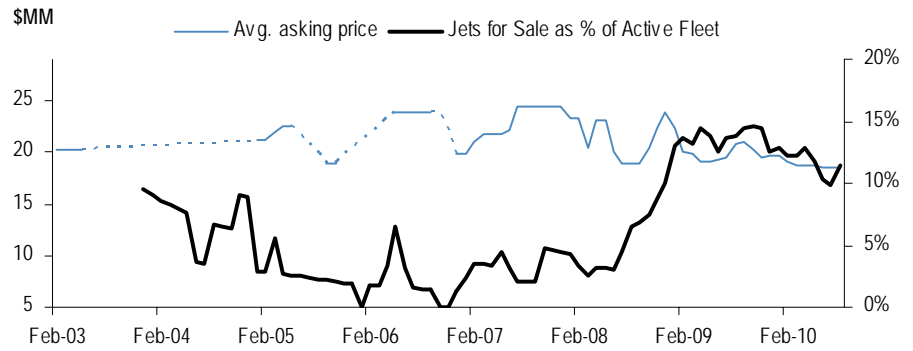
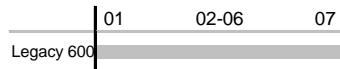
J.P.Morgan

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Legacy 600

Figure 42

| | |
|--------------|-------------|
| Model | Legacy 600 |
| Manufacturer | Embraer |
| Engine | Rolls-Royce |
| Avionics | Honeywell |
| Range | 6504 km |
| Passengers | 13 |
| List price | \$23.6 M |



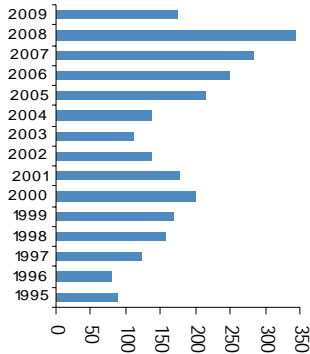
Source: JetNet, J.P. Morgan estimates.

Medium Jets

Market Share Trends

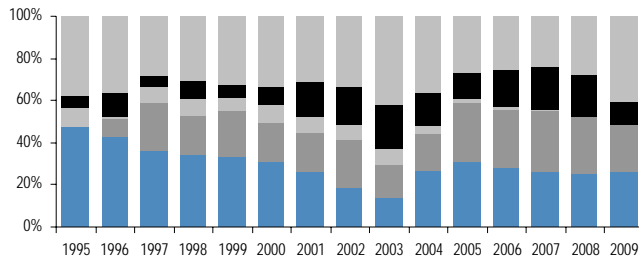
- Medium jet deliveries decreased 47% to 24 jets in 2Q10 compared to 45 a year ago and declined 33% compared to the previous quarter. All mid-size OEMs except Gulfstream reported fewer y/y deliveries in Q2. Gulfstream delivered 8 mid-size jets, two more than 2Q09. Hawker delivered 8 fewer 800XPs but 1 more 4000s resulting in 7 fewer total deliveries. Cessna delivered just 3 Sovereigns compared to 8 Sovereigns and 4 Citation Xs in 2Q09. Bombardier delivered 5 Challenger 300s only, while the company had delivered 9 300s and 2 Learjet 60s a year ago.
- On a trailing four quarter basis, by volume, Gulfstream and Hawker gained 270 bps and 90 bps of market share, respectively, primarily at the cost of Cessna, which lost 330 bps share. Bombardier also witnessed a slight decline of 30 bps.
- By value, Gulfstream and Hawker gained 310 bps and 140 bps of market share, respectively, at the expense of Cessna (-400 bps) and Bombardier (-50 bps).

Market Size - by Volume



Source: Teal Group, J.P. Morgan estimates.

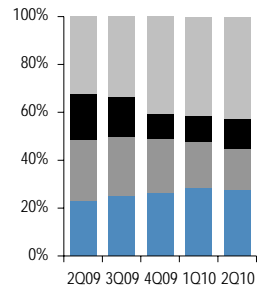
Figure 43: Market share by Volume, 1995-2009



Bottom to Top : Bombardier, Cessna, Dassault, Gulfstream, Hawker Beechcraft

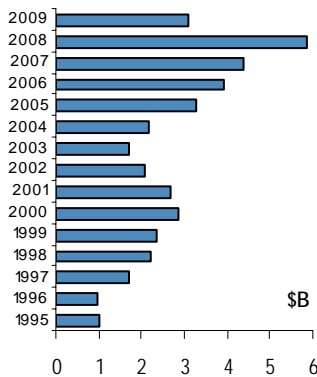
Source: Teal Group, J.P. Morgan estimates.

Figure 44: LTM



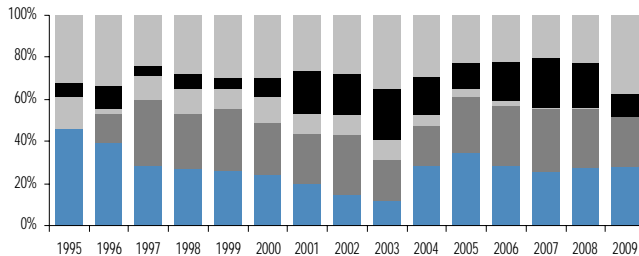
Source: Teal Group, J.P. Morgan est.

Market Size - by Value



Source: Teal Group, J.P. Morgan estimates.

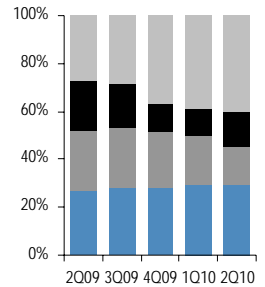
Figure 45: Market share by Value, 1995-2009



Bottom to Top : Bombardier, Cessna, Dassault, Gulfstream, Hawker Beechcraft

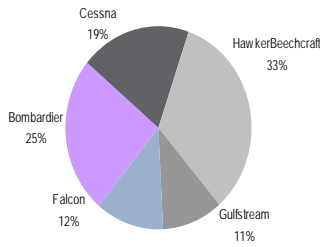
Source: Teal Group, J.P. Morgan estimates.

Figure 46: LTM



Source: Teal Group, J.P. Morgan est.

Active Fleet In Operation - Breakdown by Manufacturer



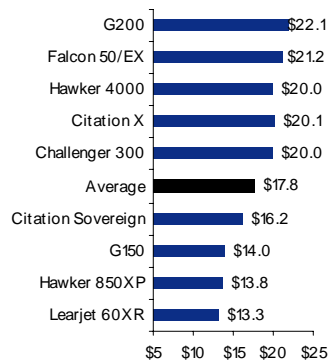
Source: JetNet

Used Market Trends

Inventories increased 20 bps; average asking price down 0.7%

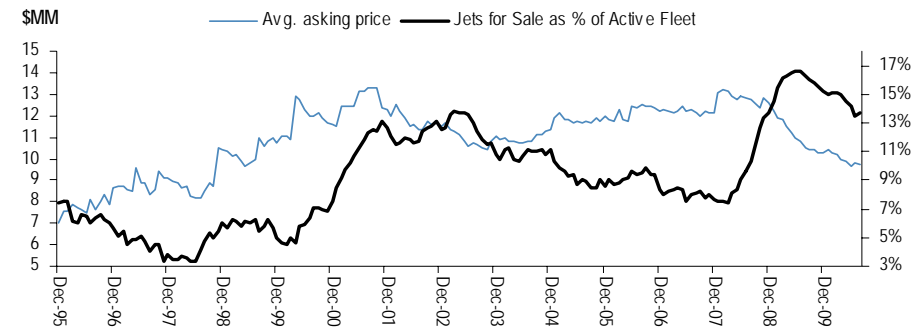
- Used jet inventory, measured by ‘aircraft for sale as % of active fleet’ increased 20 bps to 13.7% in August, a bump in the road after decreasing 160 bps in the last four months. Medium jets had witnessed a decrease of about 50 bps per month in the three preceding months. Inventories are still 290 bps off the peak of 16.6% in July of last year. All medium jet models—except Hawker 800 (-40 bps) and G100/150 (-10 bps)—witnessed increases in inventory, including Citation X (+100 bps), G200 (+80 bps), Citation Sovereign (+60 bps), Falcon 50 (+60 bps), Challenger 300 (+30 bps), and Learjet 55/60 (+20 bps). Hawker 800 constitutes about one-third of total Medium jet inventories.
- Average asking price for medium jets decreased 0.7% to \$9.7 mln in Aug, marking the 18th decrease in 21 months. Prices have fallen ~7% since Jan. Prices are still 26% off the peak of \$13.2 mln in early 2008. The price decrease was driven by G200 (-5.3%), Citation Sovereign (-2.0%), and Challenger 300 (-0.7%), partially offset by Citation X (+3.2%), Falcon 50 (+2.5%), Hawker 800 (+0.5%), and Learjet 55/60 (+0.5%). G100/150 prices were flat.
- Favorable change: Hawker 800.
- Mixed: Falcon 50, Learjet 55/60, and Citation X saw increased inventories and higher prices, which is exactly the opposite of the last month for all three models. G100/150 had lower inventories and flat prices.
- Unfavorable change: G200, Challenger 300, Citation Sovereign.

Product Price Points



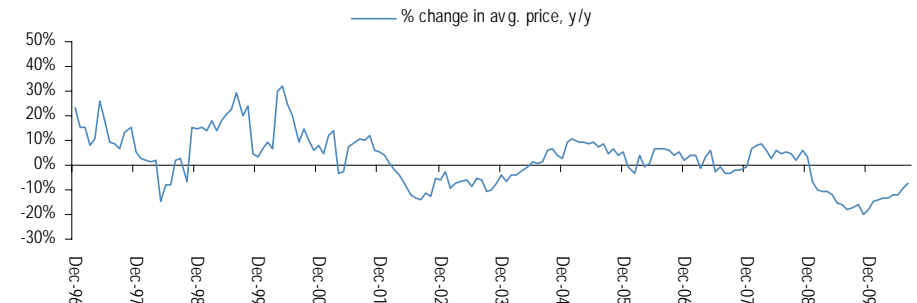
Source: Teal Group, Textron Factbook, Business & Commercial Aviation

Figure 47: Average Asking Price and % of Active Fleet for Sale



Source: JetNet, J.P. Morgan estimates.

Figure 48: % Change in Average Asking Price

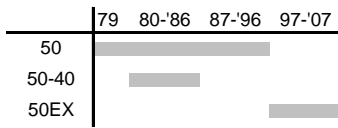


Source: JetNet, J.P. Morgan estimates.

Note: We only consider active platforms in this section (major OEMs)—either clean sheet designs or platforms currently out of production but that have in-production derivatives.

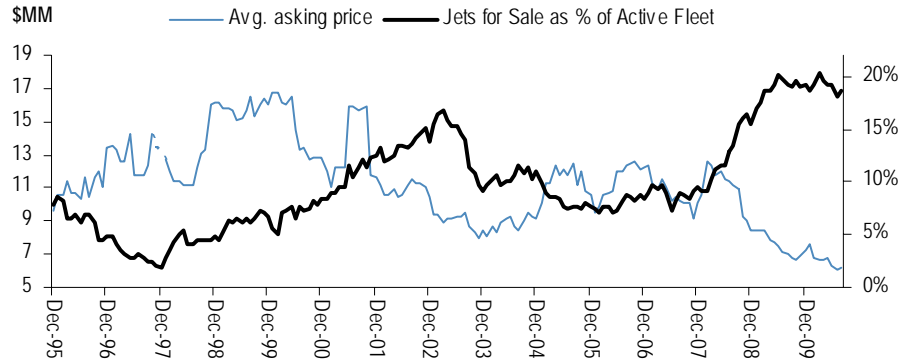
Model Specs & Product History

| | |
|--------------|------------------|
| Model | Falcon 50/EX |
| Manufacturer | Dassault |
| Engine | Honeywell |
| Avionics | Rockwell Collins |
| Range | 6083 km |
| Passengers | 9-12 |
| List price | \$21.2 M |



Falcon 50/50-40/50EX

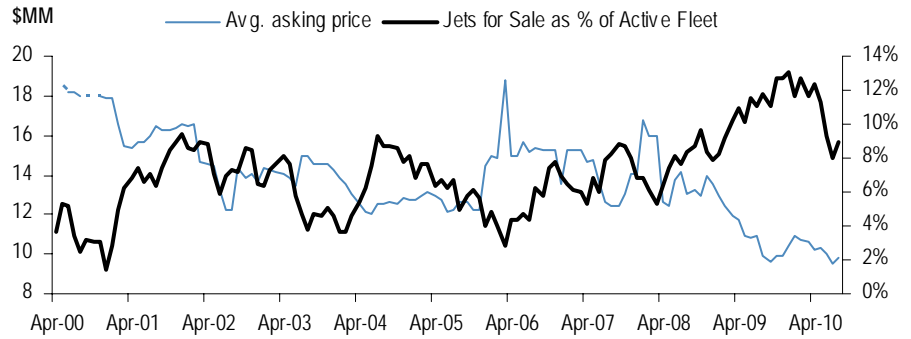
Figure 49



Source: JetNet, J.P. Morgan estimates.

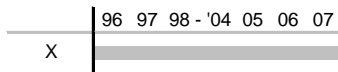
Citation X

Figure 50



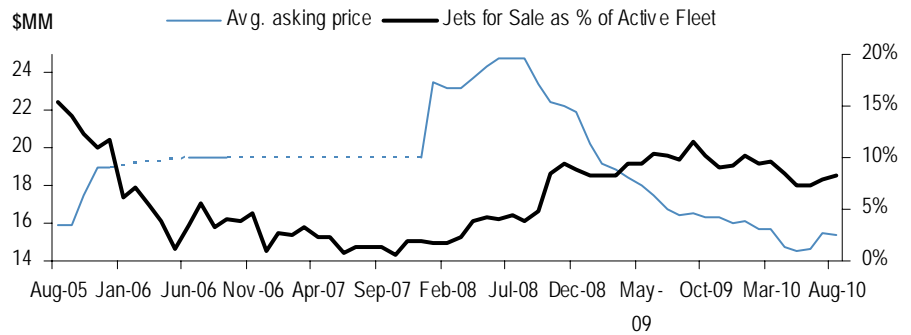
Source: JetNet, J.P. Morgan estimates.

| | |
|--------------|-----------------------|
| Model | Citation X |
| Manufacturer | Cessna (Textron) |
| Engine | Rolls-Royce (Allison) |
| Avionics | Honeywell |
| Range | 7040 km |
| Passengers | 10 |
| List price | \$19.6 M |



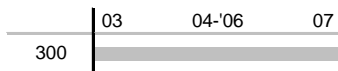
Challenger 300

Figure 51



Source: JetNet, J.P. Morgan estimates.

| | |
|--------------|------------------|
| Model | Challenger 300 |
| Manufacturer | Bombardier |
| Engine | Honeywell |
| Avionics | Rockwell Collins |
| Range | 5741 km |
| Passengers | 8 |
| List price | \$18.3 M |

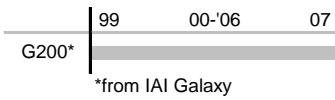


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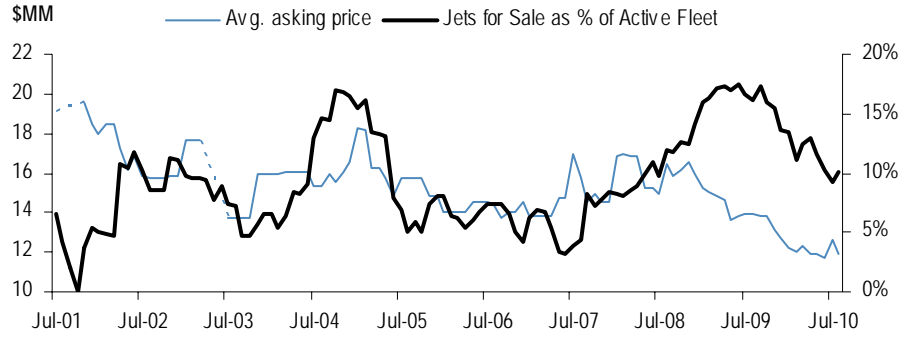
Model Specs & Product History

Model G200
 Manufacturer Gulfstream (GD)
 Engine P&W Canada
 Avionics Rockwell Collins
 Range 6667 km
 Passengers 8-10
 List price \$21.4 M



G200

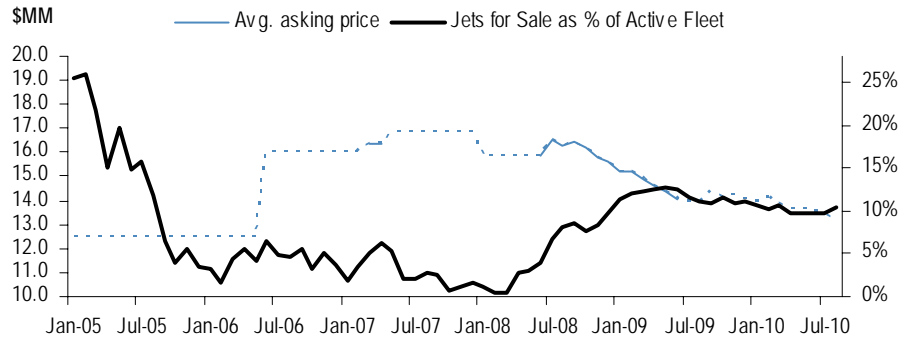
Figure 52



Source: JetNet, J.P. Morgan estimates.

Citation Sovereign

Figure 53



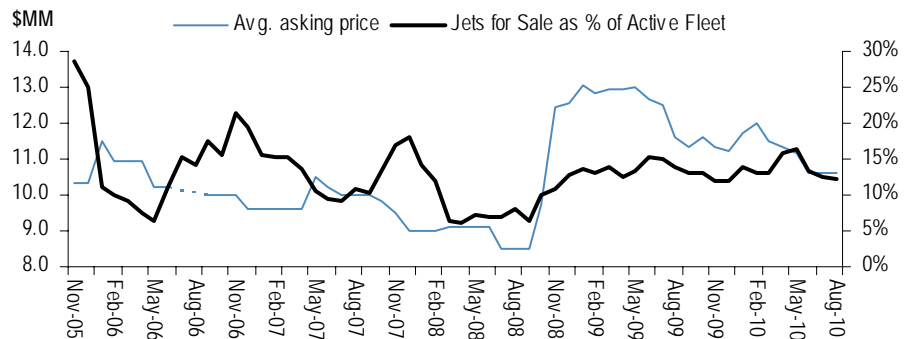
Source: JetNet, J.P. Morgan estimates. Note: Due to the inconsistent availability of data, dotted line represents last known asking price.

Model Citation Sovereign
 Manufacturer Cessna (Textron)
 Engine P&W Canada
 Avionics Honeywell
 Range 5222 km
 Passengers 8-12
 List price \$15 M



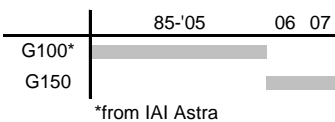
G100/150

Figure 54



Source: JetNet, J.P. Morgan estimates.

Model G100/ G150
 Manufacturer Gulfstream (GD)
 Engine Honeywell
 Avionics Rockwell Collins
 Range 5000 km
 Passengers 6-7/ 6-8
 List price \$11.9 M/ \$13.5 M



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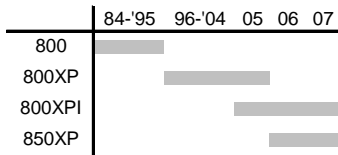
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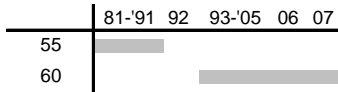
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Model Specs & Product History

Model Hawker 800
 Manufacturer HawkerBeechcraft
 Engine Honeywell
 Avionics Rockwell Collins
 Range 5560 km
 Passengers 6-14
 List price \$10 M

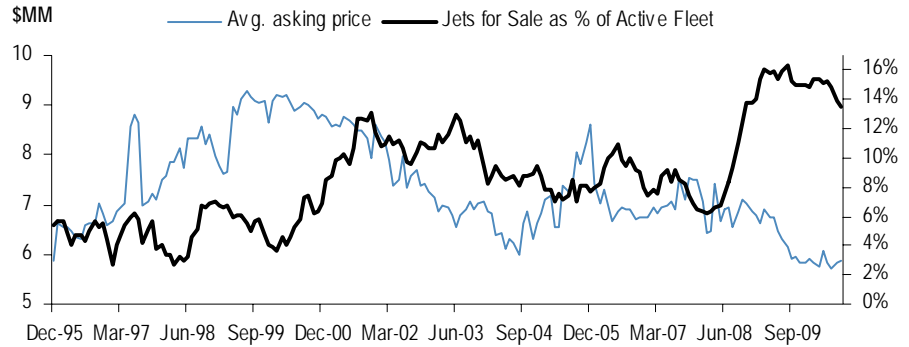


Model Learjet 60
 Manufacturer Bombardier
 Engine P&W Canada
 Avionics Rockwell Collins
 Range 4461 km
 Passengers 6-10
 List price \$8.3 M



Hawker 800A/800B (215-800)/800XP/800XPI/850XP

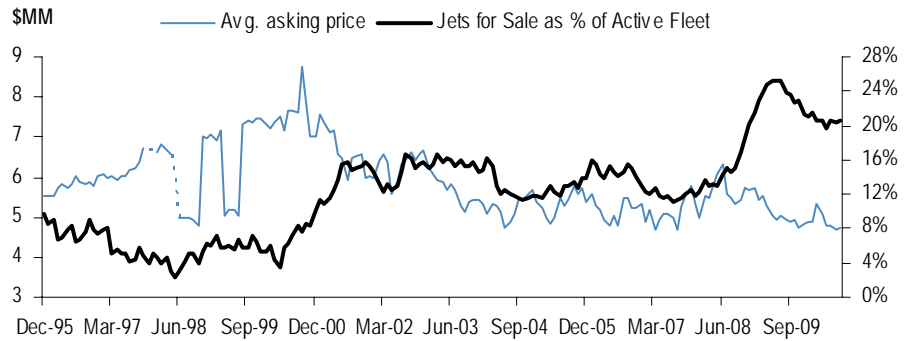
Figure 55



Source: JetNet, J.P. Morgan estimates.

Learjet 55/55B/55C/60/60XR

Figure 56



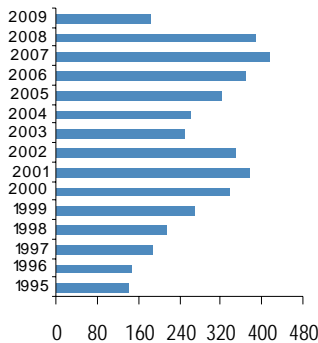
Source: JetNet, J.P. Morgan estimates.

Light Jets

Market Share Trends

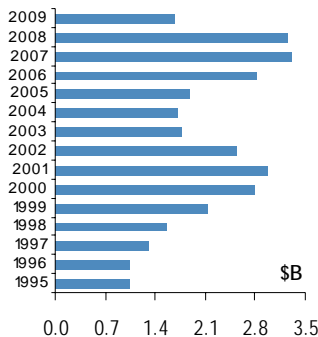
- 2Q10 Light jet deliveries totaled 32 aircraft, decreasing 36% from 46 in 2Q09 but up 167% compared to 12 in 1Q10. Cessna and Hawker delivered fewer aircraft, while Bombardier deliveries were flat. Cessna delivered just 20 aircraft, 11 fewer than in the year-ago period, primarily due to fewer Citation CJ1+ (-6), XLS+ (-5), CJ3 (-4), and CJ2+ (-3) deliveries. Cessna started delivering CJ4 during the quarter. Bombardier delivered 8 Light jets, matching the deliveries for 2Q09. Hawker delivered 4 jets, 4 fewer than in the year-ago period, including 2 fewer Premier Is and 2 400XPs.
- Light jet deliveries have improved from a dismal first quarter but remain low historically. On a trailing four quarter basis, Cessna gained 190 bps of market share despite seeing a significant decline in deliveries due to weak comps last quarter. Bombardier lost 130 bps market share and Hawker lost 60 bps. Similarly, by value, Cessna gained 230 bps at the expense of Bombardier and Hawker, which lost 190 bps and 40 bps of market share, respectively.

Market Size - by Volume



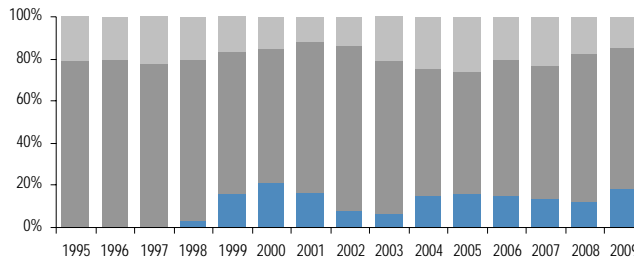
Source: Teal Group, J.P. Morgan estimates., Business & Commercial Aviation.

Market Size - by Value



Source: Teal Group, J.P. Morgan estimates.

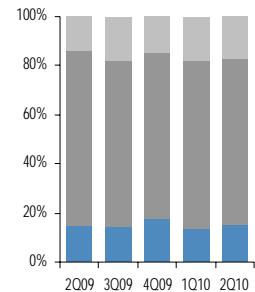
Figure 57: Market share by Volume, 1995-2009



Bottom to Top : Bombardier, Cessna, HawkerBeechcraft

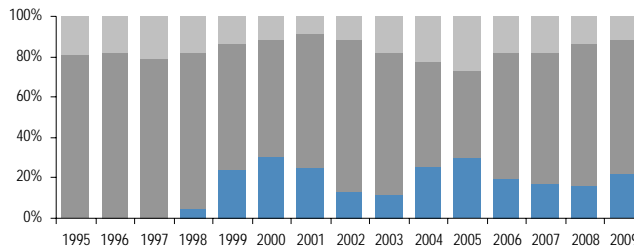
Source: Teal Group, J.P. Morgan estimates.

Figure 58: LTM



Source: Teal Group, J.P. Morgan est.

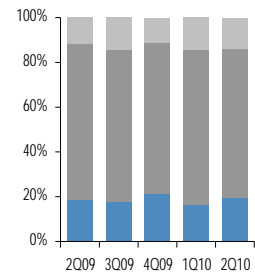
Figure 59: Market share by Value, 1995-2009



Bottom to Top : Bombardier, Cessna, HawkerBeechcraft

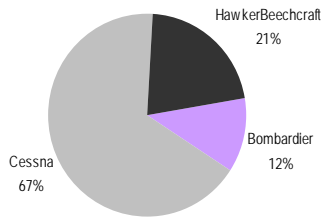
Source: Teal Group, J.P. Morgan estimates.

Figure 60: LTM



Source: Teal Group, J.P. Morgan est.

Active Fleet in Operation:
 Breakdown by Manufacturer



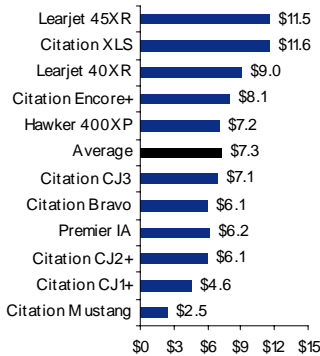
Source: JetNet

Used Market Trends

Inventories increased 20 bps; average asking price essentially flat

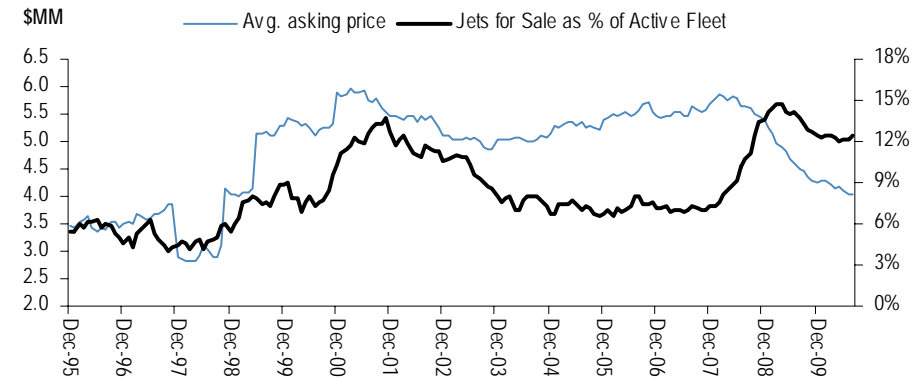
- Used jet inventory, measured by ‘aircraft for sale as % of active fleet,’ increased 20 bps to 12.4% in August. Light jet inventory levels have moved within the range of 12.0% and 12.5% for the last 9 months. The increase was driven by Citation CJ2/CJ2+ (+120 bps), CJ1/CJ1+ (+80 bps), Citation CJ3 (+60 bps) and Excel/XLS (+50 bps), partially offset by Learjet 40/45 (-40 bps), Premier I/IA (-40 bps), Citation V/Ultra/Encore/Encore+ (-40 bps), and Beechjet 400/Hawker 400 (-20 bps).
- Light jet average asking price was essentially flat at \$4.0 mln in August, after falling for 24 of the last 26 months. Prices decreased about 3.3% in the last two months and are at the lowest level since Mar-99. The decrease in prices for Beechjet 400/Hawker 400 (-7.6%), Citation CJ1/CJ1+ (-2.6%), Premier I/IA (-2.3%), and Citation CJ3 (-1.1%) was almost completely offset by Citation V/Ultra/Encore/Encore+ (+4.6%), Learjet 40/45 (+1.6%), Citation Excel/XLS (+1.4%), and CJ2/CJ2+ (+0.4%).
- Favorable change: Citation V/Ultra/Encore/Encore+, Learjet 40/45.
- Mixed: Citation CJ2/CJ2+ and Excel/XLS saw increased inventory levels and higher prices, while Premier I/IA and Beechjet 400/Hawker 400 witnessed lower prices and decreased inventories.
- Unfavorable change: Citation CJ1/CJ1+, CJ3.

Product Price Points



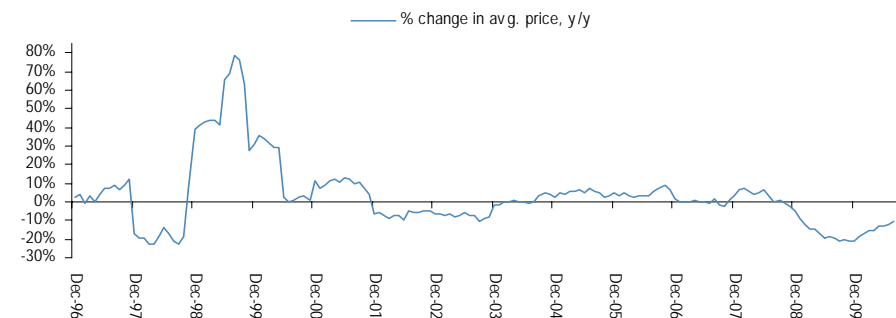
Source: Teal Group, Textron Factbook

Figure 61: Average Asking Price and % of Active Fleet for Sale



Source: JetNet, J.P. Morgan estimates.

Figure 62: % Change in Average Asking Price



Source: JetNet, J.P. Morgan estimates.

Note: We only consider active platforms in this section (major OEMs)—either clean sheet designs or platforms currently out of production but that have in-production derivatives.

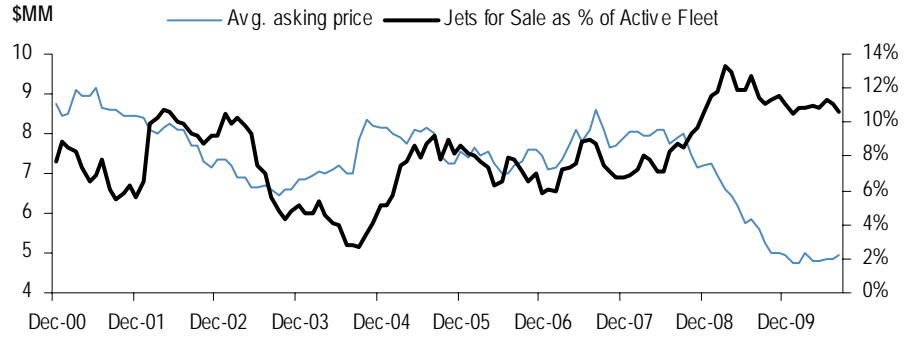
Model Specs & Product History

| | |
|--------------|---------------------|
| Model | Learjet 45 |
| Manufacturer | Bombardier |
| Engine | Honeywell (Garrett) |
| Avionics | Honeywell |
| Range | 3704 km |
| Passengers | 8 |
| List price | \$10.3 M |

| | 98 | 99-'03 | 04 | 05 | 06 | 07 |
|------|----|--------|----|----|----|----|
| 45 | █ | | | | | |
| 40 | █ | | | | | |
| 40XR | █ | | | | | |
| 45XR | █ | | | | | |

Learjet 40/40XR/45/45XR

Figure 63



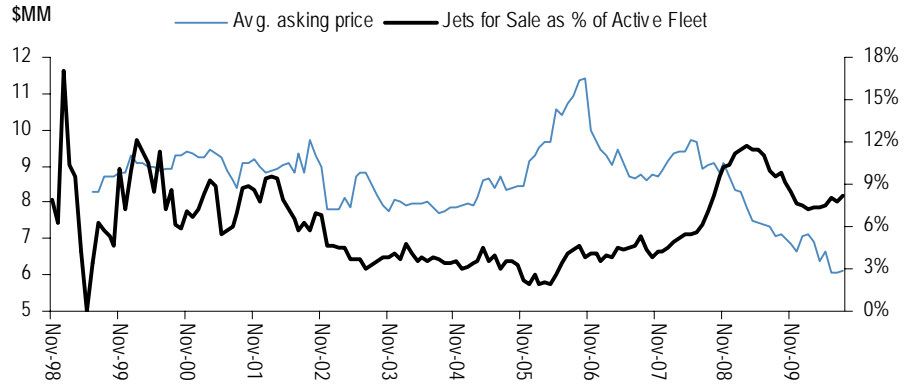
Source: JetNet, J.P. Morgan estimates.

| | |
|--------------|------------------|
| Model | Citation XLS |
| Manufacturer | Cessna (Textron) |
| Engine | P&W Canada |
| Avionics | Honeywell |
| Range | 3805 km |
| Passengers | 8 |
| List price | \$10.5 M |

| | 98 | 99 | 00-03 | 04-06 | 07 |
|-------|----|----|-------|-------|----|
| Excel | █ | | | | |
| XLS | █ | | | | |

Citation Excel/XLS

Figure 64



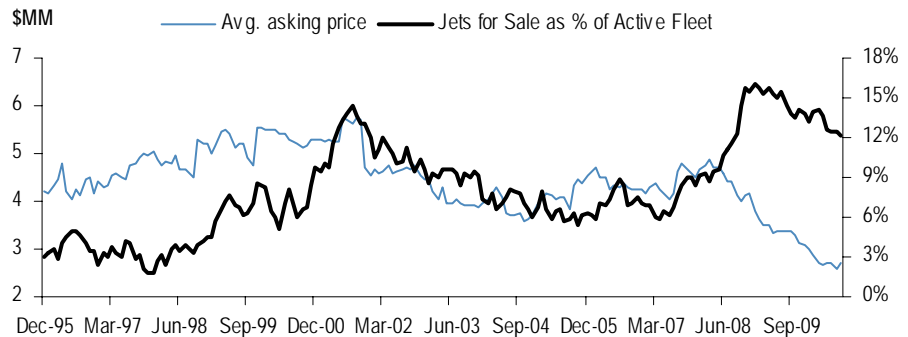
Source: JetNet, J.P. Morgan estimates.

| | |
|--------------|------------------|
| Model | Citation Encore |
| Manufacturer | Cessna (Textron) |
| Engine | P&W Canada |
| Avionics | Honeywell |
| Range | 2696 km |
| Passengers | 4-6 |
| List price | \$8.1 M |

| | 89-'95 | 96-'99 | 00-'05 | 06 | 07 |
|---------|--------|--------|--------|----|----|
| V | █ | | | | |
| Ultra | █ | | | | |
| Encore | █ | | | | |
| Encore+ | █ | | | | |

Citation V/Ultra/Encore/Encore+

Figure 65



Source: JetNet, J.P. Morgan estimates.

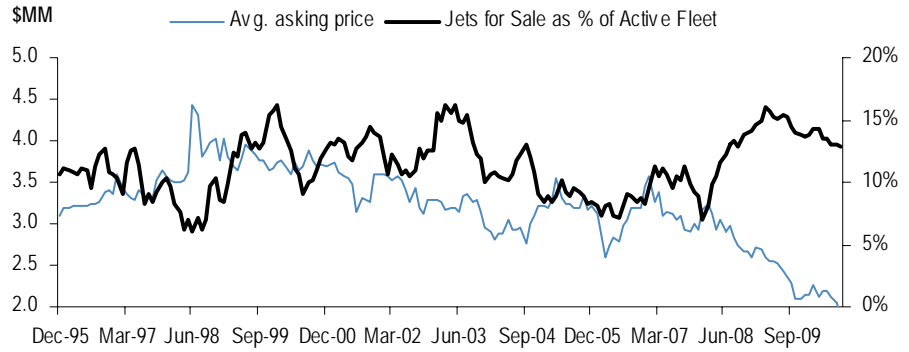
Model Specs & Product History

| | |
|--------------|------------------|
| Model | Beechjet 400XP |
| Manufacturer | HawkerBeechcraft |
| Engine | P&W Canada |
| Avionics | Rockwell Collins |
| Range | 3519 km |
| Passengers | 7-9 |
| List price | \$7 M |

| | 86-'89 | 90-'02 | 03 | 04-'07 |
|-------|--------|--------|----|--------|
| 400 | █ | | | |
| 400A | | █ | | |
| 400XP | | | | █ |

Beechjet 400/400A/Hawker 400XP

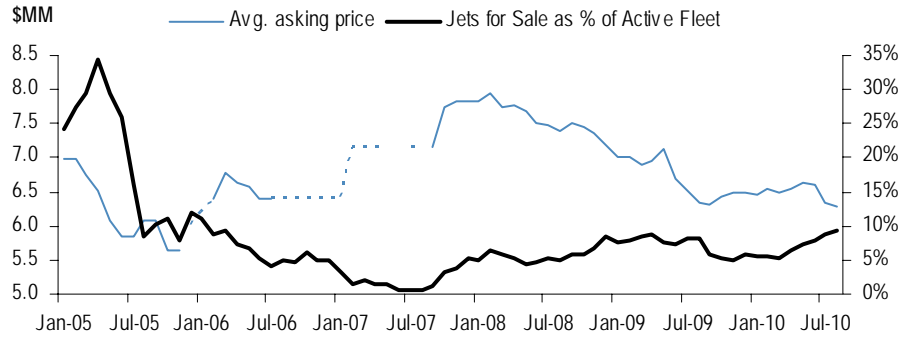
Figure 66



Source: JetNet, J.P. Morgan estimates.

CitationJet CJ3

Figure 67



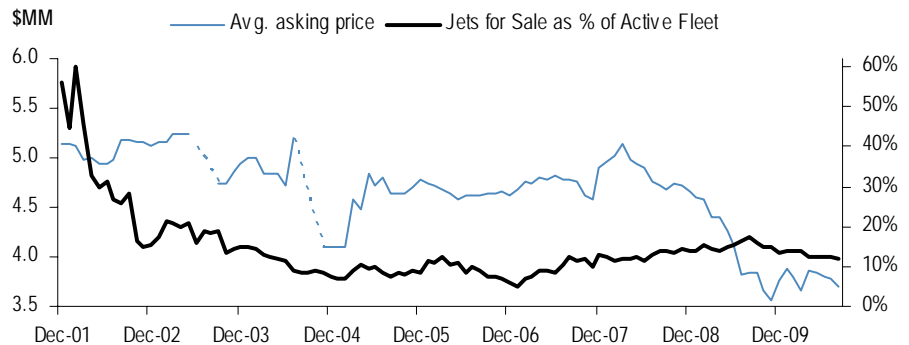
Source: JetNet, J.P. Morgan estimates.

| | |
|--------------|------------------------|
| Model | Citation CJ3 |
| Manufacturer | Cessna (Textron) |
| Engine | Williams / Rolls-Royce |
| Avionics | Rockwell Collins |
| Range | 4001 km |
| Passengers | 6 |
| List price | \$6.4 M |

| | 04 | 05 | 06 | 07 |
|-----|----|----|----|----|
| CJ3 | █ | █ | █ | █ |

Premier I/IA

Figure 68



Source: JetNet, J.P. Morgan estimates.

Model Specs & Product History

| | |
|--------------|------------------|
| Model | Premier I |
| Manufacturer | HawkerBeechcraft |
| Engine | Williams |
| Avionics | Rockwell Collins |
| Range | 2590 km |
| Passengers | 6-7 |
| List price | \$5.7 M |

| | 01 | 02-'04 | 05 | 06 | 07 |
|----|----|--------|----|----|----|
| I | █ | █ | █ | █ | █ |
| IA | | | | █ | █ |

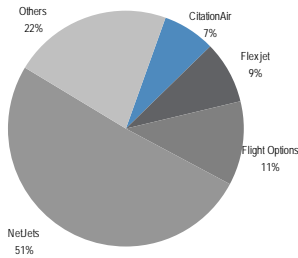
Fractional Jets

Provider Fleet Trends

Fractional fleet increased nominally

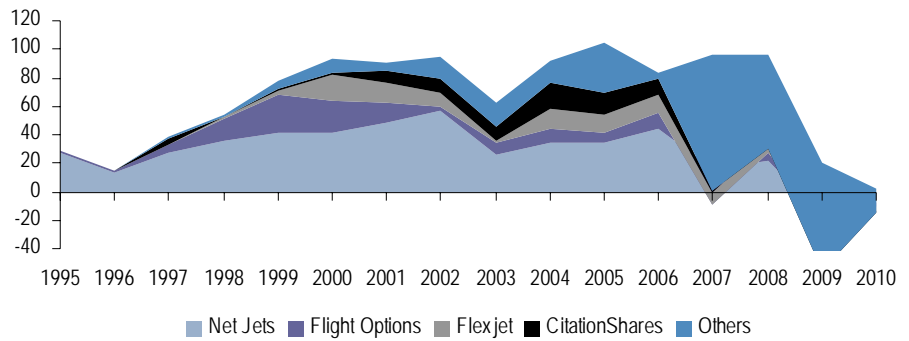
- The total fractional fleet increased by 1 unit to 880 aircraft in July, the first increase in the last 15 months. The fractional fleet is still down by 80 aircraft from the peak of 960 in January 2009, about ~8%. Initial July numbers point to a modest decrease in the fractional fleet.
- The three-month rolling average of gross fleet additions was flat at 2.0 in July following three straight increases. The average of new jet additions decreased to 0.7 from 1.0, while the average of used jet additions increased from 1.0 to 1.3.

Fractional Fleet Base: Breakdown by Provider



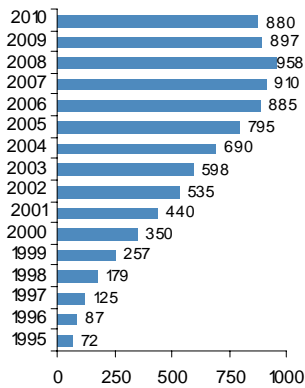
Source: JetNet

Figure 71: Fractional Fleet Additions, by Provider



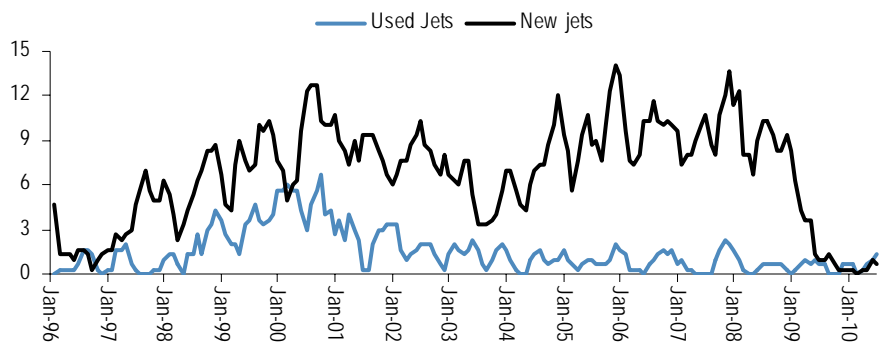
Source: JetNet, J.P. Morgan estimates.

Fractional Fleet base



Source: JetNet

Figure 72: Fractional Fleet Additions, Used and New—3-Month Rolling Average



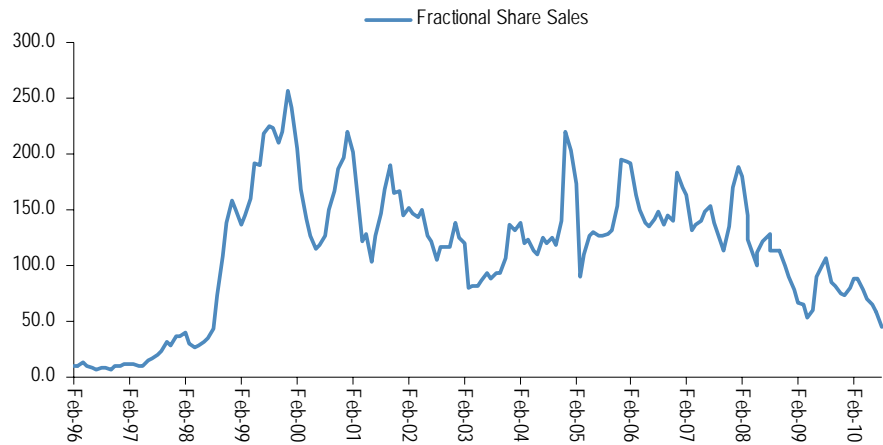
Source: JetNet, J.P. Morgan estimates.

Share Sales Trend

Share sales decline continues

- On an absolute basis, July share sales declined 70.5% y/y and 57.4% sequentially.
- On a rolling three-month average basis, share sales decreased 58.6% y/y and were down 24.9% compared to June.

Figure 73: Fractional Share Sales, by Providers (# of shares) – 3m rolling avg.



Source: JetNet, J.P. Morgan estimates.

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