



Preowned Business Jet Monitor

Young Preowned Availability Continues to Shrink, Down 13% Seq/68% YOY at 2% of Installed Base

We estimate total preowned inventory now ~3% of installed base (down 12% sequentially), representing another new low and 56% below on an absolute basis over the last year, compared to long-term average at ~12% of fleet. We estimate young preowned inventory (0-10 years old) now ~2% of installed base (down 13% sequentially), down ~68% on absolute basis over the last year, compared to long-term average at 8% of fleet.

Young inventory by cabin class: We estimate small, midsize, and large cabin young preowned inventory are at new lows as percentage of installed base. Small cabin inventory now 2% of installed base (long-term average ~8% of fleet), midsize cabin 1% (long-term average ~8% of fleet), and large cabin 2% (long-term average ~7% of fleet).

Young inventory by region: Young preowned inventory (0-10) in the two largest markets in North America and Europe has fallen back to lows at ~1% and ~2% of installed base, respectively.

Pricing 15% higher: We estimate that overall preowned pricing (0-20 years old) has increased by ~15% since mid-2020 bottom, including young preowned pricing increasing to near new levels.

Fleet age: We estimate the average age of the installed base has grown to >16 years as compared to 14 years post the Global Financial Crisis (GFC) with ~65% of the fleet >10 years old now as compared to <50% prior.

View on market: We forecast 2023-24 new industry delivery levels 5-10% above pre pandemic levels from 2019, equivalent to 3-4% of the installed base. We believe there could be further upside given minimal young preowned inventory along with an older installed base that should yield significant replacement demand. However, we believe a more significant recovery in corporate demand is necessary for production levels to get nearer to all-time peak levels at 6-7% of installed base.

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PLEASE SEE ANALYST CERTIFICATION(S) AND IMPORTANT DISCLOSURES BEGINNING ON PAGE 22.

INDUSTRY UPDATE

U.S. Aerospace & Defense

NEUTRAL

Unchanged

U.S. Aerospace & Defense

David Strauss

+1 212 526 5580

david.strauss@barclays.com

BCI, US

Colin Canfield

+1 312 609 4024

colin.canfield@barclays.com

BCI, US

Bradley Barton, CFA

+1 212 526 9019

bradley.barton@barclays.com

BCI, US

Joshua Korn

+1 212 526 3283

joshua.korn@barclays.com

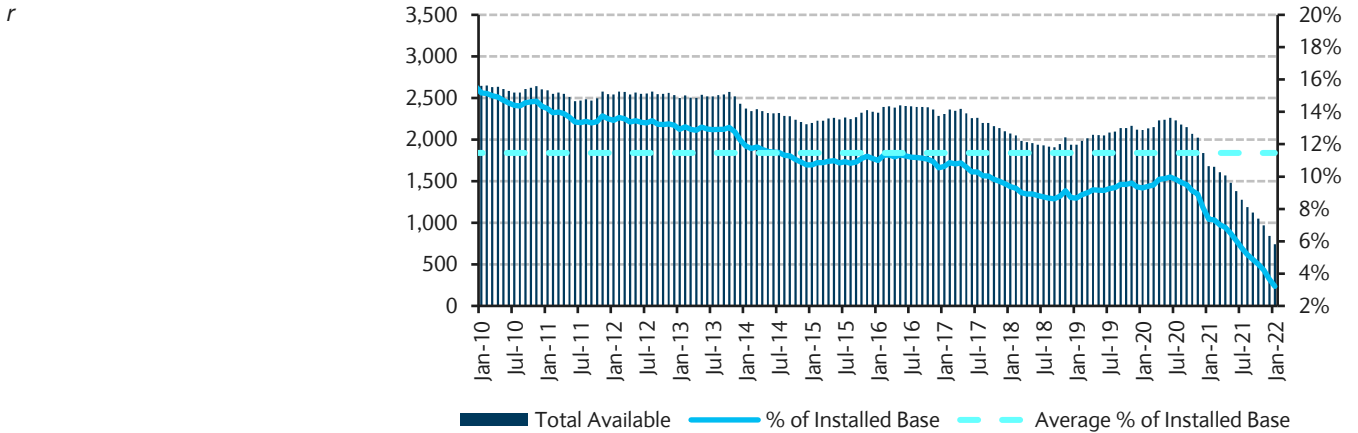
BCI, US

Preowned Business Jet Inventory

We view the preowned business jet market as a key determinant of new business jet demand. We monitor the size of the preowned available for sale fleet, including the mix of young vs. older aircraft, along with the direction of pricing.

We estimate available for sale business jet inventory was 12% lower sequentially in January and 56% lower (or ~410bps as % of installed base) YOY. We estimate inventory now at ~3.2% of the installed base, representing a new low and ~830bps below the long-term average (~12%). We estimate used inventory has decreased 65% (or 620bps as % of installed base) since the beginning of COVID-19.

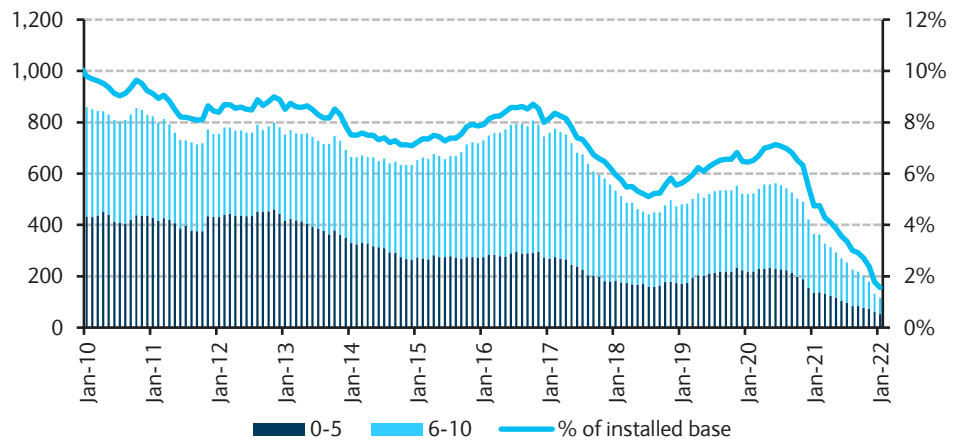
FIGURE 1
Preowned Bizjet Inventory and % of Fleet



Source: JETNET and Barclays Research

We estimate young (0-10 year) preowned inventories were 13% lower sequentially and 68% lower (or ~320bps as % of installed base) YOY. We estimate young inventories have now fallen to a new low at 1.6% of the installed base, as compared to pre-financial crisis levels (5-6%) and long term average at 8%. We estimate young used inventory has decreased 78% (or 500bps as % of installed base) since the beginning of COVID-19.

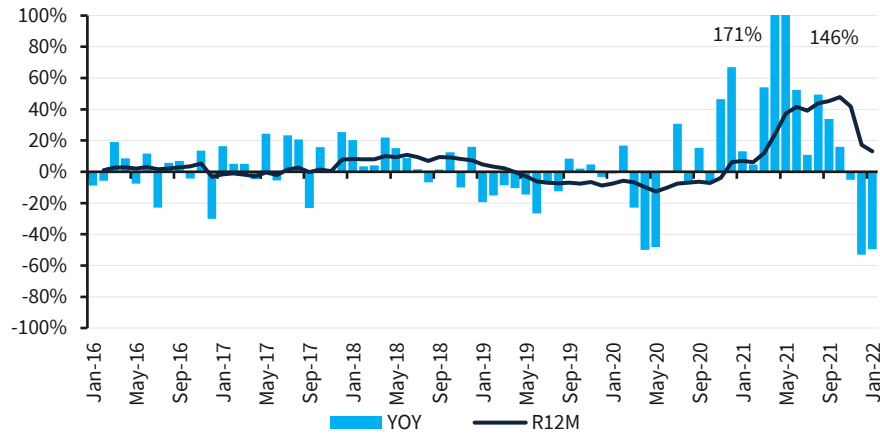
FIGURE 2
0-10 Year Old Preowned Business Jet Inventory



Source: JETNET and Barclays Research

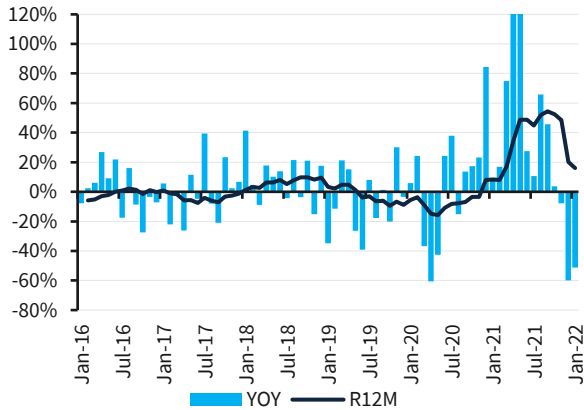
We estimate that transaction activity decreased 50% YOY in January (but increased 13% on a R12M basis), with all cabin sizes lower.

FIGURE 3
Preowned Bizjet Transaction Activity



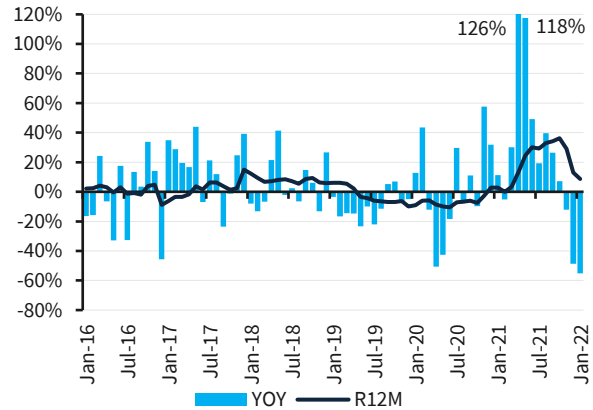
Source: JETNET and Barclays Research

FIGURE 4
Preowned Bizjet Transaction Activity - Small



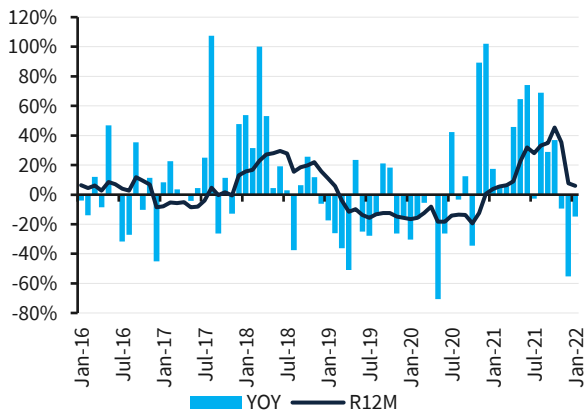
Source: JETNET and Barclays Research. Note: +269% YOY in April 2021, +182% YOY in May 2021.

FIGURE 5
Preowned Bizjet Transaction Activity - Midsize



Source: JETNET and Barclays Research

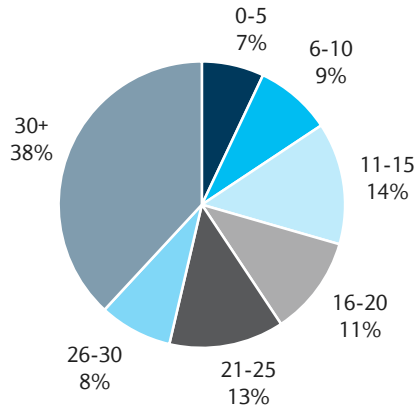
FIGURE 6
Preowned Bizjet Transaction Activity - Large



Source: JETNET and Barclays Research

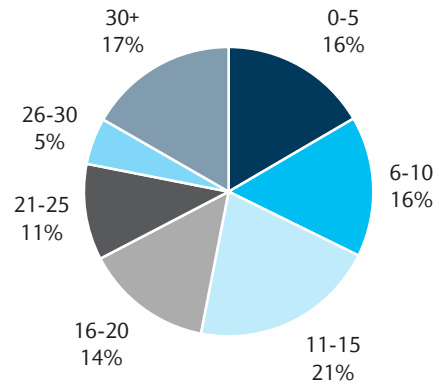
We estimate 16% of global preowned inventory is made up of young (0-10 year) aircraft. This compares to 32% of the global installed base of aircraft.

FIGURE 7
Preowned Bizjet Inventory Breakdown by Age



Source: JETNET and Barclays Research

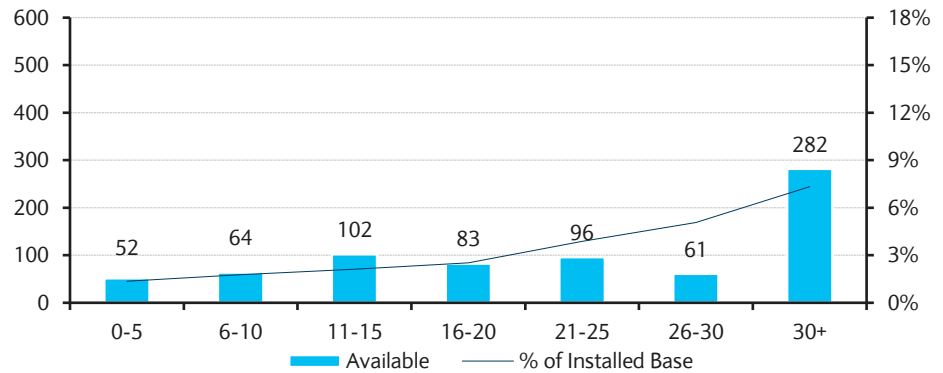
FIGURE 8
Bizjet Installed Base by Age



Source: JETNET and Barclays Research

By age class, we count 52 available for sale 0-5 year old aircraft (1.4% of fleet) and 64 6-10 year old aircraft (1.8%). Inventory of 20+ year old aircraft is higher at 4-8% on average, although it is lower compared to historical levels of older aircraft at 15-20% of installed base.

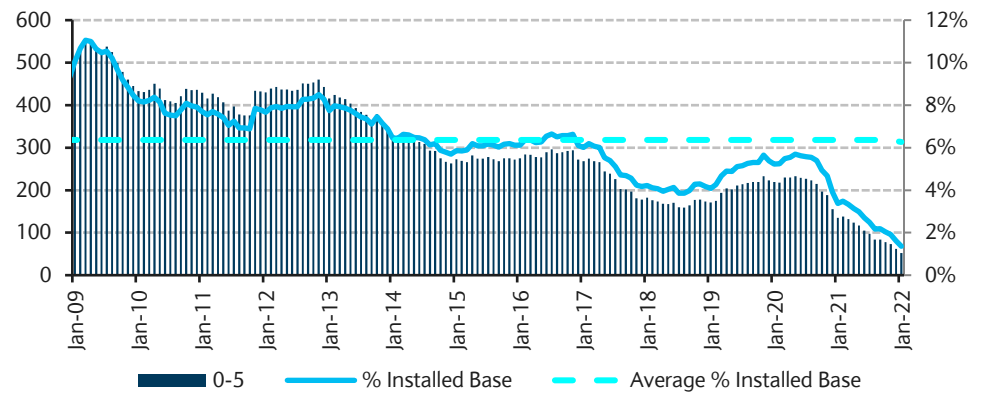
FIGURE 9
Preowned Available by Age Class and % of Installed Base



Source: JETNET and Barclays Research

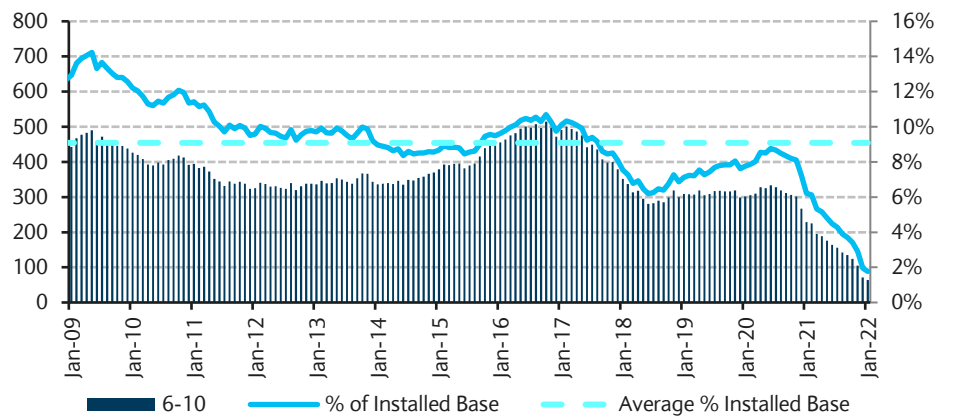
We estimate very young (0-5 year) inventories decreased 61% YOY, while 6-10 year inventories decreased 72%. Preowned 0-5 year inventory at 1.4% of installed base (200bps lower YOY) and 6-10 year inventory at 1.8% (450bps lower YOY) are 450-750bps below their long-term averages.

FIGURE 10
0-5 Year Old Inventory Levels and Percentage of Installed Base



Source: JETNET and Barclays Research

FIGURE 11
6-10 Year Old Inventory Levels and Percentage of Installed Base

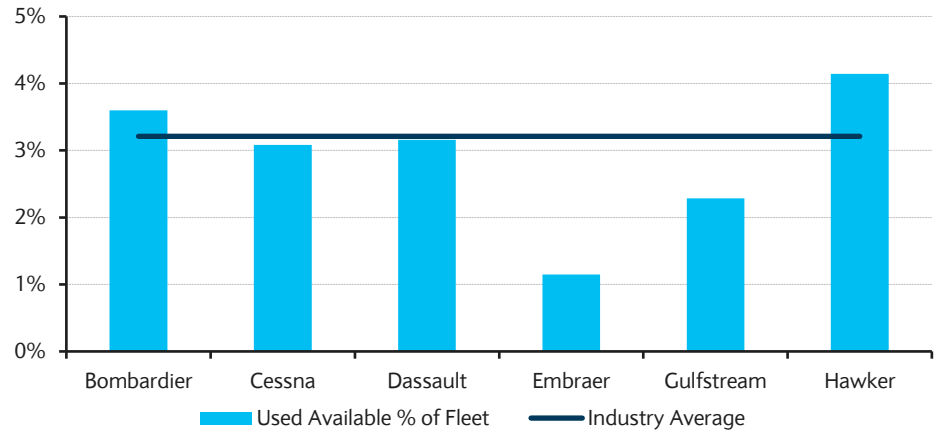


Source: JETNET and Barclays Research

Detail by Manufacturer

By aircraft manufacturer, Embraer preowned inventory is lowest at ~1% of the fleet, followed by Gulfstream at ~2%, Cessna/Dassault at ~3% and Bombardier at ~4%. Inventory levels are higher for Hawker, which ended business jet production in 2013, with the preowned Hawker fleet now mostly 10+ years old.

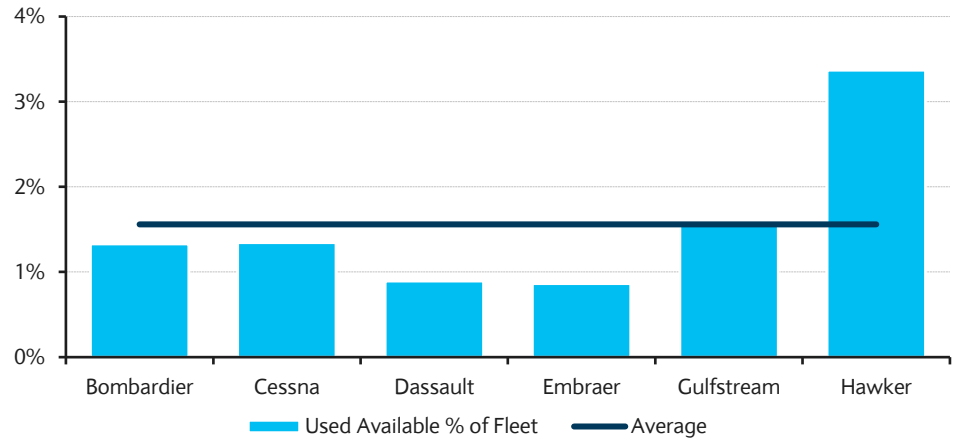
FIGURE 12
Available for Sale Business Jets by Manufacturer (% of Fleet)



Source: JETNET and Barclays Research

Looking at just young (0-10 year old) aircraft, inventories are lowest for Embraer/Dassault/Bombardier/Cessna at ~1%, with Gulfstream slightly higher at ~2%.

FIGURE 13
Available for Sale 0-10 Year Business Jets by Manufacturer (% of Fleet)

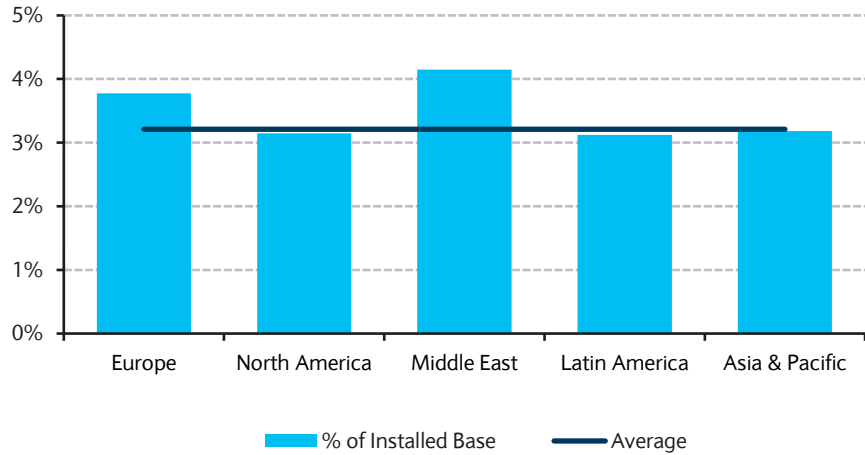


Source: JETNET and Barclays Research

Detail by Geography

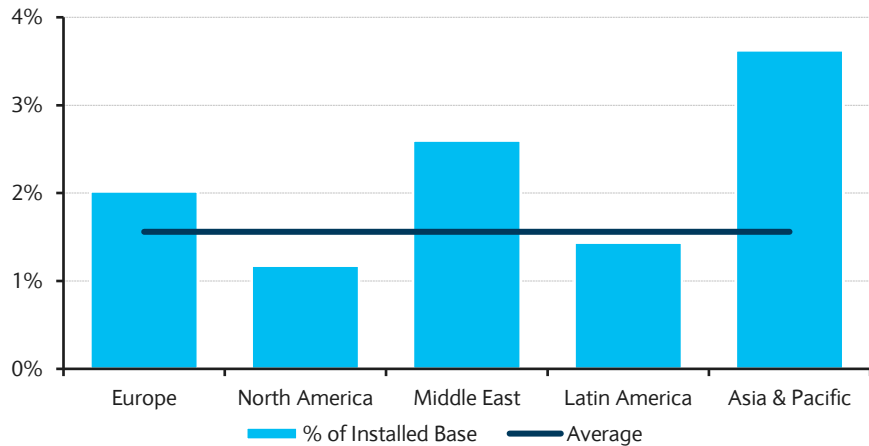
By geography, Latin America/North America/APAC have the lowest percentage of installed base available for sale at ~3%, with Europe/Middle East at ~4%. When considering only young aircraft, North America/Latin America have the lowest proportion available at ~1%, with Europe at ~2%, Middle East at ~3% and APAC at ~4%.

FIGURE 14
Inventory as Percentage of Installed Base



Source: JETNET and Barclays Research

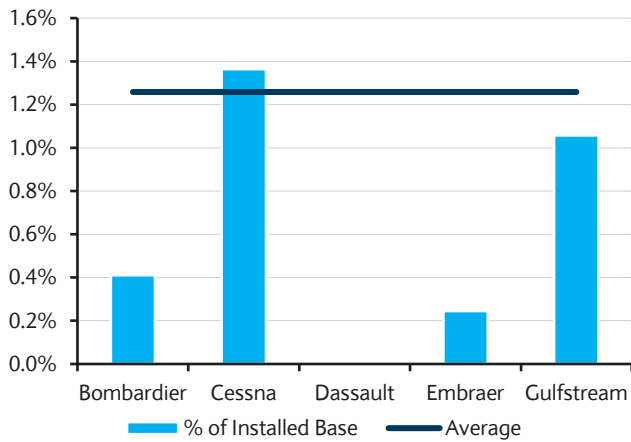
FIGURE 15
Young (0-10 Year) Inventory as Percentage of Installed Base



Source: JETNET and Barclays Research

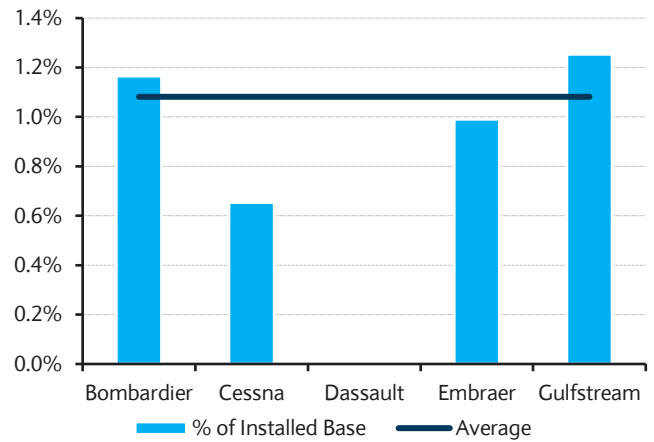
When looking at just North America, very young (0-5) inventories average ~1.3% of installed base with 6-10 year at ~1.1%. North American young inventories are lowest for Dassault and highest for Gulfstream.

FIGURE 16
North America 0-5 Year Inventory



Source: JETNET and Barclays Research. Note: Excludes Hawker

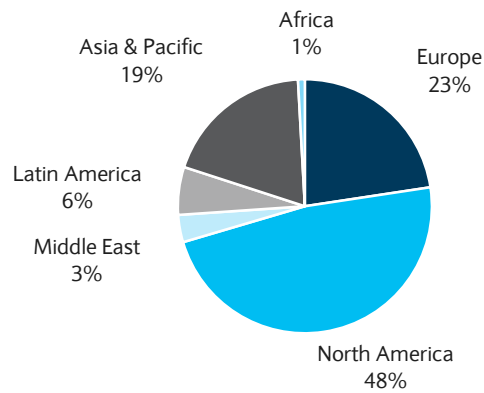
FIGURE 17
North America 6-10 Year Inventory



Source: JETNET and Barclays Research. Note: Excludes Hawker

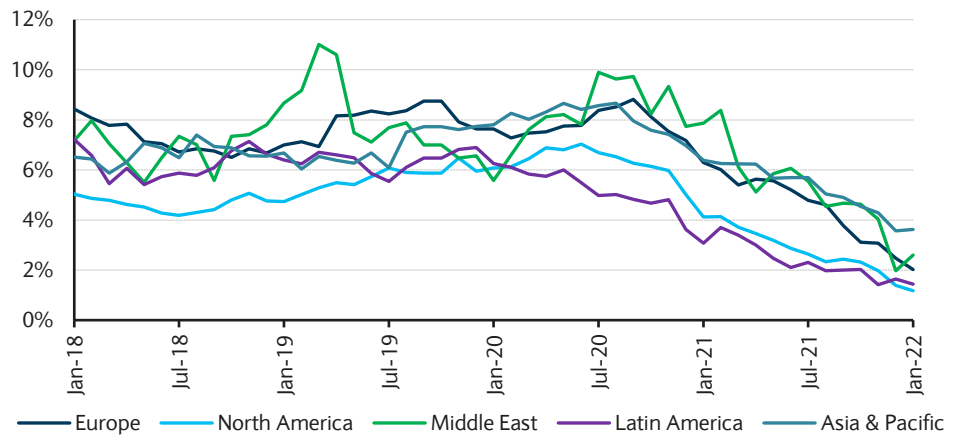
The decline in young preowned inventory during the pandemic has been led by North America and Europe, the regions with the largest amount of young preowned inventory. North America young preowned inventory has fallen to 1% of the installed base from 6%, while Europe young preowned inventory has fallen to 2% from 8%.

FIGURE 18
Young (0-10 Year) Inventory by Region



Source: JETNET and Barclays Research

FIGURE 19
Historical Young (0-10 Year) Inventory as Percentage of Installed Base, by Region

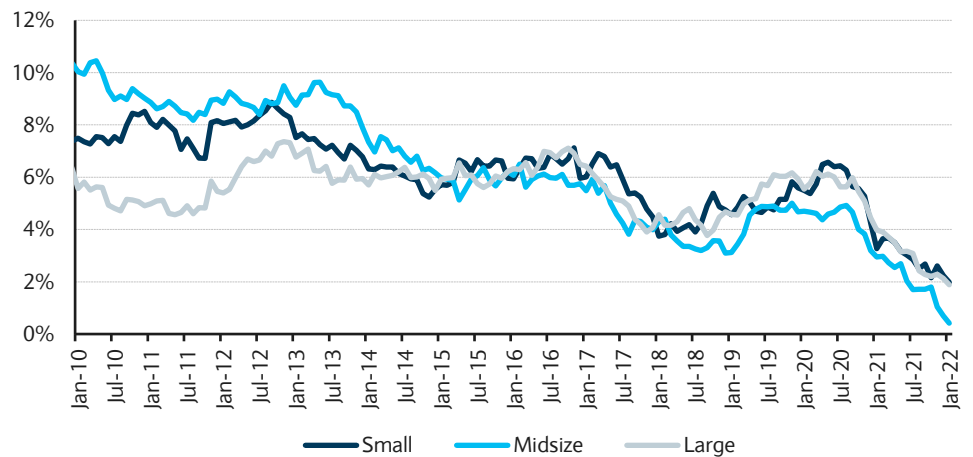


Source: JETNET and Barclays Research

Detail by Segment

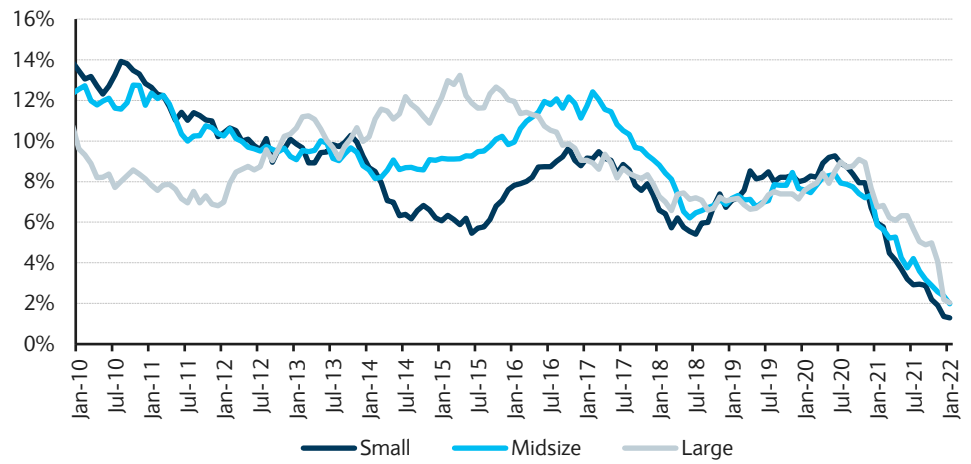
Breaking down the young preowned fleet by cabin size, inventories for each cabin class are at new lows. For 0-5 year, preowned inventories are lowest for midsize cabin at ~0.5%, followed by small/large cabin at ~2%. For 6-10 year, preowned inventories are lowest for small cabin at ~1%, followed by midsize/large cabin at ~2%.

FIGURE 20
Historical 0-5 Year Inventory as % of Installed Base, by Class



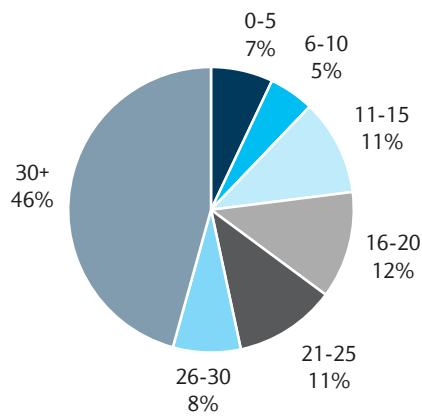
Source: JETNET and Barclays Research

FIGURE 21
Historical 6-10 Year Inventory as % of Installed Base, by Class



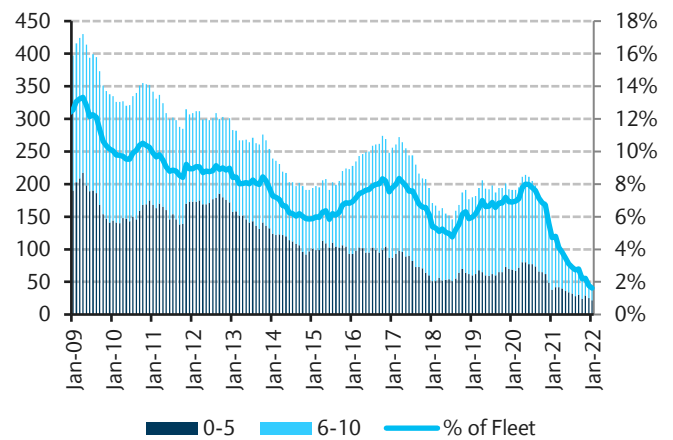
Source: JETNET and Barclays Research

FIGURE 22
Age Distribution – Small Inventory



Source: JETNET and Barclays Research

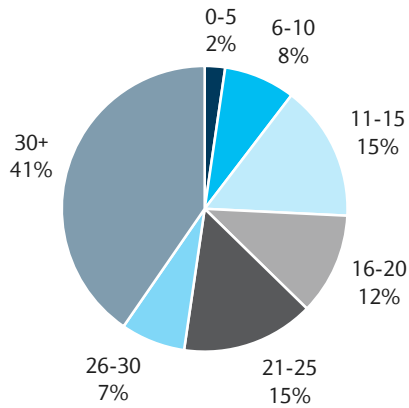
FIGURE 23
Historical Small Young (0-10 Year) Inventory



Source: JETNET and Barclays Research

FIGURE 24

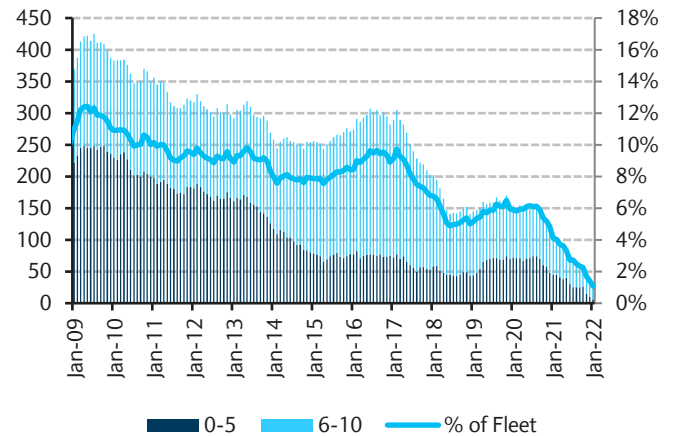
Age Distribution – Midsize Inventory



Source: JETNET and Barclays Research

FIGURE 25

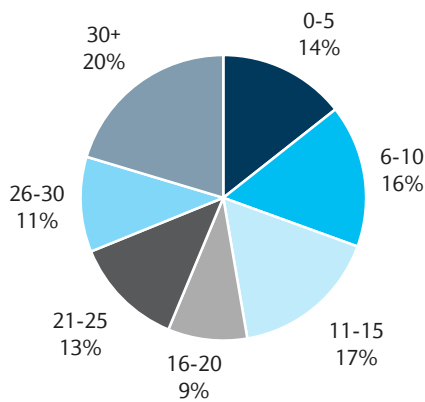
Historical Midsize Young (0-10 Year) Inventory



Source: JETNET and Barclays Research

FIGURE 26

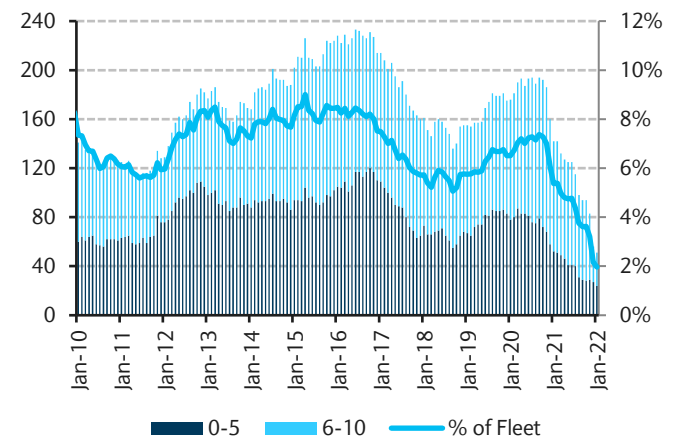
Age Distribution – Large Inventory



Source: JETNET and Barclays Research

FIGURE 27

Historical Large Young (0-10 Year) Inventory

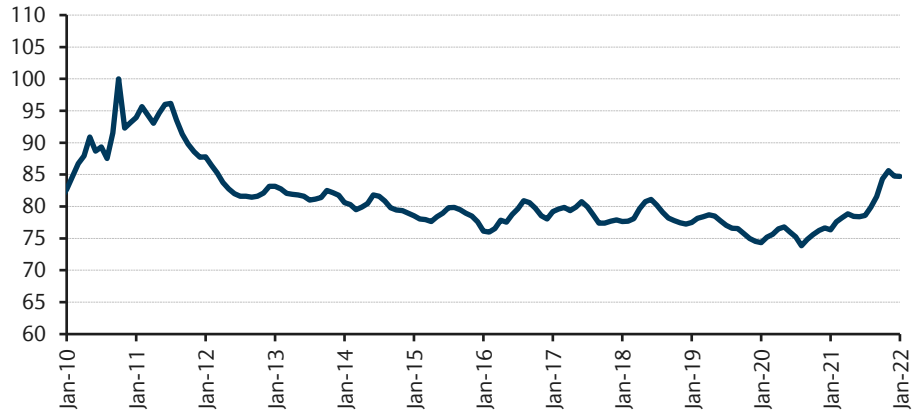


Source: JETNET and Barclays Research

Pricing Trends

In addition to preowned inventory levels, we monitor preowned jet pricing as an indicator of demand for the various age and cabin classes. We estimate overall preowned pricing (0-20 year old) has increased ~15% from late 2019, although still below highs reached more than 10 years ago. Most recently, we estimate pricing was flat sequentially, but 11% higher YOY in January.

FIGURE 28
Business Jet Pricing Index (R3M)

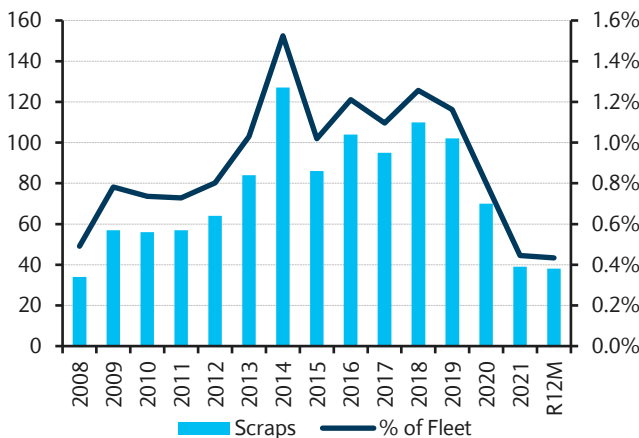


Source: JETNET and Barclays Research. Average of 0-20 year pricing changes.

Business Jet Scraps

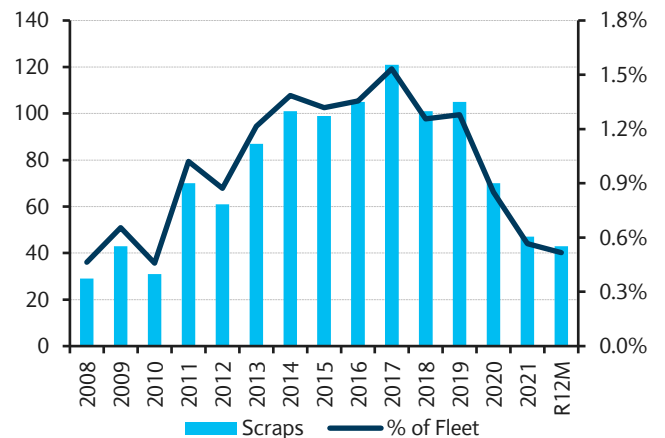
We estimate business jet scraps are currently running at ~0.4% of the fleet, down from a high of ~1.3% of fleet in 2014.

FIGURE 29
Small Cabin Business Jet Scraps



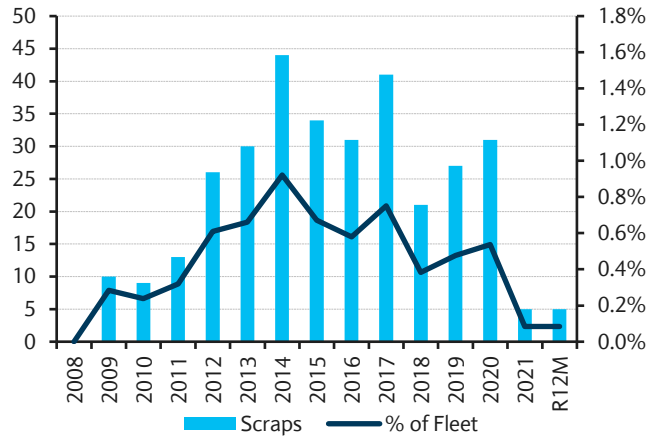
Source: JETNET and Barclays Research

FIGURE 30
Midsize Cabin Business Jet Scraps



Source: JETNET and Barclays Research

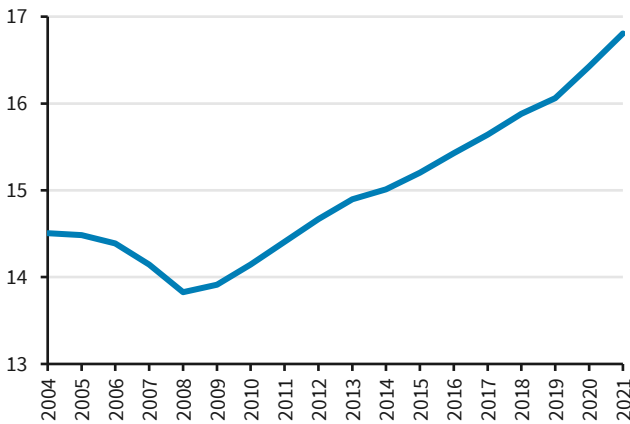
FIGURE 31
Large Cabin Business Jet Scraps



Source: JETNET and Barclays Research

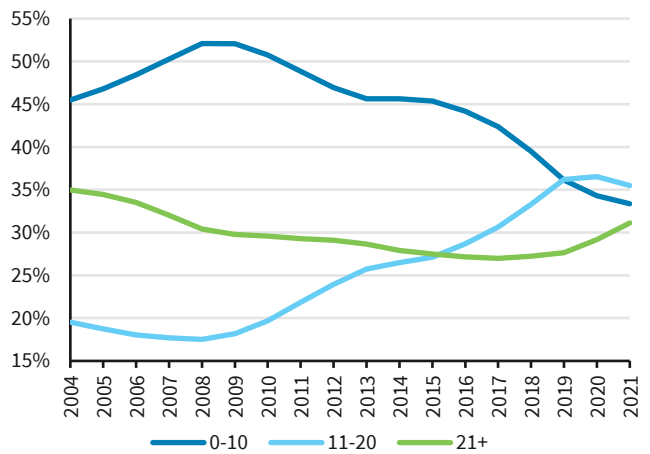
We would expect retirements to pick up given the average age of the fleet has increased from ~14 years to >16 years since the financial crisis, with a much larger portion of the fleet aging into the 11-20 year range as new deliveries have slowed. We estimate the small and midsize cabin fleets have aged more than large cabin (driven by a steeper decline in new delivery volumes since the financial crisis) and present a larger replacement opportunity.

FIGURE 32
Average Fleet Age



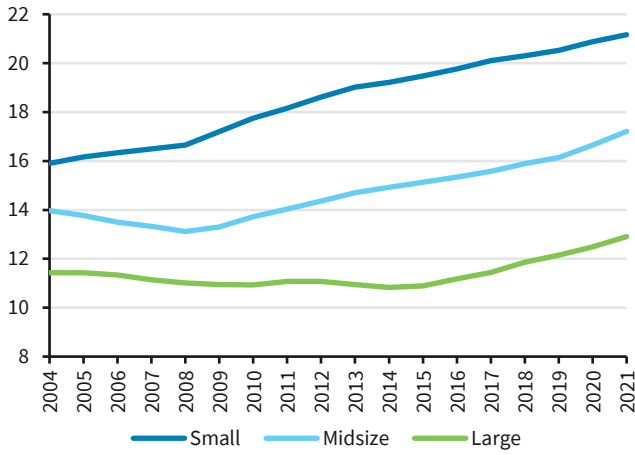
Source: Barclays Research and Cirium

FIGURE 33
Fleet by Age Group



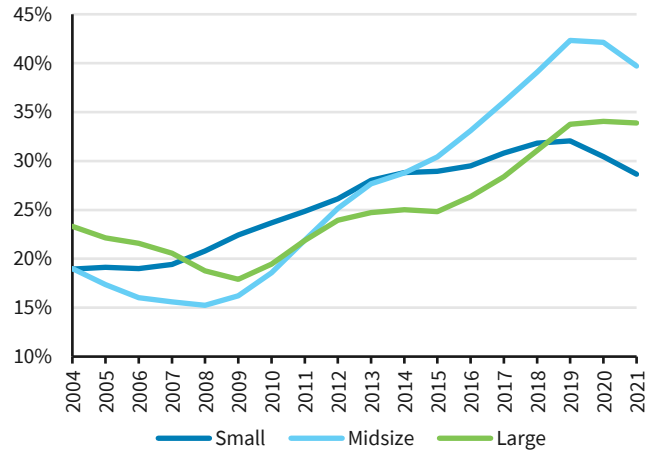
Source: Barclays Research and Cirium

FIGURE 34
Average Fleet Age – By Segment



Source: Barclays Research and Cirium

FIGURE 35
11-20 Year Aircraft % of Installed Base – By Segment



Source: Barclays Research and Cirium

A Closer Look at Individual Models

Taking a closer look at the individual aircraft types, we track 30 in-production models (or recently in production). Of these 30 models, two saw sequential inventory increases in January, while 11 were unchanged and 17 declined. Compared to a year ago, one model saw inventory increases, while two were unchanged and 27 declined.

FIGURE 36

Inventory and Pricing by Make and Model

Aircraft Model	Manufacturer	Installed Base Available Aircraft % of Ins. Base		Available Inventory					Average Used Asking Price (\$M)				
		Jan-22	Jan-22	Jan-22	Dec-21	Change	Jan-21	Change	Jan-22	Dec-21	Change	Jan-21	Change
Super Large													
Falcon 7X	Dassault	293	1%	2	3	-33%	13	-85%	n/a	n/a	n/a	\$ 19.7	n/a
Falcon 8X	Dassault	76	1%	1	1	0%	4	-75%	n/a	n/a	n/a	\$ 41.5	n/a
Global 6000	Bombardier	327	2%	5	5	0%	21	-76%	\$ 34.0	\$ 34.0	0%	\$ 23.7	43%
Gulfstream G-550	Gulfstream	608	1%	7	12	-42%	27	-74%	n/a	\$ 18.8	n/a	\$ 15.9	n/a
Gulfstream G-650	Gulfstream	161	2%	4	4	0%	4	0%	n/a	n/a	n/a	n/a	n/a
Gulfstream G-650ER	Gulfstream	309	2%	5	5	0%	5	0%	\$ 52.7	\$ 52.7	0%	\$ 50.0	6%
Long Range													
Falcon 900EX/LX	Dassault	319	3%	10	14	-29%	23	-57%	n/a	\$ 12.7	n/a	\$ 12.7	n/a
Global 5000	Bombardier	236	2%	5	4	25%	17	-71%	n/a	n/a	n/a	\$ 15.5	n/a
Gulfstream G-450	Gulfstream	354	1%	4	4	0%	29	-86%	n/a	n/a	n/a	\$ 12.7	n/a
Lineage 1000	Embraer	30	7%	2	2	0%	3	-33%	n/a	n/a	n/a	n/a	n/a
Large													
Challenger 604	Bombardier	350	2%	6	7	-14%	26	-77%	n/a	n/a	n/a	\$ 4.2	n/a
Challenger 605/650	Bombardier	409	1%	4	4	0%	29	-86%	n/a	n/a	n/a	\$ 9.8	n/a
Legacy 600/650	Embraer	299	2%	6	9	-33%	13	-54%	\$ 8.6	\$ 10.3	-16%	\$ 6.6	30%
Falcon 2000EX/LX/LXS	Dassault	375	1%	5	7	-29%	15	-67%	\$ 17.7	n/a	n/a	\$ 12.3	44%
Medium Large													
Challenger 300/350	Bombardier	847	0%	2	5	-60%	24	-92%	n/a	n/a	n/a	\$ 10.6	n/a
Gulfstream G-280	Gulfstream	222	2%	4	5	-20%	13	-69%	n/a	n/a	n/a	\$ 12.0	n/a
Medium													
Citation Latitude	Cessna	283	0%	1	1	0%	6	-83%	n/a	n/a	n/a	n/a	n/a
Citation Sovereign	Cessna	445	1%	3	7	-57%	18	-83%	\$ 9.0	\$ 7.7	16%	\$ 5.8	56%
Gulfstream G-150	Gulfstream	124	1%	1	3	-67%	8	-88%	n/a	\$ 5.0	n/a	\$ 4.0	n/a
Embraer Legacy 450/500	Embraer	84	1%	1	1	0%	6	-83%	n/a	n/a	n/a	n/a	n/a
Learjet 60/60XR	Bombardier	390	6%	25	30	-17%	40	-38%	\$ 2.8	\$ 2.2	23%	\$ 1.9	46%
Super Light													
Learjet 45/45XR	Bombardier	439	2%	9	13	-31%	51	-82%	n/a	n/a	n/a	\$ 2.1	n/a
Citation XLS/XLS+	Cessna	632	0%	3	5	-40%	31	-90%	n/a	n/a	n/a	\$ 5.4	n/a
Light													
Citation CJ3	Cessna	611	0%	1	3	-67%	21	-95%	n/a	n/a	n/a	\$ 4.8	n/a
Citation CJ4	Cessna	363	1%	4	5	-20%	10	-60%	\$ 7.2	\$ 7.9	-9%	\$ 5.8	24%
Citation M2	Cessna	300	4%	12	10	20%	9	33%	\$ 4.3	\$ 4.4	-2%	\$ 3.3	28%
Phenom 300	Embraer	638	0%	3	4	-25%	31	-90%	n/a	\$ 7.7	n/a	\$ 6.9	n/a
Entry Level													
Citation CJ1/CJ1+	Cessna	295	2%	6	6	0%	24	-75%	n/a	\$ 1.6	n/a	\$ 1.6	n/a
Citation CJ2/CJ2+	Cessna	458	2%	10	10	0%	34	-71%	\$ 3.6	\$ 3.3	11%	\$ 2.8	28%
Phenom 100	Embraer	387	1%	5	10	-50%	24	-79%	n/a	\$ 2.4	n/a	\$ 2.0	n/a

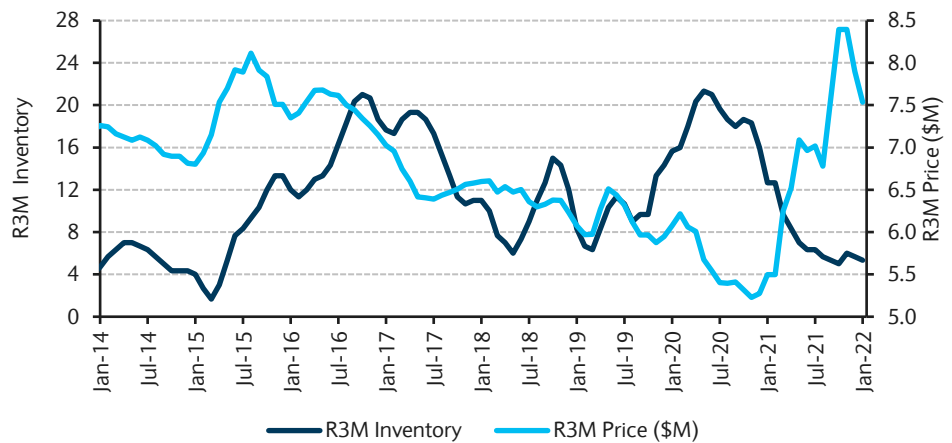
Source: JETNET and Barclays Research

Since pricing can be distorted by monthly changes in aircraft mix, we are tracking several individual models, which we believe are indicators of trends in their respective aircraft categories.

Light – Cessna Citation CJ4

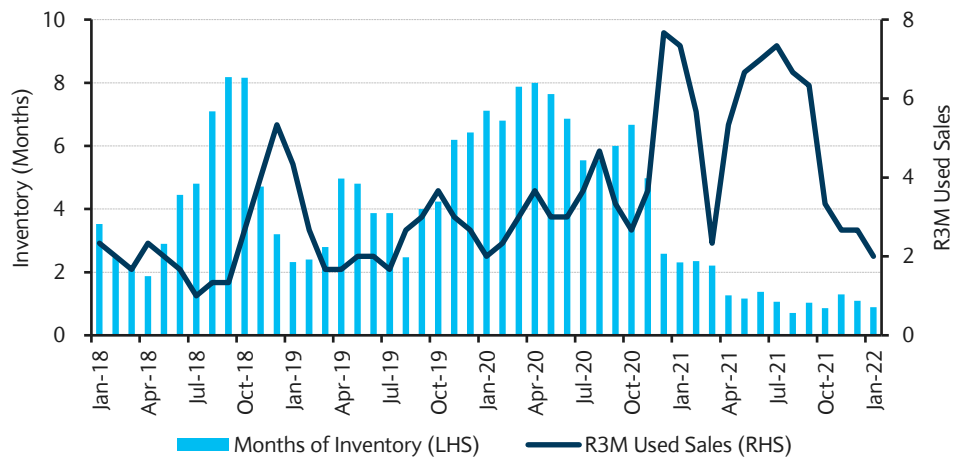
We estimate the average asking price for a Citation CJ4 was 5% lower (sequentially) in January (10% below peak), while available inventories were 6% lower (75% below peak).

FIGURE 37
Citation CJ4 R3M Average Asking Price (\$M) and Preowned Inventory Level (Aircraft)



Source: JETNET and Barclays Research

FIGURE 38
Citation CJ4 R3M Preowned Sales and Months of Inventory

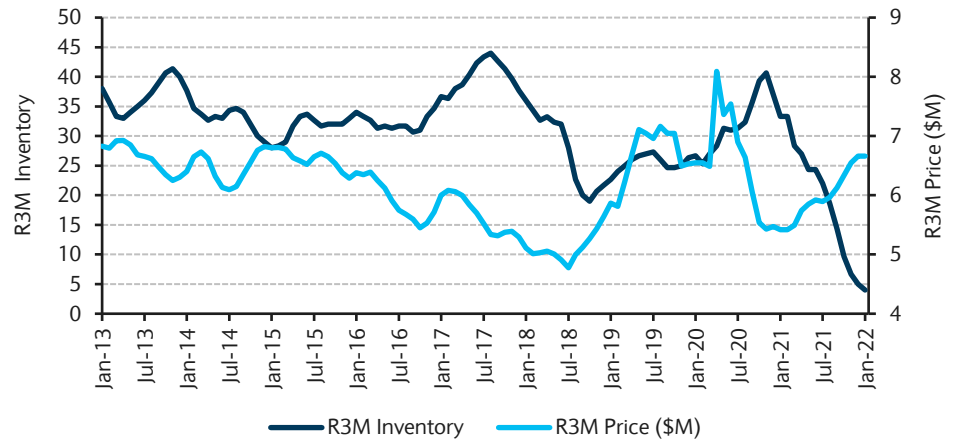


Source: JETNET and Barclays Research. Note: Months of inventory based on R12M sales.

Super Light – Cessna Citation XLS/XLS+

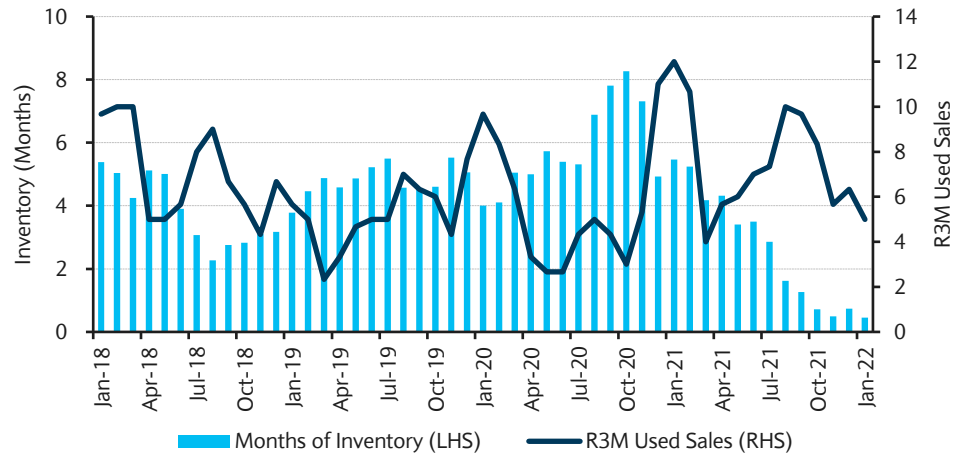
We estimate the average asking price for a Citation XLS/XLS+ was flat (sequentially) in January (18% below peak) while available inventories were 20% lower (91% below peak).

FIGURE 39
Citation XLS/XLS+ R3M Average Asking Price (\$M) and Preowned Inventory Level (Aircraft)



Source: JETNET and Barclays Research

FIGURE 40
Citation XLS/XLS+ R3M Preowned Sales and Months of Inventory

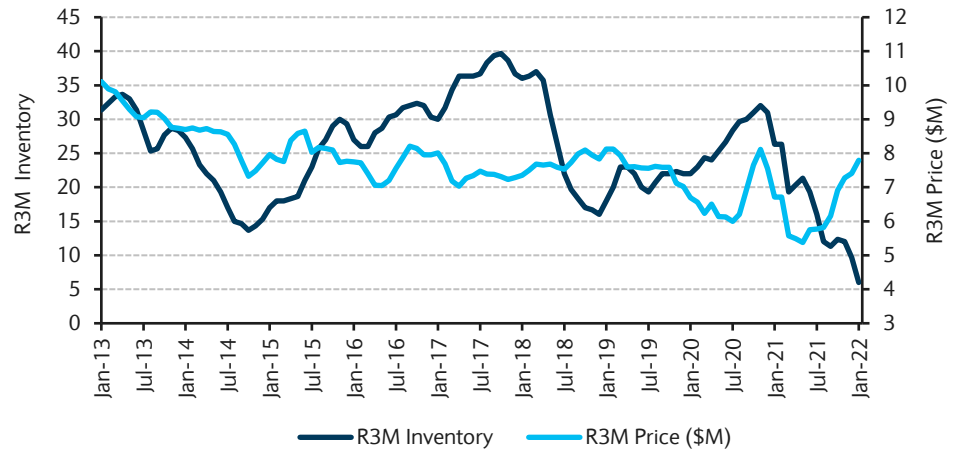


Source: JETNET and Barclays Research

Midsize – Citation Sovereign+

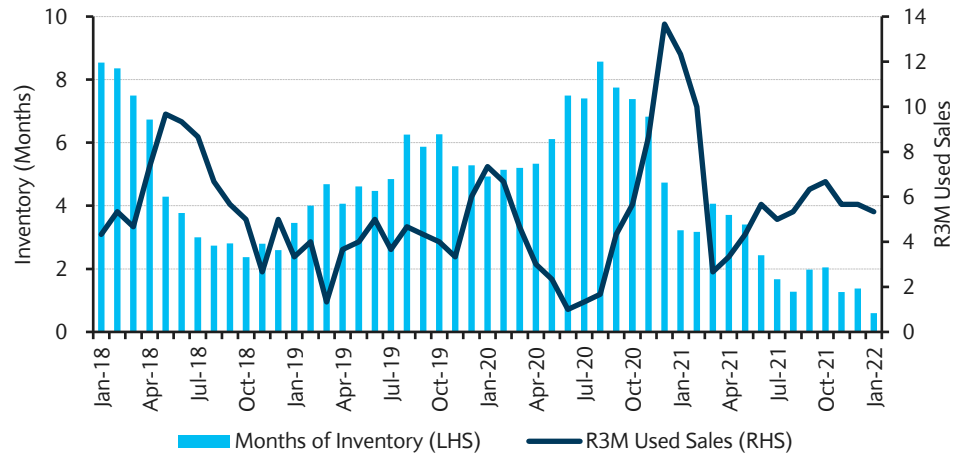
We estimate the average asking price for a Citation Sovereign+ was 5% higher (sequentially) in January (23% below peak) while available inventories were 38% lower (85% below peak).

FIGURE 41
Citation Sovereign+ R3M Average Asking Price (\$M) and Preowned Inventory Level (Aircraft)



Source: JETNET and Barclays Research

FIGURE 42
Citation Sovereign+ R3M Preowned Sales and Months of Inventory

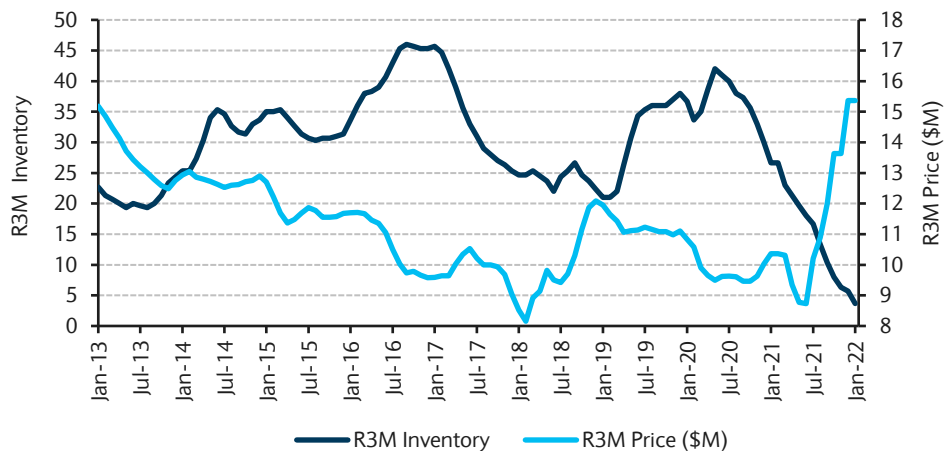


Source: JETNET and Barclays Research

Super Midsize – Bombardier Challenger 300/350

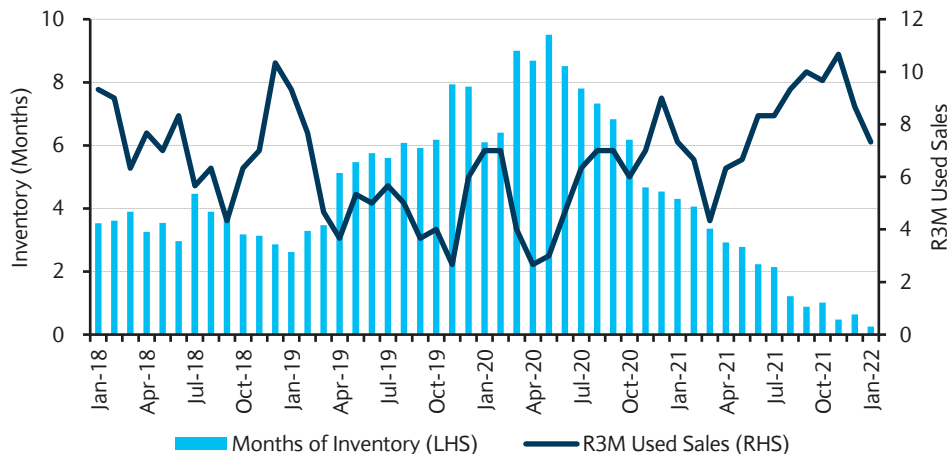
We estimate the average asking price for a Bombardier Challenger 300/350 was flat (sequentially) in January (at peak) while available inventories were 35% lower (92% below peak).

FIGURE 43
Challenger 300/350 R3M Average Asking Price (\$M) and Preowned Inventory Level (Aircraft)



Source: JETNET and Barclays Research

FIGURE 44
Challenger 300/350 R3M Preowned Sales and Months of Inventory

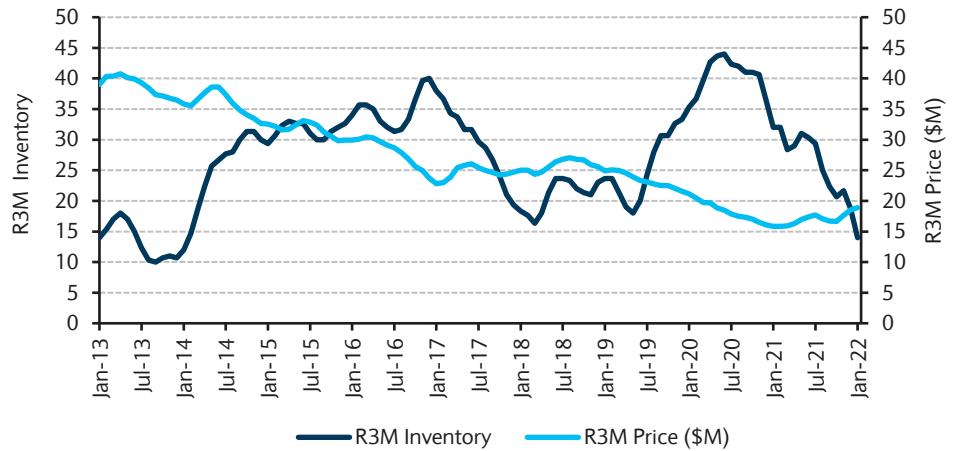


Source: JETNET and Barclays Research

Long Range – Gulfstream G-550

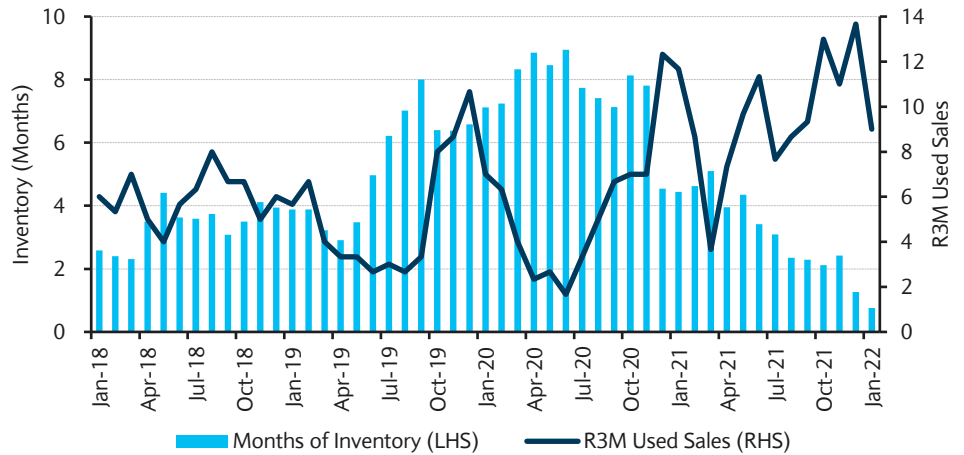
We estimate the average asking price for a Gulfstream G-550 was 2% higher (sequentially) in January (54% below peak) while available inventories were 25% lower (68% below peak).

FIGURE 45
Gulfstream G-550 R3M Average Asking Price (\$M) and Preowned Inventory Level (Aircraft)



Source: JETNET and Barclays Research

FIGURE 46
Gulfstream G-550 R3M Preowned Sales and Months of Inventory

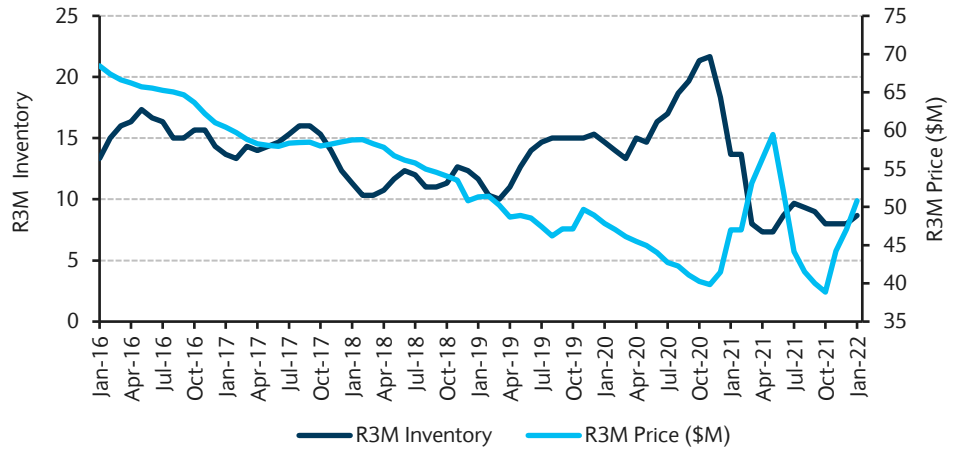


Source: JETNET and Barclays Research

Ultra Long-Range – G-650/G-650ER

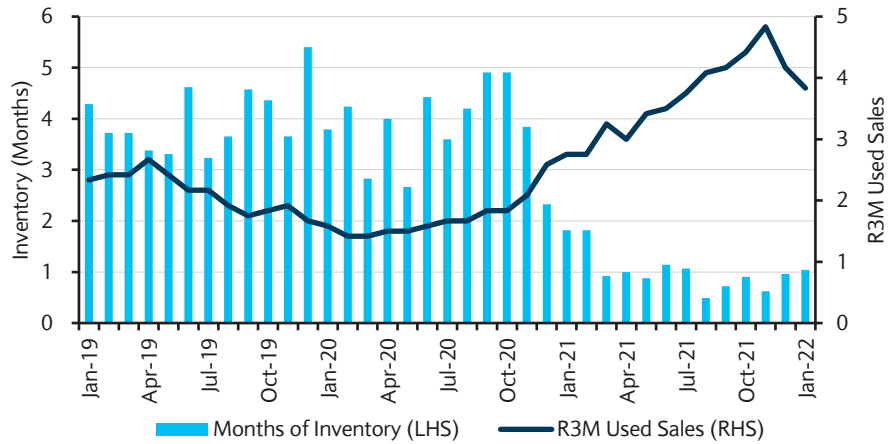
We estimate the average asking price for a Gulfstream G-650/G-650ER was 8% higher (sequentially) in January (32% below peak) while available inventories were 8% higher (60% below peak).

FIGURE 47
Gulfstream G-650/650ER R3M Average Asking Price (\$M) and Preowned Inventory Level (Aircraft)



Source: JETNET and Barclays Research

FIGURE 48
Gulfstream G-650/650ER R12M Preowned Sales and Months of Inventory



Source: JETNET and Barclays Research

References:

Bizjet Survey Index Holding at Highs, Research, 12/2/21

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