GLOBAL JET
CAPITAL

BUSINESS JET MARKET OUTLOOK \ 2023-2027

NEW AND PRE-OWNED
BUSINESS JET TRANSACTION FORECAST

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AFTER A RECORD SETTING RUN, BUSINESS AVIATION WILL RETRENCH SLIGHTLY AND THEN ESTABLISH A NEW AND SOLID PLATEAU

What comes up, may come down. If you are at all close to the business aviation market, over the past two years you have seen several impressive records set. Flight activity and pre-owned transactions were at all-time highs and inventories reached all-time lows. We also saw a record number of first-time users at all entry points: charter, fractional ownership, and whole ownership. While more difficult to track, there exists strong evidence that this period also saw all-time highs in the dollars invested in the business aviation industry. From FBOs, to MROs, operators, and others we have seen a broad array of private investment enter this space.

When we look back at this period a decade from now, perhaps the most important record is the one we did not set—aircraft production. Against a backdrop of unprecedented demand, supply chain issues and OEM order book discipline resulted in aircraft production below the increased demand. That "underproduction" has, in our view, positioned the industry well for an uncertain economic future. We are all aware of the economic clouds on the horizon, and the likelihood of turbulence ahead. As always, that disruption will push some people out of charter back to the airlines, out of a half-share onto a jet card, and out of whole ownership into one of the many shared service platforms available. But with rational production rates we do not expect to see inventories swell nor widespread aircraft devaluation as we saw following the Great Recession in 2008-09.

Over the past two years more and more people, corporations, and investors were exposed to the undeniable value proposition behind business aviation—immediate and unscheduled access to travel, security, safety (including health safety) and, most of all, productivity. That exposure led to a widespread expansion of our industry, and while we may be coming down from some all-time highs, all evidence suggests we will be landing on a new, higher, and solid plateau.

\ THE GLOBAL JET CAPITAL BUSINESS JET MARKET OUTLOOK PROVIDES A SUMMARY OF THE OUTPUTS OF OUR PROPRIETARY TRANSACTION FORECAST MODEL COVERING THE PERIOD OF 2023 THROUGH 2027.

It reflects our projection of future activity in the business jet market in both the new and pre-owned market segments across different geographic markets around the world. The business jet market shrank in 2022 as OEMs continued to deal with supply chain constraints and the pre-owned market normalized from a historically strong 2021. Despite some headwinds in 2023, the business jet market remains resilient, and we forecast steady growth over the next five years.

- Total new and pre-owned business jet transaction unit volume is forecast to decrease 2.6 percent in 2023 as pre-owned transactions continue to normalize from the all-time high volume seen in 2021. However, the increase in new deliveries and growing demand for larger jets should result in a 1 percent increase in transaction dollar volume.

- Following a strong 2021, major aircraft manufacturers continued to report strong order intake in 2022. At the same time, supply chain constraints continued to limit production. The combination resulted in increased backlogs. Most manufacturers plan to increase production over the next few years as a result. New deliveries are expected to increase 6.3 percent in 2023, while new delivery dollar volume should increase 12.2 percent. Over the next five years, new deliveries are forecast to grow at a compound annual growth rate (CAGR) of 4.6 percent and dollar volume should grow at a CAGR of 6.4 percent.

- Pre-owned transactions are expected to continue declining in 2023 as they did in 2022. Unit volume is forecast to decline 4.8 percent while dollar volume is forecast to decline 8.5 percent. Continued market demand, however, should lead to more pre-owned deliveries over the next five years. Pre-owned transactions are expected to increase at a CAGR of 2.5 percent, with dollar volume remaining stable over that time.

- North America is forecast to continue to be the largest market for both new and pre-owned business jets, making up 77 percent of the total market. Europe is also an important market and Latin America will remain a significant market for pre-owned aircraft.

KEY THEMES DRIVING THE FORECAST

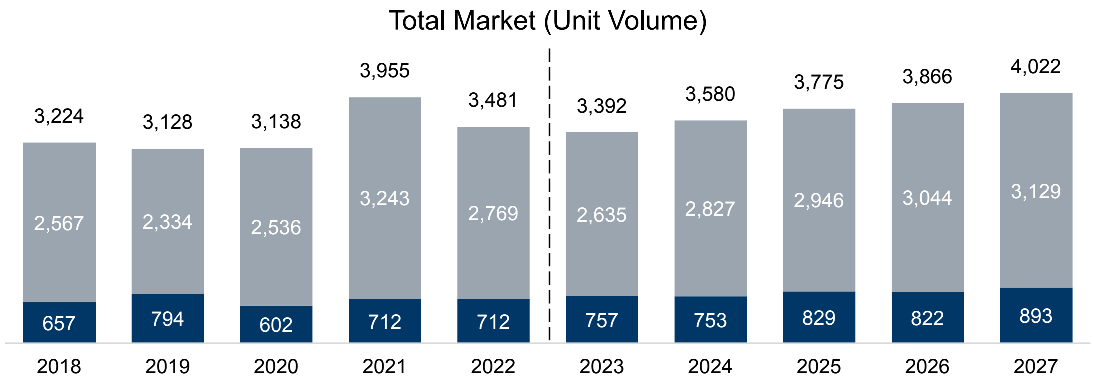
Business jet demand, measured in dollar volume, is forecast to grow at an annualized rate of 3.1 percent over the next five years. After years of continuing demand from both new and established users, the business jet market is on a solid footing.

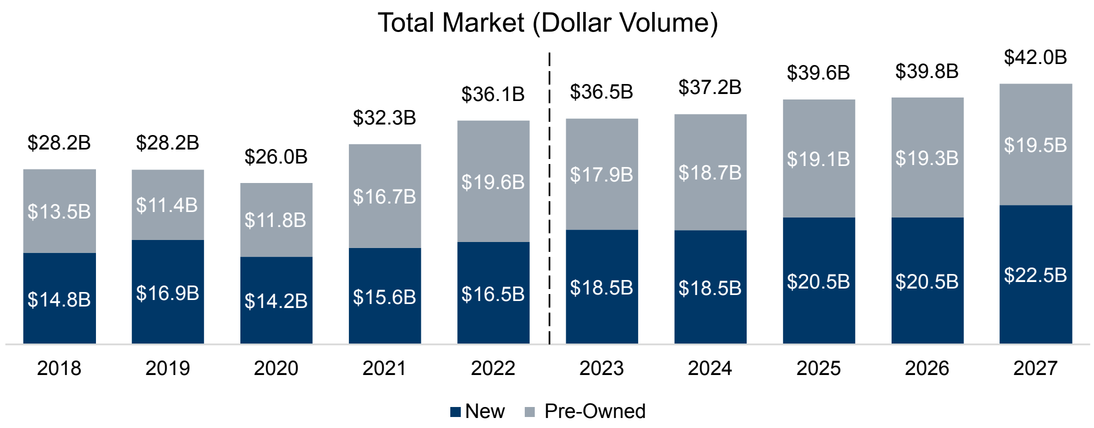
Business jets are primarily business tools and demand is closely aligned with overall economic growth. Oxford Economics forecasts global GDP will grow at a year-over-year rate of 1.8 percent in 2023. Following years of strong growth as the world recovered from COVID, the global economy is now dealing with a variety of risks including the Ukraine War and other geopolitical frictions, persistent inflation, supply chain disruptions, and economic uncertainty in many regions. These factors have resulted in lower-than-expected growth over the next few years. They also create downside risks to any forecast, including the forecasts used to build Global Jet Capital's model.

Despite slower economic growth, the business jet market remains in a strong position. Following early phases of the COVID-19 pandemic, the business jet market experienced an influx of new users who purchased new and pre-owned aircraft. These new entrants also utilized charter and fractional operated aircraft, driving up fleet purchases. While many users have returned to commercial airlines as the world reopened, others continue to rely on business aviation and flight operations remain well above pre-COVID levels.

Demand also resulted in high backlogs at major business jet manufacturers. While orders slowed in late 2022 from highs earlier in the year, OEMs report that demand remains strong. Many OEMs expect to overcome supply chain constraints in 2023, enabling them to increase production compared to 2022. As more new models come on stream in 2023 and 2024, steady growth will continue in 2025 and after.

Pre-owned transactions are forecast to continue a return to a rate more in line with historical trends in 2023. This will be driven by continued low inventory, higher prices, and economic uncertainty. By 2024, however, pre-owned transactions are expected to begin to rise again as new users enter the market and established users upgrade their aircraft.



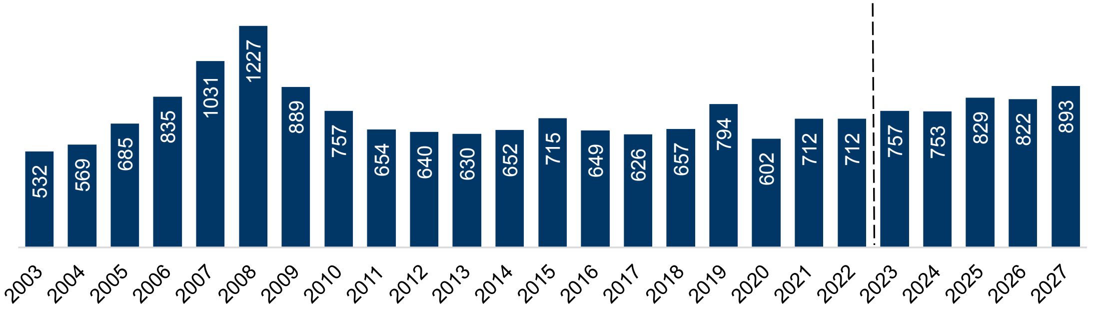


FOLLOWING STRONG GROWTH IN 2021, THE TOTAL NUMBER OF BUSINESS JET TRANSACTIONS DECLINED IN 2022.

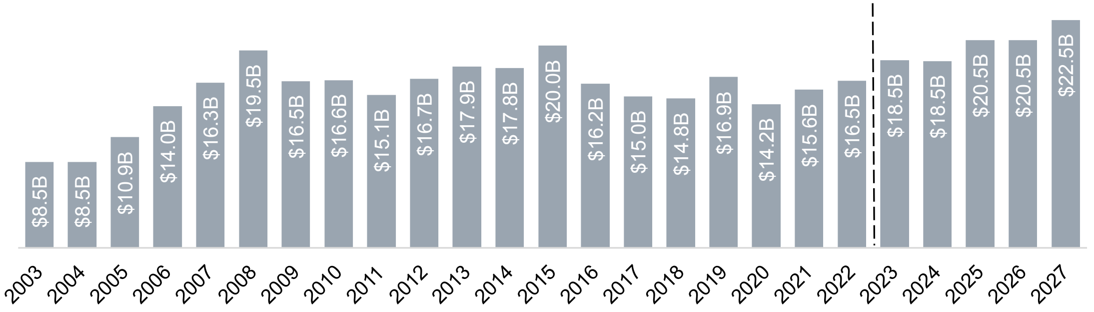
Supply chain constraints prevented manufacturers from increasing production, holding back new deliveries. Pre-owned transactions also declined as low inventory, higher prices, and economic uncertainty kept some buyers on the sidelines. Despite a 14.6 percent year-over-year decline in pre-owned transactions, 2022 was second only to a strong 2021 in unit volume. In addition, rising aircraft values drove pre-owned transaction dollar volume up 17.4 percent, making 2022 the largest pre-owned market in terms of dollar volume in over 30 years of data that Global Jet Capital maintains.

In 2023, the new and pre-owned markets are expected to diverge. New deliveries are forecast to increase 6.3 percent compared to 2022 as manufacturers are expected to overcome supply chain obstacles. On the other hand, pre-owned transactions are expected to continue to decline, dropping 4.8 percent compared to 2022 as the market continues to return to transaction volume aligning with historic trends. Over the five-year forecast period, a pattern of steady growth is expected to reemerge. We forecast total transactions will increase at an average annual rate of 2.9 percent, while dollar volume will increase at an annualized rate of 3.1 percent. Between 2023 and 2027, we forecast new aircraft will represent 51.5 percent of the total value of the market, about on par with the last five years.

Total New Delivery Forecast (Unit Volume)



Total New Delivery Forecast (Dollar Volume)



NEW DELIVERIES REMAINED STEADY IN 2022 AS MANUFACTURERS DEALT WITH SUPPLY CHAIN ISSUES THAT PREVENTED THEM FROM INCREASING PRODUCTION AS PLANNED.

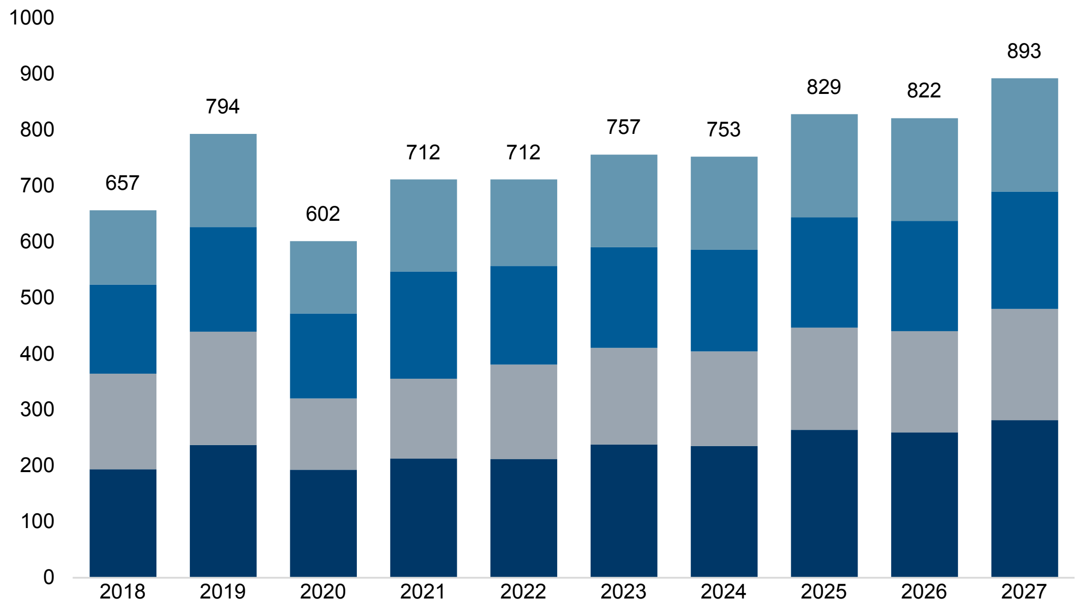
At the same time, new delivery dollar volume increased 5.8 percent as the market shifted to larger jets.

Even as production increases failed to materialize, orders were high in 2022, especially in the first half of the year, driving up backlogs. Factors such as new users entering the market and low pre-owned inventory drove demand. Going forward, demand will be driven by new aircraft models planned to be introduced over the next few years, a return to economic stability, and typical replacement and trade-up patterns.

New deliveries are forecast to increase 6.3 percent in 2023 compared to 2022 as manufacturers overcome supply chain obstacles and increase production to meet demand. New delivery dollar volume is expected to increase at an even stronger rate of 12.2 percent with new heavy jet introductions expected this year. As the product mix changes over time, unit volume and dollar volume may increase at different rates during the forecast period. Still, the pattern should be a steady increase to meet demand from customers.

Over the next five years, new deliveries should increase at a 4.6 percent average annual rate, while dollar volume is expected to increase 6.4 percent over the same period. Between 2023 and 2027, new deliveries are forecast to total 4,054 units, valued at $100.5 billion.

New Business Jet Transactions by Size



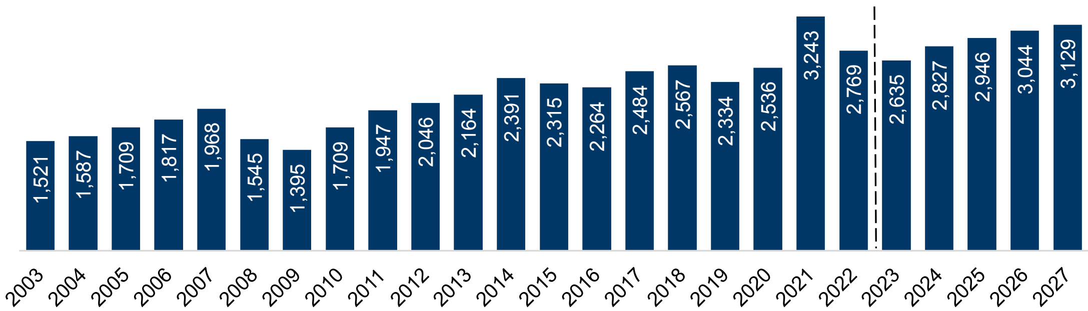
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
VLJ	133	167	129	164	154	166	166	184	184	202
Light	159	187	152	192	177	180	182	198	197	210
Medium	171	202	128	143	169	172	169	182	181	199
Heavy	194	238	193	213	212	239	236	265	260	282
Total	657	794	602	712	712	757	753	829	822	893

WE EXPECT DELIVERIES OF ALL SIZE CLASSES TO INCREASE DURING THE FORECAST PERIOD, DEMONSTRATING A GENERAL INCREASE IN DEMAND FOR BUSINESS AVIATION.

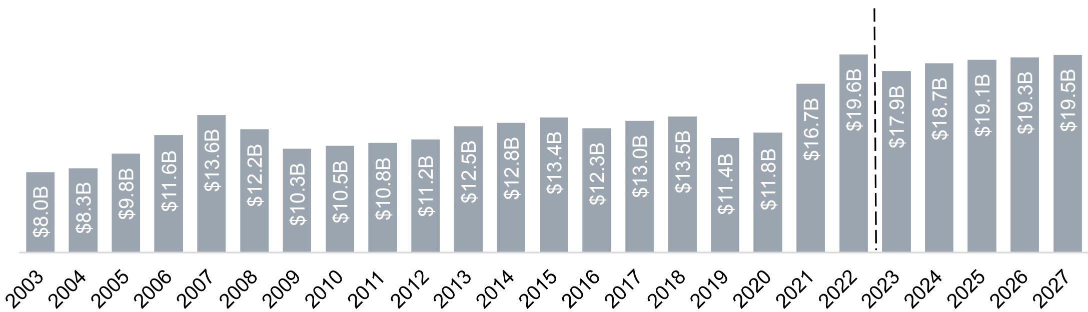
There are a wide range of business jet types that appeal to users with different missions and budgets, and that dynamic will continue over the next five years.

Still, heavy jets should increase at a faster rate than other categories. Heavy jet deliveries are forecast to increase at a CAGR of 5.9 percent between 2022 and 2027. The range and passenger capacity of these aircraft make them increasingly popular. Rebounding international travel will only enhance the appeal of these longer-range aircraft. The introduction of new heavy jets during the forecast period will further increase the appeal of this category. Very light jets (VLJs) are another category that should demonstrate rapid growth, expanding at an annual rate of 5.6 percent. The low price of VLJs makes them appealing to many buyers, especially first-time owners. Although light and medium jets will grow more slowly than heavy jets and VLJs, we forecast that deliveries in these categories will increase as well (at a 3.5 percent CAGR and 3.3 percent CAGR respectively).

Total Pre-Owned Transaction Forecast (Unit Volume)



Total Pre-Owned Transaction Forecast (Dollar Volume)



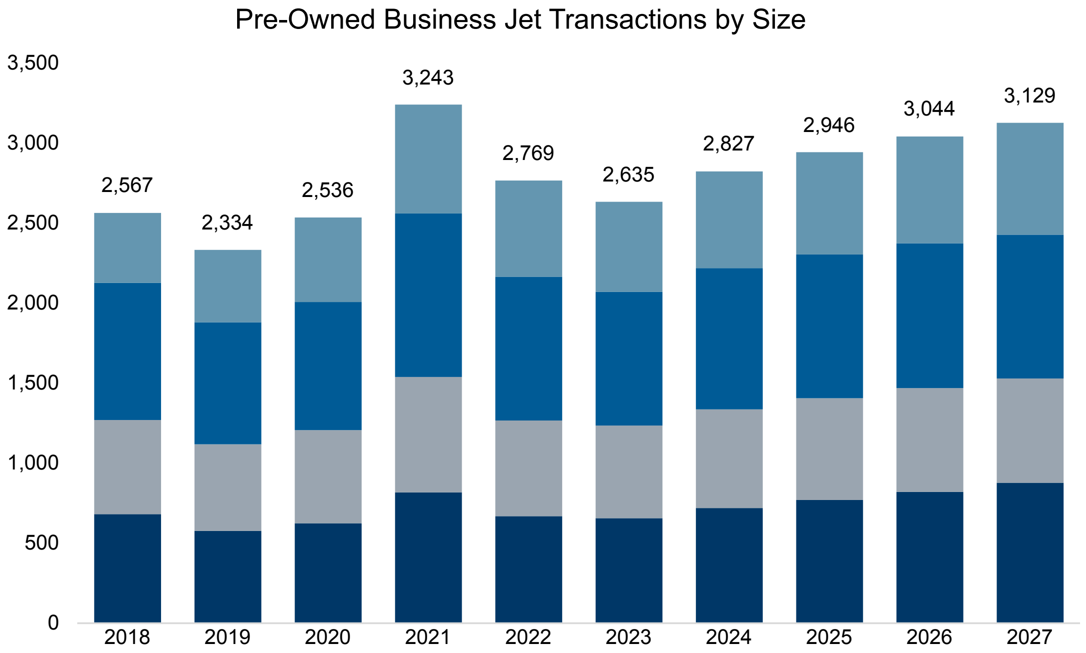
FOLLOWING A VERY STRONG 2021, THE NUMBER OF PRE-OWNED BUSINESS JET TRANSACTIONS DECLINED IN 2022.

In 2022, buyers dealt with low inventory, rising prices, and economic uncertainty, resulting in a slower market. It should be noted that despite a 14.6 percent year-over-year decline, 2022 transactions were the second highest on record, next only to 2021. In addition, rising aircraft values drove pre-owned dollar volume up 17.4 percent year-over-year.

Declines in the pre-owned market are expected to continue into 2023. Despite increases in inventory throughout 2022, aircraft listed for sale remain near historic lows, reducing buyers' options. Buyers also continue to face relatively high prices and economic uncertainty. An increase in new deliveries should also meet some demand in the marketplace, further reducing pressure in the pre-owned market. Unit volume is expected to decrease 4.8 percent year-over-year in 2023. Dollar volume is forecast to decrease at a faster rate of 8.5 percent as values normalize.

Over the long term, we expect the pre-owned market to resume the rising trend that it has experienced over the past two decades, driven by continued demand and a growing user base. Over the next five years, we forecast there will be 14,581 pre-owned transactions valued at $94.6 billion. During that time, transactions are expected to grow at an annualized rate of 2.5 percent. Dollar volume should remain level with 2022 over that time, even as unit volume increases due to normalizing aircraft values.

PRE-OWNED MARKET BY SIZE



	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
VLJ	438	450	528	681	601	562	606	637	668	700
Light	856	764	801	1,020	899	836	884	901	905	896
Medium	591	541	582	723	597	579	617	636	648	654
Heavy	682	579	625	819	672	658	720	771	823	879
Total	2,567	2,334	2,536	3,243	2,769	2,635	2,827	2,946	3,044	3,129

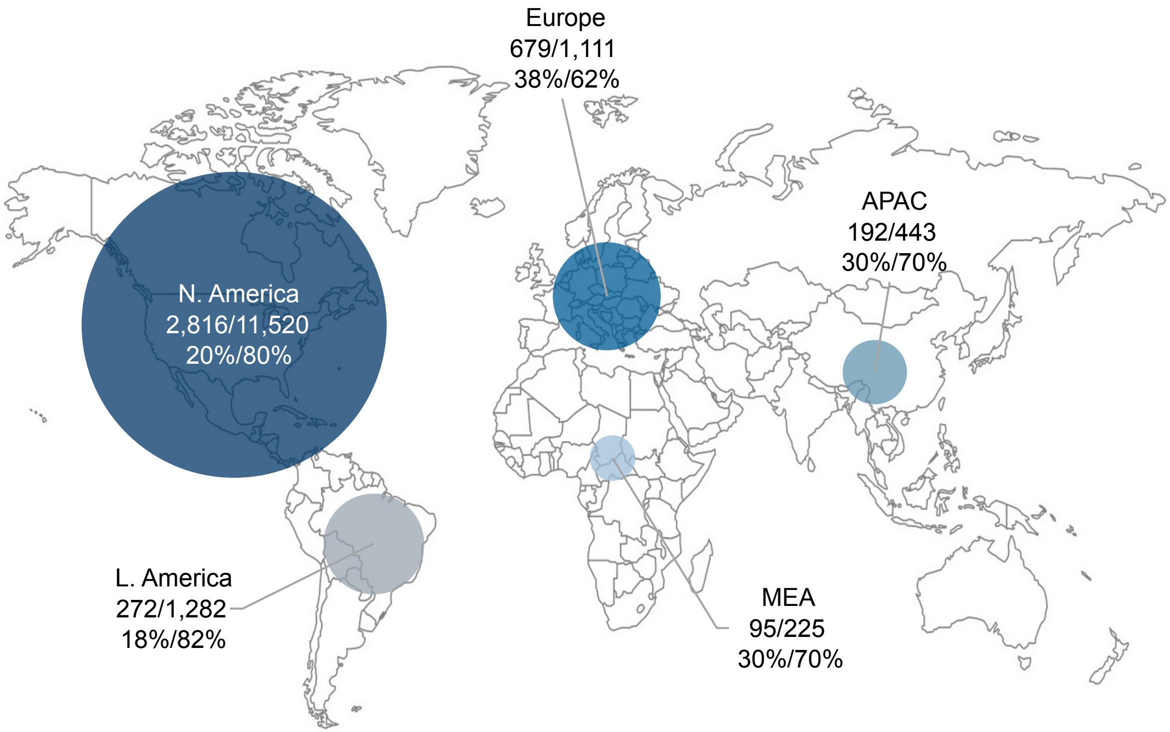
HEAVY JETS HAVE GROWN IN POPULARITY IN THE PRE-OWNED MARKET, DRIVEN BY THEIR LONG RANGE AND HIGH PASSENGER CAPACITY—THE SAME FACTORS THAT ARE DRIVING AN INCREASE IN THE NEW MARKET.

That trend is forecast to continue over the next five years, with heavy jets increasing from 24.3 percent of the pre-owned market in 2022 to 28.1 percent by 2027. During that time, we expect heavy jets will grow at an annualized rate of 5.5 percent compared to 2.5 percent for the wider pre-owned market.

We expect that VLJs will be another strong performer over the next five years, increasing from 21.7 percent of the pre-owned market in 2022 to 22.4 percent by 2027. Their small size and low price make them attractive to entry level jet buyers.

Transactions involving medium jets are also expected to increase over the next five years, rising at a CAGR of 1.8 percent. Since that rate will be slower than the overall market, medium jets will shrink as a percentage of the pre-owned market. Light jet demand is also projected to decline over the next five years. These jets are the most popular segment on the pre-owned market so even with declines, we expect they will continue to be the most popular by 2027.

GLOBAL DISTRIBUTION OF ALL NEW AND PRE-OWNED AIRCRAFT TRANSACTIONS



Top figures indicate new transactions/pre-owned transactions.
Bottom figures indicate new ratio/pre-owned ratio.

NORTH AMERICA IS FORECAST TO ACCOUNT FOR 76.9 PERCENT OF THE GLOBAL BUSINESS JET MARKET OVER THE NEXT FIVE YEARS, MAKING IT THE LARGEST REGION FOR BUSINESS JETS IN THE WORLD.

North America has the largest installed base of business jets, strong market maturity, and supporting infrastructure that will drive continued strength in the market.

The North American market is also driven by wide acceptance of pre-owned business jets. Over 79 percent of all pre-owned transactions are forecast to take place in North America between 2023 and 2027, with transactions involving pre-owned aircraft accounting for 80.4 percent of all transactions in North America.

While North America should remain the largest market over the next five years, other regions of the world are expected to continue to drive sales of business jets as well. Europe is projected to be the second largest market between 2023 and 2027, with 9.6 percent of transactions. Latin America is forecast to be an important market for pre-owned jets, accounting for 8.8 percent of all pre-owned transactions. The remaining transactions are expected to be split between the Middle East and Africa region (MEA) and the Asia Pacific region (APAC).

GLOBAL JET CAPITAL UTILIZES A TOP-DOWN LINEAR REGRESSION MODEL, USING ECONOMIC VARIABLES AS INPUTS TO FORECAST THE BUSINESS JET MARKET.

Model outputs are balanced against Global Jet Capital's in-depth market knowledge and insights to arrive at a detailed five-year forecast covering both new and pre-owned business jet transactions.

Economic data and forecasts come from Oxford Economics and are based on its analysis of current and expected future market conditions. Forecasts are based on analysis of relevant data at the time they are made. In a dynamic market, data may change rapidly, and unforeseen events may lead to differences between forecasts and actual future events. Global Jet Capital does not guarantee the accuracy or likelihood of these forecasts and these projections should not be construed as advice for any business decisions.

As with any forecast, there are many risks that may result in different outcomes than expected. Upside risks include a reduction in geopolitical conflicts around the world, the ability of central banks to resolve inflation and conduct an economic "soft landing," and higher-than-expected demand from new users. Downside risks include a worsening of the geopolitical environment, persistent inflation, economic recession, continued low supply due to low pre-owned inventory and OEM supply chain difficulties, as well as more new users returning to commercial airlines than expected.

In 2022, Global Jet Capital forecast that the new market would be worth $18 billion, and that the pre-owned market would be worth $14.8 billion. By the end of the year, the new market was actually worth $16.5 billion (8.4% lower than the forecast), and the pre-owned market totaled $19.6 billion in transaction value (32% higher than the forecast). New transactions ended the year lower than forecast due to supply chain disruptions that prevented manufacturers from delivering enough aircraft to meet demand. In the pre-owned market, actual transaction unit volume was only 2.1 percent lower than Global Jet Capital's forecast. The mismatch for dollar volume was due to higher-than-expected prices due to low supply.

TOTAL BUSINESS JET TRANSACTIONS DECLINED IN 2022 VERSUS 2021.

New deliveries were held back by supply chain issues that affected OEMs, while pre-owned transactions declined due to low inventory, higher prices, and economic uncertainty. Despite the decline in the pre-owned market, the total number of transactions in 2022 was second only to 2021, demonstrating the strength of the market in 2021. In addition, rising values drove the market dollar volume up 11.8 percent, even as overall unit volume declined 12 percent.

The new market was lower than forecast in 2022 as manufacturers continued to struggle with supply chain constraints that delayed some deliveries. The pre-owned market was slightly lower than forecast in terms of unit volume but higher than forecast in terms of dollar volume due to continued strength in aircraft values.

In 2023, the new and pre-owned markets are expected to diverge. New deliveries will increase as manufacturers overcome supply chain obstacles and increase production to meet demand. On the other hand, declines in the pre-owned market are expected to continue into 2023. Despite increases in inventory throughout 2022, aircraft listed for sale remain near historic lows, reducing buyers' options. Buyers also continue to face relatively high prices and economic uncertainty. Following a dip in 2023, we forecast both markets will grow steadily into 2027.

Between 2023 and 2027, North America should remain the dominant geographic market for business jets, with a strong lead in new deliveries and pre-owned transactions. Europe is also expected to be an important market for business jets, while Latin America is expected to remain a strong market for pre-owned jets.

FOR PURPOSES OF THIS STUDY, GLOBAL JET CAPITAL HAS RELIED ON VARIOUS SOURCES, WHICH ARE AS FOLLOWS:

Business Jet Transaction Data: JetNet and Global Jet Capital Analysis

Economic Data: Oxford Economics and Global Jet Capital Analysis

Business Jet Flight Data: WINGX and Global Jet Capital Analysis

Global Distribution Map: freeusandworldmaps.com

OEM Data: Company Financial Reports, Jefferies Equity Research, and Earnings calls

Aircraft Valuation Data: Aircraft Bluebook and Global Jet Capital Analysis

BUSINESS AVIATION SIMPLIFIED.

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