The information and statistics set out in this section and other sections of this Prospectus were extracted from the report prepared by Frost & Sullivan, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged Frost & Sullivan to prepare the Frost & Sullivan Report, an independent industry report, in connection with the Global Offering. The information from official government sources has not been independently verified by us, the Sole Sponsor, Sole Global Coordinator, the Joint Bookrunners, the Joint Lead Managers, the Underwriters, the Capital Market Intermediaries, any of their respective directors, officers, employees, advisers or agents, or any other persons or parties involved in the Global Offering, and no representation is given as to the accuracy.

SOURCE OF INDUSTRY INFORMATION

In connection with the Global Offering, we have engaged Frost & Sullivan to conduct a detailed analysis and to prepare an industry report on the markets in which we operate. Frost & Sullivan is an independent global market research and consulting company founded in 1961 and is based in the United States. Services provided by Frost & Sullivan include market assessments, competitive benchmarking, and strategic and market planning for a variety of industries.

We have included certain information from the Frost & Sullivan Report in this Prospectus because we believe such information facilitates an understanding of the market in which we operate for potential investors. Frost & Sullivan prepared its report based on its in-house database, independent third party reports and publicly available data from reputable industry organizations, literature research and market data gathered by conducting interviews with key industry experts and leading industry participants. Where necessary, Frost & Sullivan contacts companies operating in the industry to gather and synthesize information in relation to the market, prices and other relevant information. Frost & Sullivan believes that the basic assumptions used in preparing the Frost & Sullivan Report, including those used to make future projections, are factual, correct and not misleading. Frost & Sullivan has independently analyzed the information, but the accuracy of the conclusions of its review largely relies on the accuracy of the information collected. Frost & Sullivan research may be affected by the accuracy of these assumptions and the choice of these primary and secondary sources.

We have agreed to pay Frost & Sullivan a fee of US$80,000 for the preparation of the Frost & Sullivan Report. The payment of such amount was not contingent upon our successful listing or on the content of the Frost & Sullivan Report. Except for the Frost & Sullivan Report, we did not commission any other industry report in connection with the Global Offering. Our Directors confirmed that, to the best of their knowledge, after making reasonable enquiries, there has been no adverse change in the market information since the date of the report prepared by Frost & Sullivan which may qualify, contradict or have an impact on the information set forth in this section in any material respect.

OVERVIEW OF GLOBAL GENERAL AND PERSONAL AVIATION MARKET

Definition and Classification of General and Personal Aviation

General aviation refers to all aviation other than military and scheduled commercial airlines. General aviation is the largest aviation market in the world based on units delivered. In 2023, the general aviation market aircraft deliveries totaled 3,050 new aircraft valued at approximately US$23.4 billion. General aviation encompasses both personal and professional aviation. Personal aviation refers to the non-commercial operation of fixed-wing general aviation aircraft[1], including activities such as owner-flown and flight instruction.

General aviation encompasses both personal aviation and professional aviation. Personal aviation aircraft market consists of aircraft, targeting individual customers such as private owners, trainers and individual flying enthusiasts, generally with an acquisition price below US$7 million; while professional aviation market includes aircraft used for corporate and charter services and other professional scenarios (such as agricultural operations, fire protection, disaster relief and environmental conservation). The following sets out the differences between the personal aviation aircraft and professional aviation aircraft, which span operational capabilities, market focus and intended use, luxury and customization levels:

Note:

1. Fixed-wing general aviation aircraft refers to aircraft that have wings that are fixed in position and do not move during flight. Fixed-wing aircraft generally require a runway for takeoff and landing, while rotary wing aircraft — commonly referred to as helicopters can take off and land vertically. Cirrus SR2X series and Vision Jet are fixed-wing aircraft.

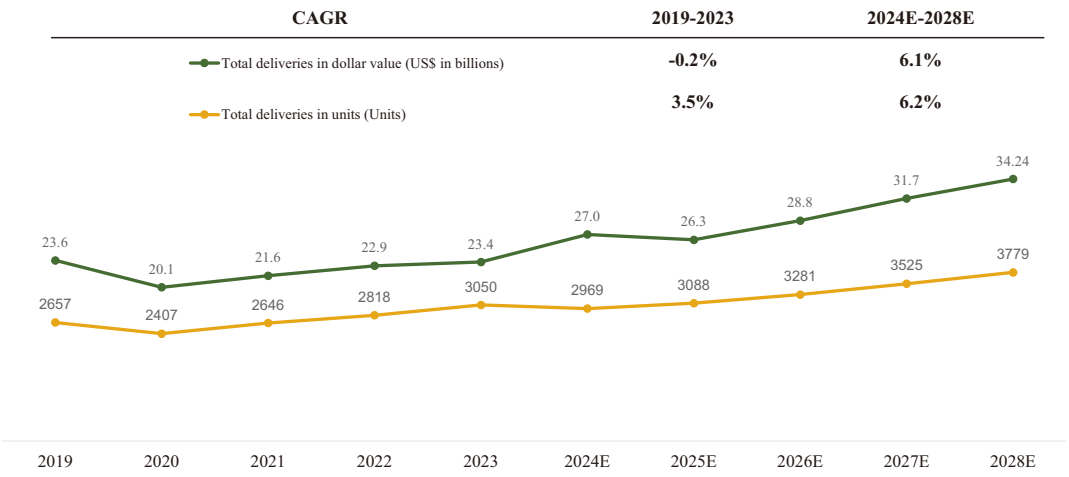
	Personal Aviation Aircraft	Professional aviation aircraft
Operational capabilities and range	Designed for short to medium-range flights (i.e. less than 1,000 kilometers), typically equipped with single or twin engines. The main types of aircraft used in personal aviation include piston engine aircraft and turbine aircraft. These aircraft are suitable for personal, non-commercial, and training flights within a relatively limited geographical scope.	Capable of long-range, transcontinental, and intercontinental flights, equipped with advanced technology and multiple engines to support high-speed travel over longer distances; or capable of performing professional tasks such as responding to medical emergencies, transporting logistics, and serving fire protection purposes, usually on short to medium-range flights.
Market Focus and Intended Use	Primarily serving individual owners, non-commercial operations, and flight training institutions and targeting individual customers such as private owners, trainers and individual flying enthusiasts, with a focus on accessibility, efficiency, and practicality for personal or small-scale business travel.	Targeting corporate clients, governments, and luxury travel markets, with an emphasis on global reach, speed, and the capacity to accommodate larger groups in luxurious comfort.
Luxury and Customization	Offer functional and comfortable interiors with essential amenities, focusing on safety and operational efficiency over opulence.	Come in various types, including those used for agricultural, medical emergency, logistics transportation, and fire protection purposes, which may not prioritize luxury but serve specific operational needs. For other types of professional aviation aircraft, they feature spacious and customizable cabins that can be outfitted with high-end luxury amenities. These aircraft cater to the needs and preferences of the most discerning clients, offering a luxurious and comfortable flying experience. They are often used for executive travel, luxury charter flights, and other high-end aviation services.

The personal aviation market accounted for 76.0% of the general aviation market based on the units delivered, with a total number of personal aviation aircraft deliveries of 2,215 units in 2023 valued at approximately US$3.7 billion. The main types of aircraft used in personal aviation include piston engine aircraft[2] and turbine aircraft[3]. Turbine aircraft include turboprop aircraft and jet. Professional aviation involves a range of activities, including corporate services, charter services, agricultural operations, fire protection, disaster relief and environmental conservation.

GLOBAL AND REGIONAL GENERAL AVIATION AIRCRAFT DELIVERIES MARKET

Global market overview

Global General Aviation Aircraft Deliveries, in both Dollar Value and Units, 2019-2028E



(1) Includes personal aviation piston aircraft and turbine aircraft, and fixed-wing professional aviation aircraft

Source: GAMA, Frost & Sullivan Analysis

Note:

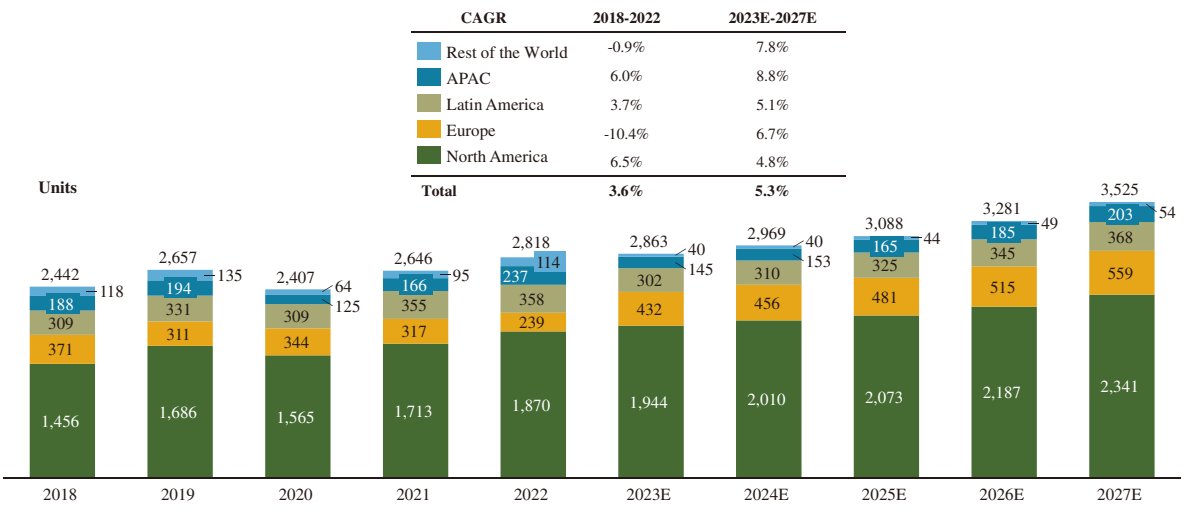
2. Piston engine aircraft refers to aircraft that are powered by piston engines. These engines use a combination of fuel and air to drive pistons within cylinders, converting the reciprocating motion into rotary motion to power the aircraft's propeller. Cirrus SR2X series are piston engine aircraft.

3. Turbine engine aircraft refers to aircraft powered by turbine engines. These engines use a continuous combustion process to generate thrust, providing high levels of power and speed. Vision Jet is a turbine engine aircraft.

Global economic growth and an increasing number of HNWIs, technological advancement, increasing availability and accessibility of airport infrastructure and related ancillary services are driving the growth of the general aviation market globally. In 2023, deliveries of general aviation aircraft, including personal aviation aircraft and fixed-wing professional aviation aircraft, reached 3,050 units, an increase from 2,657 units in 2019, representing a CAGR of 3.5%. Going forward, as the global economy recovers from the pandemic, with significant momentum in the growth of wealth among HNWIs, which is expected to lead to an increase in demand for general aviation aircraft as a luxury consumption option, it is expected that total deliveries will reach 3,779 units in 2028, representing a CAGR of 6.2% from 2024 to 2028. Global general aviation aircraft deliveries, measured by dollar value, are also expected to grow at a steady pace in the forecast period and reach US$34.2 billion in 2028, an increase from US$27.0 billion in 2024, representing a CAGR of 6.1%.

Regional market overview

Global General Aviation Aircraft Deliveries by Region, in Units, 2018-2027E



Source: GAMA, Frost & Sullivan analysis

North America (United States and Canada) has historically been by far the largest market for general aviation aircraft. In 2022, North America accounted for 66.4% of global deliveries of new fixed-wing piston, turboprop, and turbofan general aviation aircraft. The mature infrastructure present in North America further enhances the characteristic of general aircraft to provide flexible travel. In the United States, the general aviation aircraft fleet operates across a spectrum of more than 5,100 public-use airports, far more than any other country on an actual and per-capita basis. This wealth of civil aviation airport infrastructure is an important differentiator that encourages the

widespread sale and use of general aviation aircraft. These aircraft operate across an extensive network of airports, providing unmatched and essential air services that help to connect communities, shorten overall travel times, increase productivity, and stimulate economic activity.

The growth in the aircraft pilot population in North America, also fueled by the number of student pilots in training, influences and reflects the demand for general aviation aircraft. The U.S. student pilot population grew at a CAGR of 12.5% from 197.7 thousand in 2019 to 316.5 thousand in 2023, which bodes well for sales of general aviation aircraft. Greatly contributing to the global general aviation market, the general aviation aircraft deliveries in North America reached 1,870 units in 2022, accounting for 66.4% of the world's total general aviation aircraft deliveries.

In the near future, the North America market is expected to benefit from a lower fuel price relative to other markets, and a significant backlog due to pent-up demand and an influx of customers who could previously afford personal aviation but, before COVID-19, could not justify the required investment. Additionally, general aviation is gradually being recognized as an optimal transportation alternative with a noticeably higher return on investment, along with market potential derived from the growth of general aviation market. Based on a confluence of all factors, and a continuation of government policy and regulatory oversight that is broadly supportive of the general aviation industry, the North America market will continue to experience a strong growing momentum in the next five years. It is expected that the general aircraft deliveries in North America will reach 2,341 units by 2027 with a CAGR of 4.8% from 2023 to 2027.

While North America was the fastest growing world region for deliveries from 2018-2022, growth rates over the next five years are expected to be more equally balanced across world regions. Other than North America, Latin America and Europe are considered regional markets with noticeable growth potential. Despite facing challenges such as relatively immature infrastructure and non-uniform regulations across different countries, general aviation new aircraft delivery market in Latin America and Europe are still considered key geographies outside North America with significant market potential that cannot be overlooked.

Latin America and Europe serve as important transportation hubs connecting different countries and continents, making personal aircraft a more convenient and efficient mode of transportation. Moreover, in the post-COVID-19 period, individuals in both regions are increasingly focused on and prefer using general aircraft for business and leisure travel, and there is also a considerable customer base for general aircraft. European general aviation market was greatly affected by the pandemic, which has resulted in a reduction in market size in the past few years; however, it is anticipated to regain growth potential moving on to the post-pandemic stage upon economic recovery. Therefore, with continuous economic growth and improving

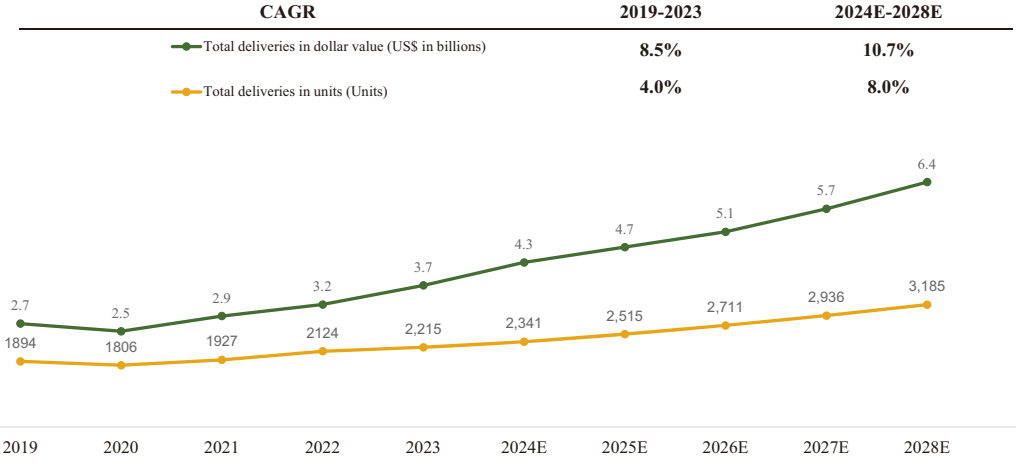
infrastructure, Latin America and Europe are expected to experience increasing demand for general aircraft. It is expected that the general aircraft deliveries for Latin America and Europe will reach 368 and 559 by 2027, respectively, with a CAGR of 5.1% and 6.7% from 2023 to 2027.

The market scale of other regions worldwide, including the Asia Pacific region, is relatively small in terms of the number of fleets or annual deliveries. However, due to the presence of supportive factors including 1) gradual relaxation of local government policies, 2) increasing consumption level of residents and 3) development of infrastructure and general aviation airports, it is anticipated that regional markets, including the Asia Pacific region, will experience potential market growth in the near future.

GLOBAL PERSONAL AVIATION AIRCRAFT DELIVERIES MARKET

The personal aviation aircraft market has experienced accelerated growth in terms of units delivered in comparison to the overall general aviation aircraft market. The personal aviation market has benefited from several factors, including the recovery of the global economy in the post-pandemic era, recovering business confidence, and the increase in the number of HNWIs globally. Central to the interest of the expanded HNWI population in personal aviation are the key benefits of personal air mobility, privacy, security, schedule flexibility, and year-round accessibility. The personal aviation market is also expected to gain strong growth momentum in the future by benefiting from the growth in popularity of premium mobility services for customers seeking the finest personalized, customized air transportation solutions. The chart below sets forth the growth of personal aviation aircraft market:

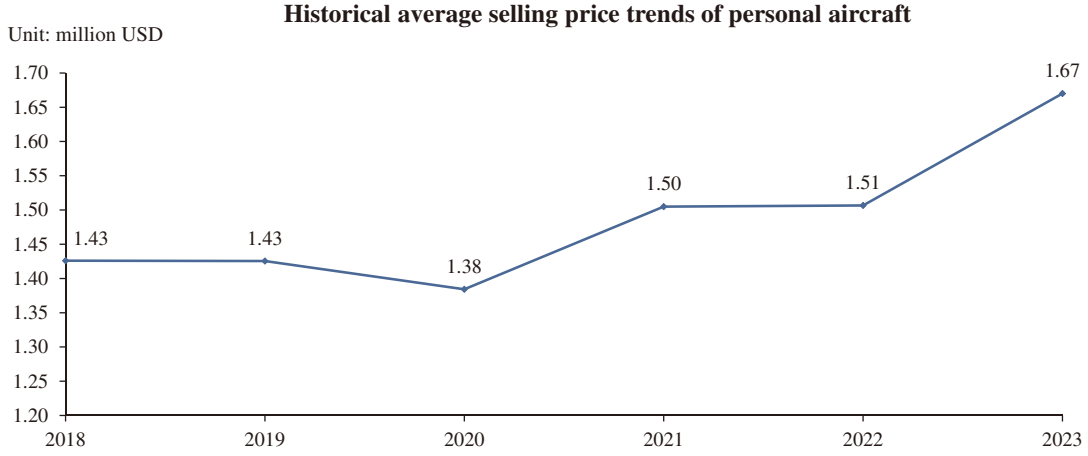
Global Personal Aviation Aircraft Deliveries, in both Dollar Value and Units, 2019-2028E



Source: GAMA, Frost & Sullivan analysis

The average selling price of personal aircraft has slightly increased during the past few years, which was mainly due to the increase in cost of raw materials and labor and aircraft manufacturers' success at developing and selling higher-priced models with higher-performance.

Historical average selling price trends of personal aircraft



Source: Frost & Sullivan

Aircraft manufacturers tend to compete based on aircraft size, price, engine type, mission performance, design features, brand reputation, and customer service. Due to their ease of operation and cost-effective performance, certain personal aircraft have gained popularity and become increasingly attractive as a sub-segment of personal aircraft.

GLOBAL GENERAL AVIATION AIRCRAFT SERVICE MARKET

Services including FBO, MRO, spare parts, upgrades, training, insurance and financing, play an important role in the growing general aviation aircraft market.

For the majority of top-line aviation manufacturing companies, typically with large-scale and aging fleets, relevant services can contribute up to 35% to 40% of revenue. The primary cause or consideration for most original equipment manufacturers ("**OEMs**") is that they focus on servicing their own aircraft for parts and maintenance, so the installed base or size of their own fleet, aircraft age, and aircraft utilization levels are the primary determinants of market potential.

In addition, the sales revenue derived from parts tends to be more noticeable than that derived from the new delivery of aircraft, due to the demand for aftersales maintenance services required by end customers. In terms of direct finances or leases, some aircraft OEMs tend to acquire their finance and equipment from banks and equipment lessors to facilitate sales, while utilizing resources in other areas of core competency. Providing aftermarket service can increase the profits of aircraft OEMs.

Service	Content
FBO	Fixed-base operators provide ground handling, fueling, parking, and other services for general aircraft. They may also offer concierge services, catering, and other amenities for passengers and crew.
MRO	Maintenance, repair, and overhaul. MRO services are crucial for ensuring the safety and airworthiness of general aircraft. They involve routine inspections, repairs, and upgrades to aircraft systems and components.
Spare parts	Components and parts used to replace worn or damaged parts of an aircraft.
Upgrades	Improvements or modifications made to an aircraft's equipment, systems, or design to enhance its performance.
Training	Educational programs and courses that teach pilots, mechanics, and other personnel how to operate aircraft.
Insurance	Protection against financial losses resulting from accidents, damage, theft, or other incidents related to aircraft ownership and operation. This can include liability coverage, hull insurance, and other specialized policies.
Financing	Obtaining funds to purchase or operate an aircraft, often through loans or other financial arrangements.

Source: Literature Research, Expert Interview and Frost & Sullivan Analysis

Services are gaining greater importance in the general aviation industry, which is attributable to several reasons:

Increasing demand for general aviation services. As more individuals and businesses enter the general aviation market, there is a growing need for support services to maintain and upgrade aircraft, as well as provide training, insurance, and financing solutions.

Regular maintenance. Regular maintenance serves as a major component in after-sale services in the general aviation industry, as it not only contributes to optimized operational levels but also further generates new sales opportunities.

Advancements in technology. New technologies are constantly being developed for small aircraft, which require specialized expertise to install, maintain, and repair. General aviation services, such as MRO and spare parts providers, play a critical role in ensuring that these technologies are effectively integrated into aircraft.

Safety concerns. Safety is paramount in the aviation industry, and general aviation services such as training and insurance help ensure that pilots are properly trained and insured against potential risks.

Long lifecycle of aircraft. General aircraft can last for decades with proper maintenance and upgrading. General aviation services such as upgrades and retrofits can help extend the lifespan of an aircraft while keeping it up to date with the latest technology and safety standards.

Regulatory compliance. The aviation industry is heavily regulated, and general aviation services must comply with strict regulations and requirements to ensure the safety and reliability of aircraft.

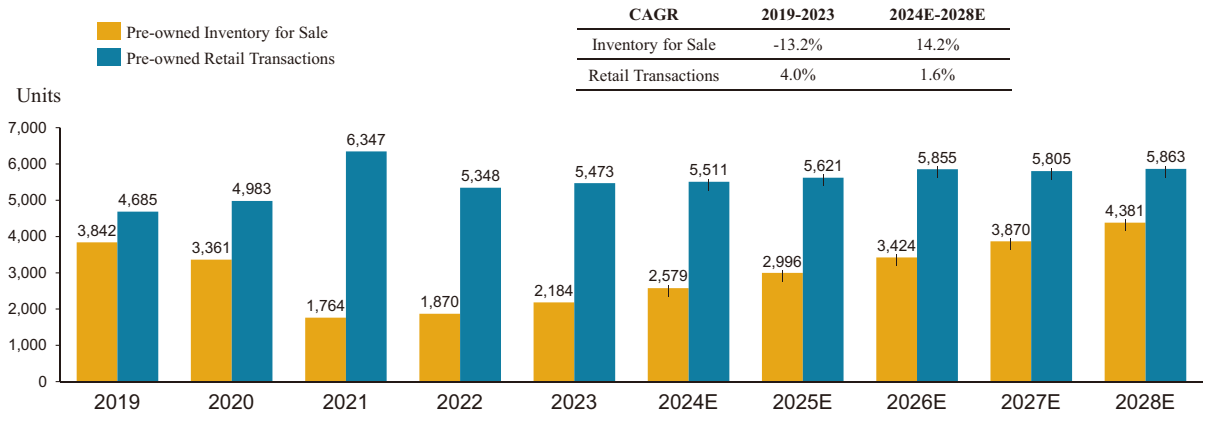
Brand reputation. New users show a greater tendency toward general aviation brands with a more established reputation and well-represented brand image. Brand reputation is crucial in attracting customers to new product offerings and services and further boosting market share for general aviation brands.

GLOBAL PRE-OWNED GENERAL AVIATION AIRCRAFT MARKET

The global inventory of pre-owned general aviation aircraft has begun to rebuild after historically low levels in 2021. In 2022, the pre-owned turboprop and jet inventory reached 3.1% and 5.4% of the total in-service fleet respectively. As inventory levels representing 10% to 12% of the fleet are more typical of a balanced aircraft market, it is expected that the pre-owned general aviation aircraft inventory will maintain a steady growth in the future.

At the same time, the rebound in inventory also signals a period where transaction prices will likely soften from their recent highs. The pre-owned aircraft market has begun to shift from a classical "seller's market" to one where there is better balance between buyers and sellers. With the growth of general aviation aircraft registration numbers and relatively lower transaction prices compared to new aircraft, it is expected that the transaction volume of pre-owned general aviation aircraft will reach 5,863 by 2028, with a CAGR of 1.6% from 2024 to 2028.

Global Pre-owned General Aviation Aircraft Inventory and Transactions

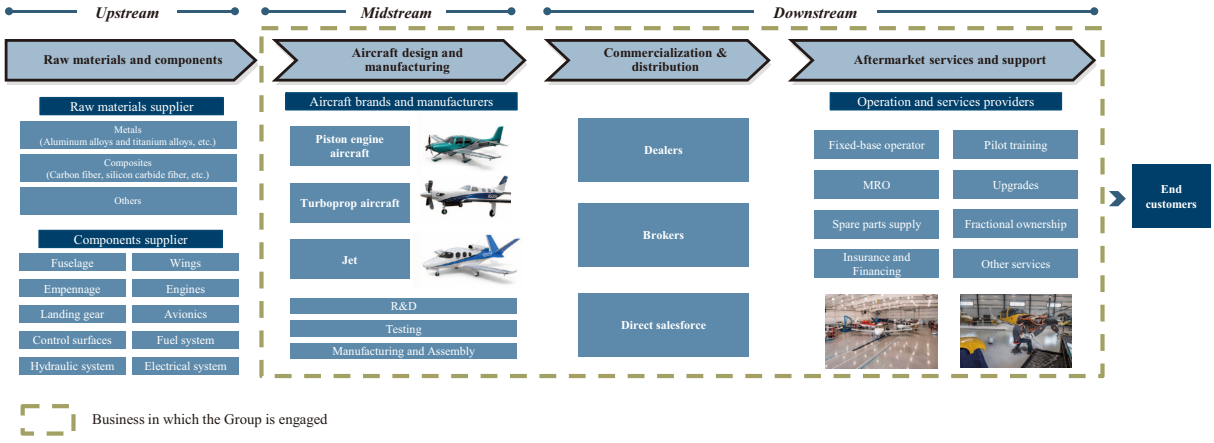


CAGR	2019-2023	2024E-2028E
Inventory for Sale	-13.2%	14.2%
Retail Transactions	4.0%	1.6%

Source: Literature Research, Expert Interview and Frost & Sullivan Analysis

VALUE CHAIN OF PERSONAL AVIATION INDUSTRY

The diagram below sets forth the value chain of personal aviation:



Source: Literature Research, Expert Interview and Frost & Sullivan Analysis

Upstream Market

Raw materials and components that serve as the upstream portion of the personal aviation industry include various metals, composites, plastics, electronics, avionics, engines, and other mechanical parts. These materials and components are used in the manufacturing of aircraft, aircraft parts, and related systems. Examples of raw materials used include aluminum alloy, titanium alloy, carbon fiber, and various types of steel. Components such as engines, landing gear, and avionics systems are critical to the operation of the aircraft and require specialized manufacturing processes and expertise.

Midstream Market

R&D is a crucial midstream activity in the personal aviation industry, which involves the development of new technologies, materials, and systems for aircraft design, testing, and certification. R&D efforts can focus on various areas such as aerodynamics, structural engineering, propulsion systems, avionics, and safety features. These developments aim to enhance aircraft performance, fuel efficiency, safety, reliability, system intelligence and simplicity in operation. Assembly, on the other hand, involves the process of building aircraft or aircraft parts using raw materials, components, and systems developed during the R&D stage. Assembly processes can vary depending on the type and complexity of the aircraft being produced and typically involve a series of stages, including fabrication, assembly, installation, testing, and certification of aircraft systems.

Downstream Market

During the process of commercialization and distribution, key participants involved in distribution networks of personal aviation include dealers, brokers and direct salesforce. The distribution networks of leading participants in the downstream market include numerous approaches, and among all, the direct salesforce approach is gaining popularity due to its advantage in effective customer relationship maintenance and demonstration of core product competence. Personal aircraft are then distributed to end customers, with related aftersales services provided by operation and services providers. Operation and services such as FBO, MRO, pilot training, aircraft management, insurance, financing, and fractional ownership are also an essential part of the downstream value chain of personal aviation. For details of these services, see "Global General Aviation Aircraft Service Market." These operation services are critical for the safe, efficient, and cost-effective operation of personal aircraft. The quality and availability of these services can impact the adoption and growth of the personal aviation industry, and may further deliver value to customers and result in greater new purchases or product upgrades from customers.

In the downstream portion of the personal aviation industry, there are two main customer segments: enterprise customers and individual customers. Enterprise customers include businesses, and other organizations that use personal aircraft for various purposes such as self-use and commercial operation. These customers often have specific requirements for their aircraft, such as range, speed, payload capacity, and specialized equipment. The aircraft may be owned or leased, and maintenance and operation may be outsourced to third-party service providers. Individual customers include private individuals who own or charter personal aviation aircraft for personal or recreational use, such as air travel, sightseeing, and sports. These customers may also have specific requirements for their aircraft, such as comfort, speed, range, safety, and simplicity in

operation. Individual customers may operate their aircraft or hire a pilot to operate it for them. Both enterprise and individual customers are essential for the growth and sustainability of the personal aviation industry.

Similar to luxury cars and the first class offering of commercial airlines, personal aviation is an important part of the premium mobility service market and is capable of providing much more flexible, efficient and comfortable mobility services with a high degree of privacy. Personal aviation is gaining wide acceptance as it becomes increasingly convenient to access and affordable to end customers, while potentially delivering advanced product features.

KEY DRIVERS FOR PERSONAL AVIATION AIRCRAFT AND SERVICE MARKET GROWTH

Global economic growth and increasing number of HNWIs

Extensive domestic and international travel is common for HNWIs, and HNWIs are important consumers for the global personal aircraft market. From 2018 to 2023, the worldwide HNWI population increased from 52.2 million to 73.9 million at a CAGR of 7.2%, and is expected to reach 118.9 million by 2028, representing a CAGR of 10.6% from 2024 to 2028. As an optimized option, personal aircraft is becoming widely chosen by HNWIs for short-distance commuting, sightseeing, and other recreational activities. This could create opportunities for personal aviation service providers to offer customized solutions to meet specific needs. The overall consumer base of personal aviation has increased accordingly.

Post-pandemic global economic recovery driving consumer perception toward privacy and convenience

The COVID-19 pandemic has disrupted travel and transportation worldwide, leading to increased interest in private air travel as an alternative to commercial airlines. As the global economy recovers, individuals and businesses are expected to have more disposable income to spend on leisure and travel. As such, consumers show greater tendency toward enhanced services regarding transportation with a stronger focus on safety and convenience. During the post-pandemic stage, consumers are motivated to subscribe to premium product and service offerings and an enhanced traveling experience, while prioritizing privacy and convenience. Additionally, businesses may use personal aircraft for corporate travel, as they seek to improve efficiency and premium services. At a global scale, premium air traffic has recovered at a faster pace than total air traffic as a result of the eased traveling restriction and pent-up traveling demand during post-pandemic. This was well-demonstrated in the 86% recovery rate (i.e., the number of air travelers in a given month as a percentage of the number of air travelers in the same month in the prior year) of premium air passengers in February 2023, outweighing that of total air

passengers which was at 81%. In Europe and North America, Europe's premium air passenger recovery rate in February 2023 was 93.1%, representing a significant increase from 56.3% in February 2022, whereas in North America, it reached 107.7% in February 2023 as compared to 75.3% in February 2022 and surpassed pre-pandemic levels.

Technological advancement leading to upgrade in product offering

Due to a number of factors, including favorable government policies and investments and increased interest in personal aviation, advancements in technology have made small aircraft more accessible and affordable. In addition, with the development of technology, products are becoming more intelligent with increasing simplicity to operate, while providing enhanced levels of safety, such as the innovative development of autonomous navigation and autonomous electric vertical takeoff and landing (eVTOL) technology. The improved product offerings have contributed significantly to the growth of the personal aviation industry, making it more convenient for individuals to own and operate small aircraft for personal use.

Increasing availability and accessibility of airport infrastructure and related ancillary services

Airports serve as critical hubs for personal aviation, providing essential services such as fueling, maintenance, and storage for personal aircraft owners. In recent years, there has been a trend towards expanding and upgrading airport infrastructure to support the growing demand for personal aviation services. As a result, there has been a proliferation of small and regional airports across many parts of the world, making it easier for individuals to access personal aviation services. For instance, the total number of public airports increased from 4,785 in 2018 to more than 5,100 in 2022 in the U.S. In addition, many airports have upgraded their infrastructure, adding new facilities and services such as FBOs that provide aircraft parking, fueling, maintenance, and catering services. The increasing availability and accessibility of airport infrastructure have contributed significantly to the growth of the personal aviation industry.

Pilot formation and increasing number of qualified personal aviation pilots

Pilots are essential to the operation and growth of the personal aviation industry, and an increase in the number of qualified pilots can help to expand the market for personal aviation services. In the United States, the number of licensed pilots reached approximately 806.9 thousand in 2023, representing a CAGR of 5.0% from 2019, and such number is expected to increase further to approximately 1,046.6 thousand in 2028 at a CAGR of 5.3%, which is attributable to several factors including the availability of affordable flight training programs and new technologies such as flight simulators and online learning tools making it easier and more efficient to train pilots.

MARKET TRENDS ANALYSIS OF GLOBAL PERSONAL AVIATION MARKET

Cost-efficient aircraft with higher ownership flexibility options will become more popular and attract a larger customer base.

In recent years, advancements in technology and manufacturing processes have led to a decrease in the cost of personal aircraft. This, coupled with a growing demand for convenient and efficient transportation options, has made personal aircraft more attractive to a larger customer base. Some companies are offering innovative ownership and sharing models, such as fractional ownership and on-demand charter services, which can make personal aircraft more affordable and convenient to access to a wider range of customers.

User-friendly features and ease in operation serve as key product features for personal aircraft to become more accessible to growing number of customers.

As personal aircraft gain popularity as an optimal transportation alternative of personal use, future product development could potentially adapt a consumer-centric approach to prioritize the simplicity in operation for end consumers. Changing consumer preferences are also driving the trend towards more commercial applications for personal aircraft. Without any necessary downgrade in functionalities or safety features, it is expected that users will be able to operate newly developed personal aircraft with ease and accessibility.

Advance technological innovation and intelligent product features will be associated with future development of personal aviation products.

In the long run, new technologies such as electric propulsion and airframe parachute system could enable greater flexibility, efficiency, and safety in personal aviation operations, making it more practical for commercial use.

Personal aviation aircraft are likely to become more widely used in commercial applications and provide on-demand premium mobility services as the personal aviation industry continues to evolve, bringing significant benefits to both consumers and businesses, offering greater convenience, flexibility and speed in air travel.

ENTRY BARRIERS AND KEY SUCCESS FACTORS IN GLOBAL PERSONAL AVIATION MARKET

Product R&D and step-up product and service family strategy

Designing and developing a personal aircraft requires a deep understanding of aerodynamics, materials science, electronics, and other specialized fields. This requires a commitment to continuous research and development and a willingness to invest in new technologies and processes. To further enhance product offering, the step-up product and service family strategy involves offering a range of products and services that cater to different segments of the market, from piston aircraft to jet, as well as corresponding MRO services. By offering a comprehensive product and service family, established manufacturers can leverage their brand reputation and customer loyalty to capture a larger share of the market. Existing customers who have purchased one type of aircraft from a particular manufacturer may be more likely to purchase additional models or services from the same supplier, particularly if they are satisfied with the quality and reliability of the existing products. In addition, the step-up product and service family strategy allows manufacturers to benefit from economies of scale and scope. Overall, the step-up product and service family strategy can act as an entry barrier for new aircraft manufacturers. Leading companies with a comprehensive product and service offering have an advantage in terms of brand recognition and customer loyalty, making it more challenging for new entrants to break into the market.

Manufacturing capabilities and supply chain management expertise

Manufacturing a personal aircraft requires specialized knowledge of materials, processes, and technologies, as well as skilled labor. In addition, a strong capability of integrating industry knowledge and skillsets in these fields further serves as a key success factor. Manufacturers must ensure that their production processes are efficient, cost-effective, and meet all necessary quality standards. Additionally, the supply chain for personal aircraft components is often complex and global, requiring strong relationships with suppliers and extensive logistics knowledge. Sourcing high-quality parts and materials can be challenging, as can managing inventory levels to avoid stockouts or excess inventory. Without this expertise, manufacturers may struggle to produce aircraft at scale and control costs, making it difficult to compete in the market. Supply chain management is crucial to personal aviation manufacturers, as disruptions in supply chain could impact production schedules, further delaying time-to-market. In addition, leading manufacturers usually engage in the entire process from raw material quality control to the manufacturing process to ensure high product quality.

Installed base of customers and value delivered to customers

Established manufacturers with a large and loyal customer base have a significant advantage over new entrants who must build their customer base from scratch. These customers may be loyal to the brand and have established good relationships with the manufacturer, making it difficult for new entrants to attract them. In addition, existing customers may be resistant to switching to a new manufacturer due to the high cost and complexity of owning and operating personal aircraft. They may prefer to remain with a trusted brand that they know and are familiar with. To overcome this entry barrier, new entrants must find ways to differentiate themselves from established manufacturers and build their own loyal customer base. Established personal aircraft manufacturers with a long history in the industry and a strong marketing presence have typically built-up higher levels of brand awareness than new entrants. New entrants to the market may struggle to build up a reputation for product quality and reliability without significant investment in product development, marketing, and customer support. Customers, particularly in the aviation industry, prioritize safety above all else. A manufacturer's safety record and reputation can greatly influence customer trust and purchasing decisions. Establishing a strong safety reputation requires a track record of producing safe and reliable aircraft, as well as implementing rigorous quality control and testing processes.

Financial strength

Aircraft manufacturing and service network establishment requires substantial upfront investment in research and development, design, production facilities, and supply chain management. Due to the nature of the personal aviation market, high initial capital is required to commercialize and build out infrastructure, and it takes time to build out financially viable aircraft. As such, established manufacturers with strong financial performance are often better positioned to weather downturns in the market, maintain high levels of R&D spending, and invest in new technologies that improve their products' competitiveness. Aircraft manufacturing is generally characterized by high fixed costs, which means that new entrants must achieve a significant scale of production to achieve economies of scale and compete on cost with established players. This often requires sustained investments over many years, which may be difficult for new competitors without strong financial backing. Additional financial capabilities are usually required by aircraft manufacturers to enable sufficient coverage of sales and aftersales network to enhance service delivery capabilities. Furthermore, the aviation industry is heavily regulated by government agencies, requiring strict adherence to safety standards, environmental regulations, and other compliance requirements. Compliance with these regulations can be expensive and time-consuming. Overall, the financial performance can be a critical entry barrier for new companies looking to enter the market. Established manufacturers with strong financial positions,

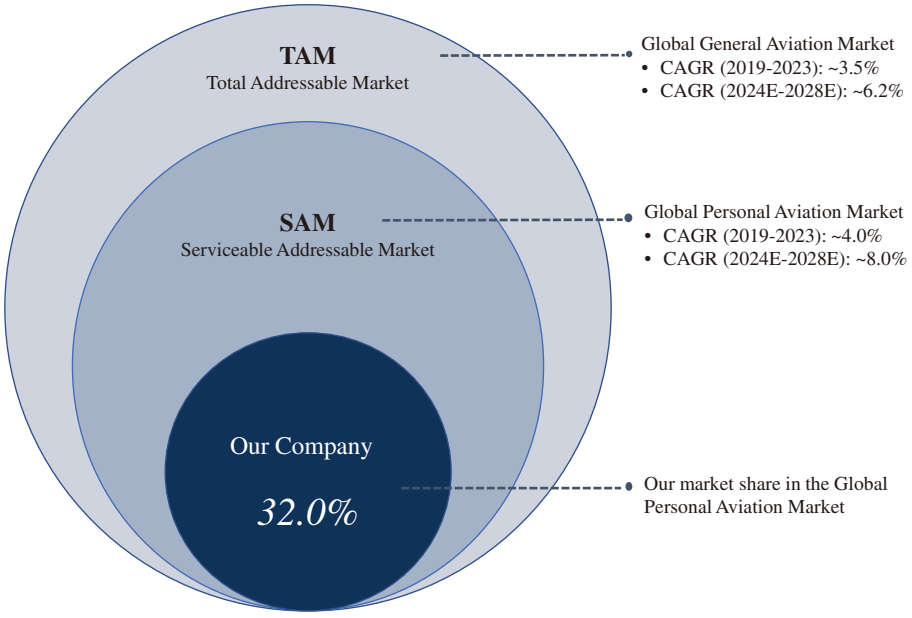
experienced management teams, and established supply chains are more likely to have the resources and experience necessary to navigate the challenges of aircraft manufacturing successfully.

Regulatory and certification expertise

Regulatory and certification expertise is a significant entry barrier for personal aircraft manufacturers because it requires a deep understanding of complex legal and technical requirements related to aviation safety. Manufacturers must comply with rigorous regulations from organizations such as the FAA in the United States or the European Aviation Safety Agency in Europe, which can involve extensive testing and evaluation processes. This expertise is critical to ensure that the aircraft meets all necessary safety standards and regulations before it can be certified for commercial use. Without this expertise, manufacturers may struggle to navigate the regulatory landscape and obtain certification, making it difficult to bring their product to market.

COMPETITIVE LANDSCAPE

Market Size Breakdown (in units delivered)



Note: Not to scale

Source: GAMA, Frost & Sullivan Analysis

According to GAMA, the scale of deliveries of general aviation aircraft globally was 3,050 in 2023. We are the largest general aviation aircraft manufacturer globally with a market share of 23.2% in 2023 based on the number of units delivered.

Ranking and market share of companies by deliveries of general aviation aircraft in global general aviation aircraft (2023)

Ranking	Company	Listing Status (Yes/No)	Deliveries in units	Market share by deliveries	Revenue in Million USD	Market share by revenue
1	Our Company[1]	No	708	23.2%	930.1	4.0%
2	Textron Aviation[2]	Yes	618	20.3%	3,615.6	15.5%
3	Diamond Aircraft[3]	No	273	9.0%	212.6	0.9%
Top three market participants			1,599	52.4%	4,758.3	20.4%
Others			1,451	47.6%	18,618.7	79.6%

Source: GAMA, Frost & Sullivan Analysis

1. Our company is a global personal aircraft manufacturer founded in 1984, primarily designing, producing and selling single-engine piston and jet.

2. Textron Aviation is the general aviation business unit of the conglomerate Textron Inc. (NYSE: TXT) that was formed in 2014. Through acquisition and integration, the company holds Beechcraft, Hawker and Cessna-branded aircraft, and offers a comprehensive product mix, encompassing business jets, turboprops, piston engine aircraft, and trainer aircraft.

3. Diamond Aircraft is a manufacturer of general aviation aircraft based in Austria with facilities in Canada and China and founded since 1981. The company specializes in the production of piston aircraft, including single engine and multi engine piston aircrafts, with majority of its products flown by private pilots, professional flight training operators and institutions.

4. Piper Aircraft Inc and TECNAM Aircraft are also leading general aviation aircraft manufacturers, which have less unit delivery or revenue with limited data availability.

The development of the personal aviation market is primarily contributed and driven by the capability in new product R&D and upgrades by key market participants. The scale of deliveries of personal aircraft globally was 2,215 in 2023, according to GAMA. We were the largest personal aircraft manufacturer in the global personal aviation market with a market share of 32.0% in 2023 based on the number of units delivered and with a market share of 24.9% in 2023 based on sales revenue.

Ranking and market share of companies by deliveries of personal aircraft in global personal aviation aircraft market (2023)

Ranking	Company	Listing Status (Yes/No)	Deliveries in units	Market share by deliveries	Revenue in Million USD	Market share by revenue
1	Our Group	No	708	32.0%	930.1	24.9%
2	Cessna Aircraft[1]	Yes	374	16.9%	564.2	15.1%
3	Diamond Aircraft	No	273	12.3%	212.6	5.7%
Top three market participants			1,355	61.2%	1,706.9	45.8%
Others			860	38.8%	2,022.0	54.2%

Notes:

1. Cessna is an American brand of general aviation aircraft owned by Textron Aviation since 2014.

2. Piper Aircraft Inc and TECNAM Aircraft are also leading personal aviation aircraft manufacturers, which have less unit delivery or revenue with limited data availability.

Source: GAMA, Frost & Sullivan Analysis

The Company competes with its competitors on the basis of price, performance and specifications as illustrated in the comparison below:

Personal Piston Aircraft Comparison						
Manufacturer	Cirrus	Cirrus	Cirrus	Cessna	Diamond	Piper
Model	SR20	SR22	SR22T	Skylane	DA62	M350 PA-46
Base Price	$626,900	$838,900	$963,900	$574,000	$1,482,000	$1,586,183
Maximum Occupants[1]	5	5	5	4	7	6
Maximum Takeoff Weight (pounds)[2]	3,050	3,600	3,600	3,100	5,071	4,340
Maximum Cruise Speed (ktas)[3]	155	183	213	145	192	213
Useful load (lbs)[4]	1,028	1,328	1,246	1,110	1,545	1,308
Takeoff Distance (ft)[5]	1,685	1,082	1,517	795	1,570	2,090
Maximum Range (nm)[6]	709	1,169	1,021	915	1,288	1,343

Personal Turbine Aircraft Comparison						
Manufacturer	Cirrus	Piper	Epic	Daher	Pilatus	Textron
Model	Vision SF 50	M600-PA-46	E1000	TBM 960	PC-12 NGX	Citation M2
Base Price	$3,240,000	$3,524,000	$4,190,000	$4,778,964	$5,716,200	$5,855,000
Maximum Occupants[1]	7	6	6	6	11	7
Maximum Takeoff Weight (pounds)[2]	6,000	6,000	8,000	n.a.	10,450	10,700
Maximum Cruise Speed (ktas)[3]	311	274	333	330	290	404
Useful load (lbs)[4]	2,450	2,400	2,860	n.a.	n.a.	3,810
Takeoff Distance (ft)[5]	2,036	2,635	2,254	2,535	2,485	3,210
Maximum Range (nautical miles)[6]	1,275	1,658	1,560	1,730	1,803	1,550

Notes:
1. Maximum Occupants refers to the maximum number of individuals, including passengers and crew members, that an aircraft is certified to accommodate.
2. Maximum takeoff weight refers to the maximum weight at which the pilot is allowed to attempt to take off.
3. Max cruise speed refers to the fastest sustainable speed at which an aircraft can be flown in normal operating conditions.
4. Useful load refers to the weight of the pilot, copilot, passengers, baggage, usable fuel, and drainable oil of the aircraft.
5. Takeoff distance refers to a horizontal distance required to take-off and climb to a specified height above the take-off surface.
6. Maximum range refers to the maximum distance an aircraft can fly between takeoff and landing.

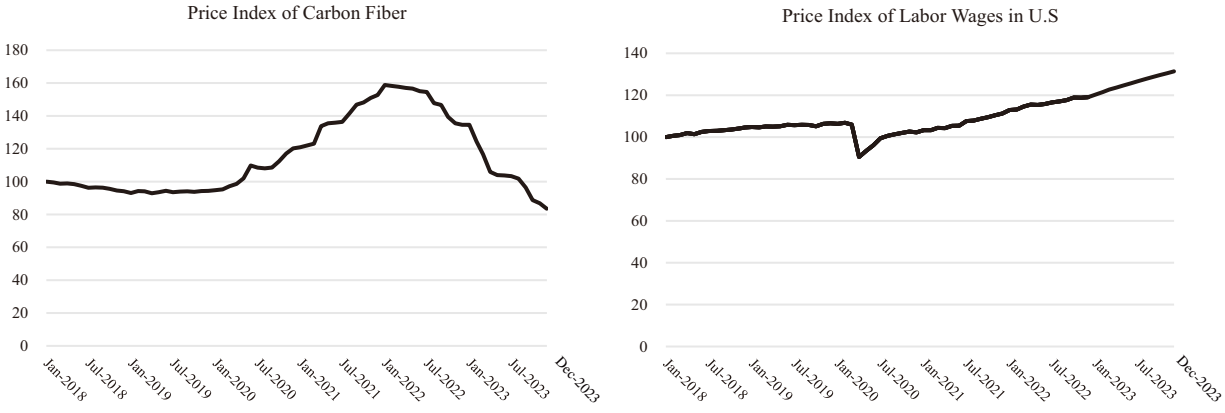
Source: Public information, Company Website, Business & Commercial Aviation, Frost & Sullivan

According to GAMA and Frost & Sullivan, our Vision Jet has been the best-selling business jet[Note] for the last six consecutive years.

PRICE ANALYSIS OF KEY RAW MATERIALS AND LABOR

Major raw materials used by personal aviation manufacturers include aluminum, titanium, and carbon fiber composites. Carbon fiber is an advanced fiber material used in the production of high-performance composite materials for aircraft. From 2019 to 2021, the increasing demand for carbon fiber in various industrial sectors, combined with disruptions in production and logistics caused by the COVID-19 pandemic, led to a consistent upward trend in carbon fiber prices. However, starting in 2022, the market experienced a shift as carbon fiber supply expanded and the raw material prices for carbon fiber declined, resulting in a downward trend in carbon fiber prices.

Labor cost is a significant component of overall costs for personal aviation manufacturers. Over the past five years, labor wages have demonstrated an upward trend. In early 2020, the outbreak of COVID-19 had a severe impact on economic activity, resulting in a significant decline in labor wages. However, as the impact of the pandemic gradually subsided and economic activity rebounded, labor wages resumed an upward trajectory. By the end of 2023, labor wages had risen by approximately 29% compared to early 2018.



Source: BAIINFO, U.S. Bureau of Labor Statistics, Frost & Sullivan analysis

Note: According to GAMA, business jets are aircraft specifically designed for business transportation, typically offering enhanced speed, range, and comfort compared to commercial airliners. They are used by corporations, individuals, and government entities for efficient travel. Business jets support significant economic activity, providing quick and flexible transportation for business purposes, which can enhance productivity and connectivity globally.