



Bin Yuan Capital All China Strategy - May 2025

Bin Yuan Opinion

The Growing Significance of Chinese Parts Manufacturers in the Global Aviation Industry

Summary and Outlook:

The latest industry data underscores a sustained surge in global aviation demand, as reflected in the growing order backlogs at Boeing and Airbus which reached 5,595 and 8,658 aircraft, respectively, by the end of 2024. However, persistent supply chain bottlenecks, particularly in core components such as forgings and castings, continue to constrain production and delivery.

Chinese manufacturers are increasingly well-positioned to address these bottlenecks, leveraging their advantages in cost control, rapid delivery capability, and technological innovation. These strengths make Chinese firms compelling candidates to become critical global suppliers, especially in the forging and casting segments, key to alleviating upstream constraints and enabling the industry to enter a new upward cycle.

Leading Players to Watch:

- GATD: demonstrates strong competitiveness through a portfolio of 69 patents, partnerships with top-tier global OEMs such as GE Aerospace and Rolls-Royce, and a 28% gross margin, outperforming many international peers
- Anhui Yingliu Group: A major player in the casting segment, with proven expertise and technological breakthroughs in gas turbine and aeroengine blade casting, further solidifying China's position in critical aviation subcomponents.

Structural Bottlenecks in Global Supply Chains of Aviation Manufacturing

Boeing and Airbus—the two dominant players in global aviation manufacturing — are grappling with a growing imbalance between surging demand and constrained delivery capabilities. Over the past few years, the production-order gap has widened. In 2023, Airbus received 2,094 net orders but delivered only 735 aircraft. Boeing recorded 1,314 net orders and just 528 deliveries. The order backlog-to-delivery ratio rose from 10.5 in 2022 to 12.7 by 2024, well above the long-term average of 9 - underscoring the persistent supply-demand imbalance and unmet market needs.

A key contributor to this mismatch is the lack of capacity expansion among major overseas component suppliers, which has been hindered by a) a shortage of skilled labor, driven by workforce attrition and limited vocational training; and b) extended facility ramp-up timelines, due to complex regulatory approvals, specialized equipment needs, and intricate manufacturing processes. These constraints have prevented OEMs from scaling production in response to surging demand.

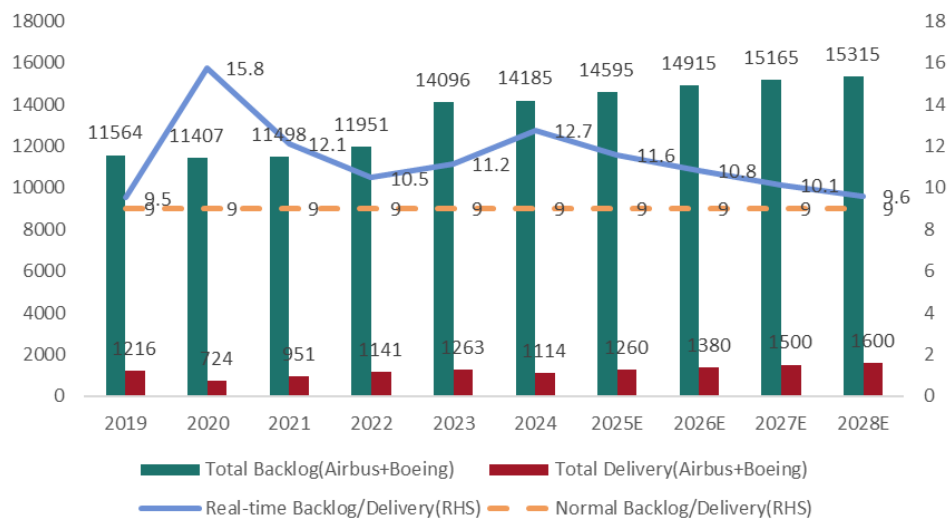


China's Pivotal Role in the Recovery Cycle

Bottleneck Mitigation through the Advancement of Chinese High-end Components

Amid global supply stagnation, China stands out as the only region significantly expanding component production capacity. This capacity boost is already supporting Boeing and Airbus in improving delivery volumes. Commercial aircraft deliveries are projected to increase from 1,114 units in 2024 to 1,600 units by 2028. This growth is expected to catalyze a new upcycle in the global aviation manufacturing sector.

Chart 1. Backlog and Delivery Ratio of Boeing and Airbus



Source: Annual Report of Boeing, Bin Yuan Capital

Chinese companies involved in aircraft component manufacturing and materials supply are uniquely positioned to benefit from this industry rebound. Their ability to alleviate global supply bottlenecks and support OEMs' delivery expansion makes them highly investable players within the global aerospace value chain.

Rising Opportunities for Chinese Aircraft Manufacturers

Amid the current global imbalance between aviation supply and demand, Chinese aircraft manufacturers like the Commercial Aircraft Corporation of China (COMAC) stand to benefit significantly from the market's unmet needs.

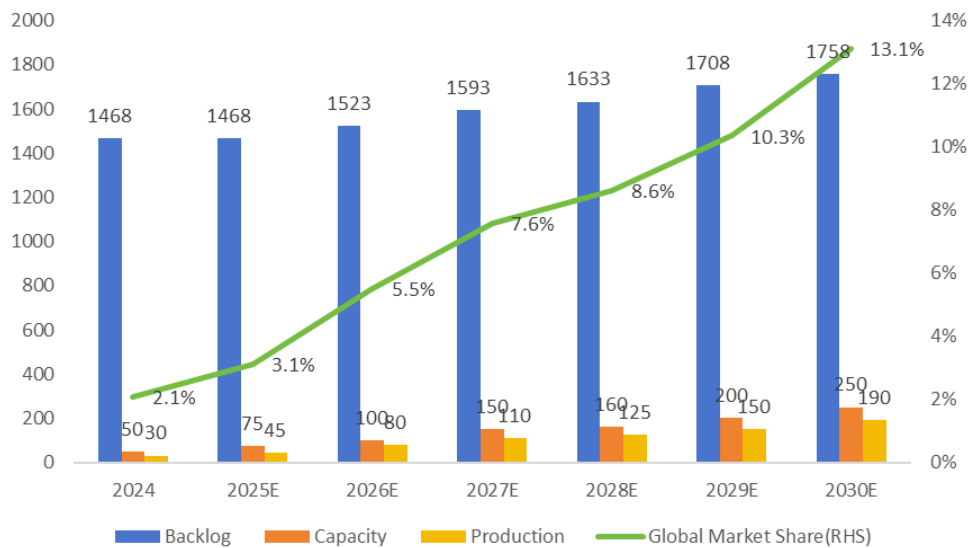
- As of February 2025, COMAC's C919 narrow-body jet had secured nearly 1,500 orders globally, reflecting robust international interest.
- COMAC plans to scale C919 production to 200 units annually by 2029, a major step toward meeting growing demand.



- The company is also advancing the C929 wide-body aircraft project, reinforcing its long-term ambition to compete with global incumbents.

As COMAC and other Chinese OEMs expand capacity and capabilities, they are expected to capture a growing share of the global market. This development underscores the strategic importance of China's aviation sector, both as a supplier of key components and as a direct competitor in commercial aircraft manufacturing.

Chart 2. Production, Backlog and Market Share Trend of Chinese Aircraft Manufacturers



Source: Bin Yuan Capital

Competitive Advantages of Chinese Component Companies in the Global Aviation Supply Chain

Due to the complexity of aircraft production and the vast number of components involved, the global aviation industry relies heavily on a highly specialized and geographically dispersed supply chain. A single commercial aircraft—such as the Boeing 787 or Airbus A350—contains over 2.3 million parts sourced from hundreds of suppliers across more than 40 countries. In this intricate ecosystem, China has emerged as an indispensable partner, leveraging its comprehensive industrial base and robust manufacturing capabilities to supply critical aerospace components efficiently and reliably.

Key Competitive Advantages:

- Cost Efficiency:** China's scale-driven production, optimized supply chains, and well-developed industrial clusters lead to manufacturing costs 25–50% lower than those of Western peers—without sacrificing quality.
- Faster Delivery Response:** With integrated logistics networks and streamlined production processes, China achieves 20–40% shorter lead times for aerospace components compared to global competitors.
- High Product Quality:** Aerospace manufacturing in China adheres to strict quality control standards, including ISO certifications, with defect rates consistently below 0.3%—matching or exceeding those in Europe and the U.S.



- **Technological Innovation:** China's aviation sector invests heavily in innovation, with R&D spending reaching 6.5% of industry revenue. This supports ongoing advancements in advanced materials (e.g., composite structures), smart manufacturing, and customization capabilities for complex aerospace systems.

Through comparative analysis across key dimensions, delivery speed, cost, quality, and innovation, China's aerospace supply chain ranks among the most competitive globally.

Table 1. Comparison of advantages for different countries

	Weight	China	US	EU	Vietnam	Mexico
On Time Delivery	30%	5	3	3	4	4
Cost	20%	5	3	3	4	4
Quality	30%	4.5	5	5	2.5	3.5
R&D capability	20%	4.5	5	5	3	3
Total	100%	4.8	4.0	4.0	3.4	3.7

Source: Annual Report of Some Listed Companies, Bin Yuan Capital

Value Chain Analysis: China's Expanding Role in Global Aviation Manufacturing

China plays an increasingly strategic role in the global aviation manufacturing value chain, with active participation across key segments—including casting, forging, airframe manufacturing, and final aircraft assembly. This evolution reflects China's shift from a component supplier to an integrated manufacturing and systems partner in the global aerospace ecosystem.

Casting: Chinese firms such as Anhui Yingliu Electromechanical have developed advanced capabilities in precision casting, specializing in superalloys and titanium alloys. These high-performance castings are used in aviation engines and structural components and are widely adopted by international aerospace manufacturers for their reliability and material strength.

Forging: Companies like GATD employ cutting-edge forging technologies to produce high-strength alloy components, including turbine rings, disks, and structural forgings. These parts are integral to both domestic and international aviation programs.

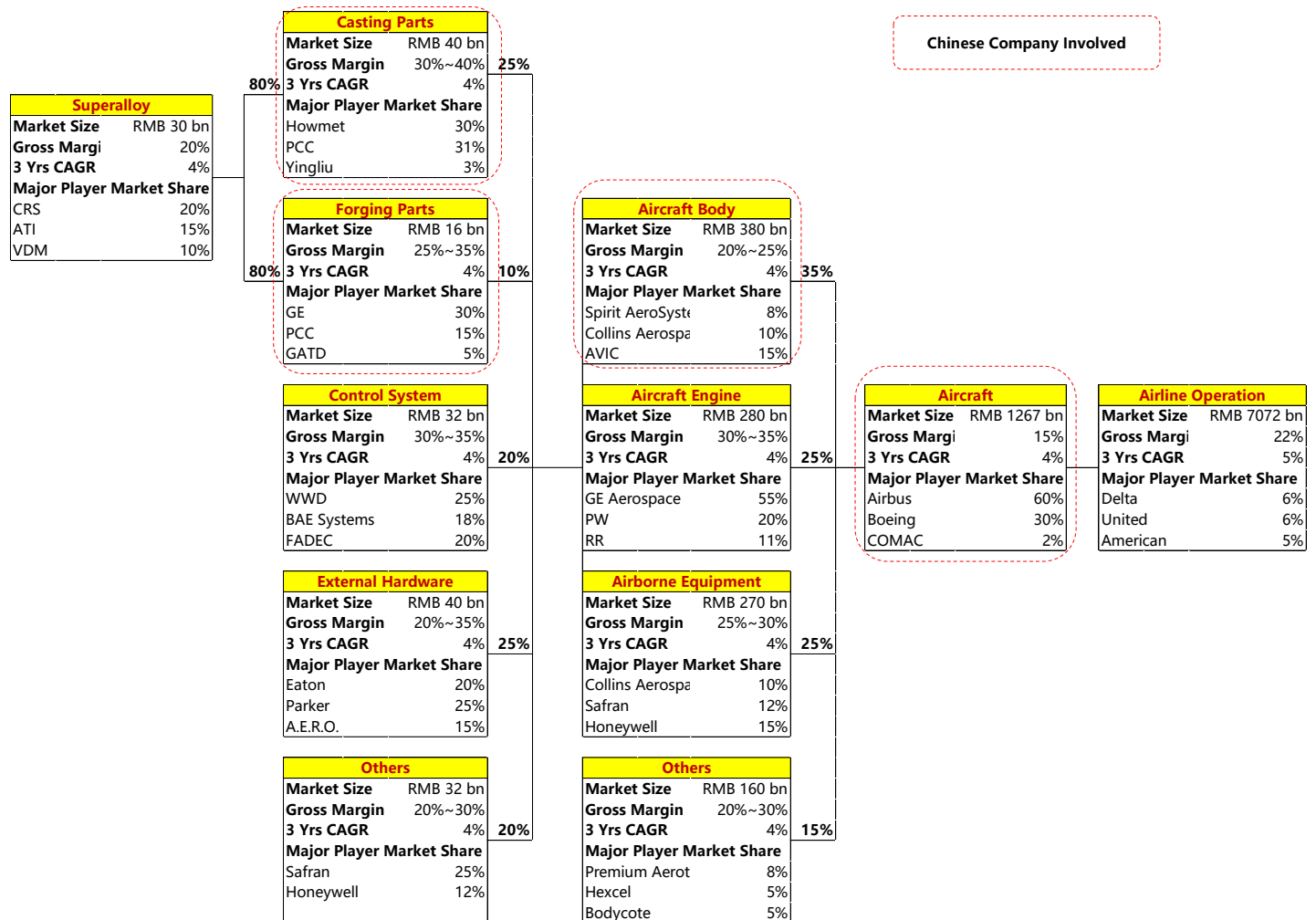
Airframe Manufacturing: Chinese aerospace firms (COMAC) contribute significantly to airframe production, including fuselage sections, wing assemblies, and composite structural components.

Final Assembly: China has also made important strides in final assembly capabilities. COMAC is leading the assembly of commercial aircraft such as the C919. Chinese firms are engaging in joint assembly projects with international aerospace companies, signifying a deeper integration of design, production, and assembly processes.



Through this end-to-end participation, from raw material processing to full aircraft integration, China is transitioning from a specialized component provider to a comprehensive aviation manufacturing hub.

Chart 3. The Value Chain of Aviation Industry



Source: Bin Yuan Capital

Our in-depth analysis highlights **casting and forging** as the most promising and investable segments for Chinese companies within the aviation manufacturing value chain.

- **Superior Profitability:** Casting and forging segments deliver gross profit margins of 25–40%, significantly higher than the 10–35% observed in other aviation manufacturing categories. This margin advantage makes these segments particularly attractive from a financial return standpoint.



- **Technological Excellence:** Chinese companies have made notable technological strides in precision casting and high-strength forging. These processes now achieve dimensional tolerances as fine as ± 0.05 mm, surpassing international standards, where tolerances of ± 0.1 – 0.2 mm remain common in other subsegments. This technological edge has enhanced China's reputation for quality and precision in aerospace applications.
- **Global Market Penetration:** More than 70% of the world's top 20 aerospace companies now source casting and forging components from Chinese suppliers. In contrast, other segments see less than 30% penetration, underscoring the relative maturity and acceptance of Chinese forging and casting firms in global supply chains.
- **Production Capacity and Scale:** China's casting and forging industry boasts an annual production capacity exceeding 5 million tons. This is 2–3 times greater than capacities in other aviation subsegments, ensuring scalability, timely delivery, and order reliability in a demand-constrained global environment

Table 2. Comparison of the Investment Opportunity for Each Segment

	Weight	Casting	Forging	Airframe	Final Assembly
Margin	25%	4.5	4	3.5	3
Technology edges	25%	5	5	3	3
Customer Recognition	25%	4.5	5	4	3.5
Capacity Readiness	25%	5	4	4	2
Total		4.8	4.5	3.8	3.0

Source: Bin Yuan Capital

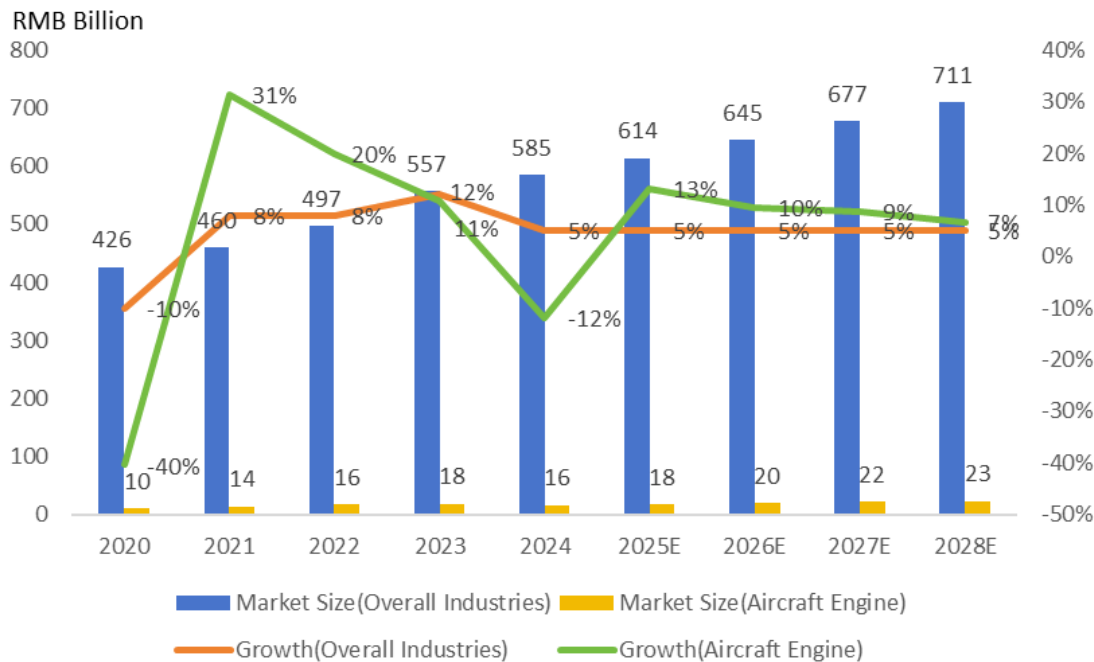
Investment Opportunities in the Forging Components Segment

The forging industry involves shaping metal materials into durable components using compressive forces, critical for manufacturing high-strength parts in various industries. Forging parts used in aircraft engines must meet stringent quality and precision requirements, constantly innovating to enhance material properties and manufacturing efficiency.

The market size of forging parts in overall industries and aircraft engine industry in 2024 is RMB 585 billion and RMB 16 billion respectively, while the growth rate in the next 4 years is 5% and 9% respectively.



Chart 4. Market Size and Growth of Forging Components in Aviation and Overall Industries



Source: Bin Yuan Capital

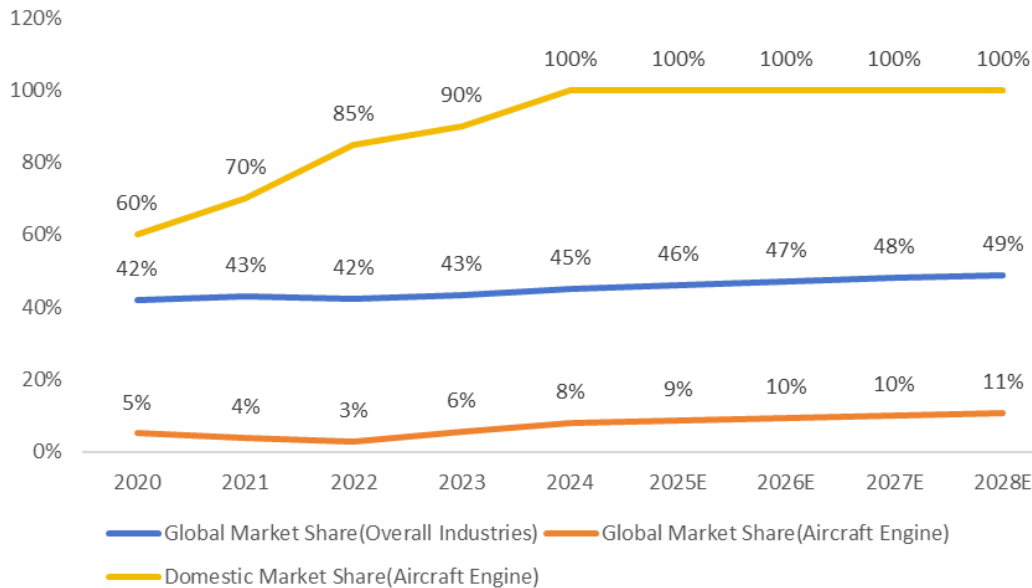
Chinese companies demonstrate significant upside potential in the aviation forging components market, with growing expectations that they will secure greater global market share in the years ahead.

In general, industrial forging, Chinese companies have already achieved a market share exceeding 45%, establishing themselves as global leaders in volume and cost efficiency. However, in the more technically demanding aviation engine forging sector, their current global market share stands at just 8%. Continued technological advancements in high-strength alloys, precision forging, and process automation and growing trust and recognition from global OEM are expected to support Chinese companies in scaling their presence in the aviation engine forging sector.

Most notably, Chinese forging enterprises have already secured a 100% market share in the domestically produced engine segment. As China ramps up production of indigenous aircraft engines in 2028, this will act as a long-term catalyst for scaling both output and technical sophistication.



Chart 5. Market Share Trend of Chinese Forging Players



Source: Bin Yuan Capital

GATD - Guizhou Aviation Technical Development (688239.SH) specializes in precision forging and machining solutions for complex, high-performance components used across aerospace, marine, gas turbine, and high-end industrial applications.

Competitive Advantages:

- 1. Technological Leadership:** GATD leverages innovative platforms such as the Guizhou Advanced Forging Engineering Technology Research Center and the Guizhou Special Alloy Precision Forging Engineering Research Center. The company has secured 69 patents, reflecting sustained R&D in new materials and advanced forging processes, strengthening both cost control and technological edge over global competitors.
- 2. Strategic Customer Base:** GATD supplies ring forgings made from various high-performance metal alloys to a prestigious group of global engine OEMs, including GE Aerospace, Pratt & Whitney, Rolls-Royce, Mitsubishi, and Honeywell. Its inclusion in the supply chains of these industry leaders underscores its technical credibility and production reliability.
- 3. Advanced Manufacturing Infrastructure:** GATD has built a fully automated intelligent manufacturing facility, ensuring efficiency from raw material cutting to final packaging and delivery. Its automation infrastructure improves both quality consistency and production scalability.
- 4. Industry Influence:** GATD contributes to the development of national and industry standards, further validating its leadership position within China's aviation forging ecosystem.

Financial Highlights and Valuation:

- Gross margin currently stands at 28%, the highest among domestic and international peers.
- The company continues to drive cost reductions and margin expansion through ongoing process innovations, with new efficiencies expected to be realized in H2 2025.
- Profit growth has outpaced peers, supported by strong demand and operating leverage.
- Based on a projected reasonable PE ratio of 20x in 2028, the company offers an upside potential of approximately 70%.

With unmatched technological capabilities, a strong customer portfolio, smart manufacturing execution, and sector-leading financial performance, GATD is well-positioned as a top-tier investment opportunity in the aerospace forging space. Its strategic role in both domestic and global supply chains underpins long-term growth potential as the aviation cycle accelerates.

Table 3. Comparison of the Forging Parts Manufacturers in Global

	Location	Gross Margin	Market Cap (RMB Billion)	3 yrs CAGR	Given PE in 2028	Upside
GATD	China	28%	6	25%	20	70%
AVICHM	China	24%	25	23%	20	20%
Thyssenkrupp	German	14%	42	15%	20	-39%
Nippon Steel	Japan	18%	151	5%	20	43%
ATI	US	20%	76	15%	20	17%

Source: Bin Yuan Capital

Opportunities in Casting Component Segments

Mirroring the forging industry, Chinese casting manufacturers are rapidly advancing in premium markets through technological innovation, increased R&D, and modern manufacturing hubs. They have achieved full localization in casting components for domestic power generation and aircraft engines and are poised to expand global share in high-end segments as production scales for domestic aerospace and power systems, solidifying their rising leadership in the global casting industry.

Anhui Yingliu Group (603308.SH) specializes in developing, manufacturing, and selling high - end casting components for special equipment, with products like pump and valve parts, power equipment components, serving industries such as aerospace, nuclear power, oil and gas, and has won many honors from international customers including GE aerospace, Caterpillar, Siemens and Emerson.



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Sincerely,

Ping and the Team

June 6, 2025



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Bin Yuan on the Road

June 3, 2025



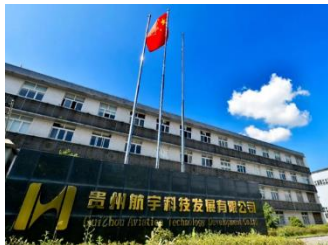
We attended Xiaomi's Investor Day event in Beijing and held in-depth discussions with the management team.

Management shared updates on the company's business progress and future plans. The smartphone and auto business has moved upmarket successfully, earning consumer trust. The IoT business is growing fast, creating value for users by making products smarter with technology.

Xiaomi's future strategy: strengthening technological capabilities, elevating the brand premium, expanding global markets, and building an integrated ecosystem. By converging software and hardware, the company will continue to empower the interconnected "Human-Vehicle-Home" ecosystem, establishing long-term differentiated advantages. We anticipate Xiaomi will sustain growth and create significant value.

"Strong winds reveal tough grass; long journeys test a horse's strength." With more time, I'm confident Xiaomi will deliver even better results. - Founder of Xiaomi, Lei Jun

May 20, 2025



We visited GATD's new factory in Deyang city of Sichuan province in May and had a conversation with the company's Vice General Manager Mr. Zhang.

We did the visit to verify that the capacity utilization of the company's new factory is increasing rapidly because of the demand recovery. Mr. Zhang mentioned the new factory has been operating at full capacity for the past few months, and the accumulated technology on material and manufacturing process helped GATD to improve the production efficiency and reduce the cost to outperform its foreign peers. Besides, the company is planning to build new factory in Europe to enhance the company's competitiveness in overseas markets.

"GATD's objective is to become a leading component forging enterprise in the global aviation industry." –Vice General Manager, Mr. Zhang

May 15, 2025



We attended China International Medical Equipment Fair (CMEF) to learn about the latest development of medical equipment in China and the strategies of various companies.

At this year's exhibition, domestic manufacturers highlighted products in two key directions: one of which is high-end, such as Wandong's world-leading helium-free MRI, United Imaging's first domestic photon-counting CT, Yuwell's upgraded CGM Anytime 5, as well as surgical robots from Weijing (Kangji) and Medbot. The other direction is the theme of medical AI, which includes Mindray's AI life monitoring system, AI imaging support from various medical imaging companies, and Yuwell's AI Glucose Assistant integrated with CGM demonstrate manufacturers' commitment to AI-driven healthcare.

"With AI assistance, doctors can not only locate lesions faster but also avoid missing critical information." – Sales representative from Wandong

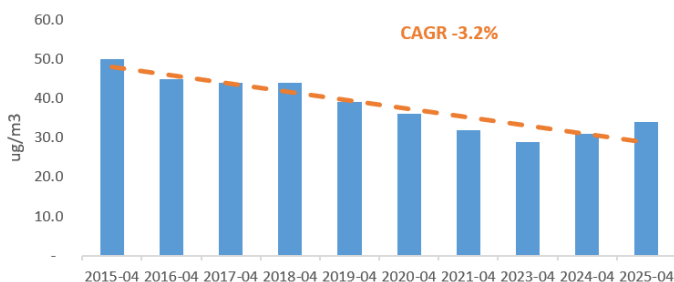


Binyuan Environment Tracking

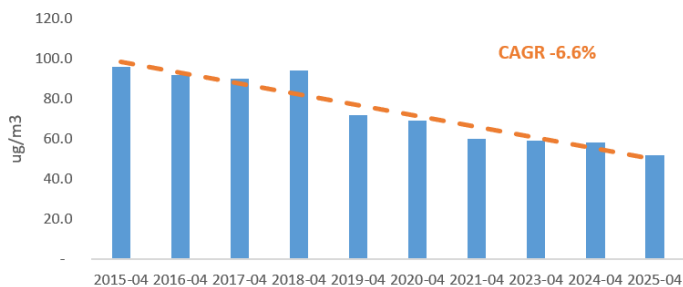
This tracking includes monthly air and water quality data, both showed steady improving trend in the last 5 years. Air pollution concentration dropped due to reduced coal combustion, increased proportion of new energy vehicles, and tightened emission control measures. Water quality improved mainly from the strengthened control of wastewater emissions since 2017.

China air pollutant concentration data June 2017-2025

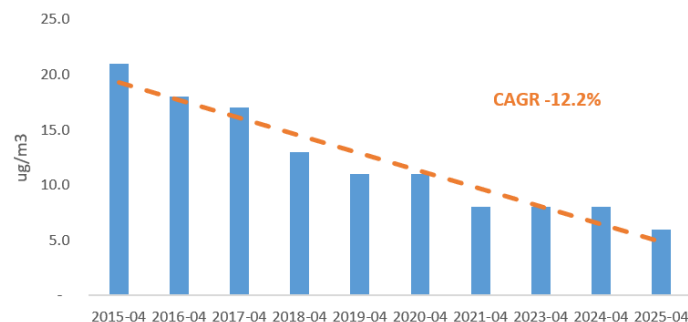
PM2.5 Average Concentration (74 Cities)



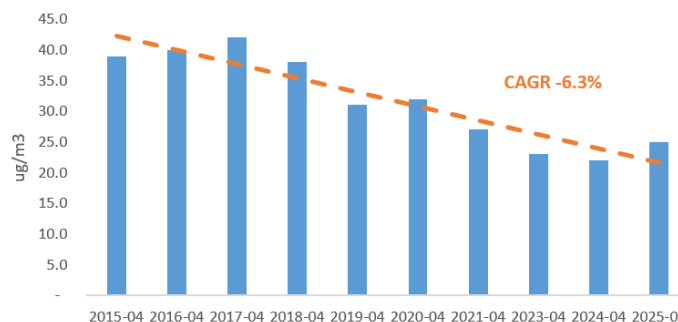
PM10 Average Concentration (74 Cities)



SO₂ Average Concentration (74 Cities)



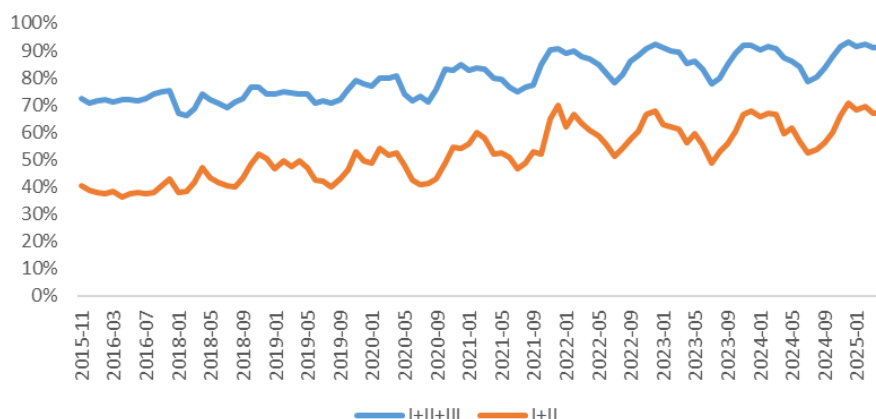
NO₂ Average Concentration (74 Cities)



*PM_{2.5}, PM₁₀ and SO₂ are mainly from fossil fuel combustion, and NO₂ is mainly from vehicle emissions.

The proportion of high-quality water in China data June 2016-2025

Proportion of High Quality Surface Water



*Water quality in China breaks down to 5 levels, with level I being the best and level V being the worst. Level I+II represents water that can be used for drinking purpose. Level I+II+III represents water that can directly contact human body.



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