
INDUSTRY OVERVIEW

The information and statistics set out in this section and other sections of this document were extracted from different official government publications, available sources from public market research and other sources from independent suppliers, and from the independent industry report prepared by Frost & Sullivan. We engaged Frost & Sullivan to prepare the Frost & Sullivan Report, an independent industry report, in connection with the [REDACTED]. The information from official government sources has not been independently verified by us, the [REDACTED], Joint Sponsors, [REDACTED], [REDACTED], any of the [REDACTED], any of their respective directors and advisers, or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy. Accordingly the information from official government sources contained herein may not be accurate and should not be unduly relied upon.

SOURCES OF INFORMATION

The Company commissioned Frost & Sullivan, an independent market research and consulting company, to conduct an analysis of the cloud service industries in China as well as all over the world.

Frost & Sullivan is an independent global consulting firm, founded in 1961 in New York. It offers industry research and market strategies and provides growth consulting and corporate training. It has over 40 offices worldwide with over 2,000 industry consultants, market research analysts and economists. We are contracted to pay a fee of RMB700,000 to Frost & Sullivan in connection with the preparation of the F&S Report.

During the preparation of the market research report, Frost & Sullivan performed both (i) primary research, which involved in-depth interviews with leading industry participants and industry experts; and (ii) secondary research, which involved review of company reports, independent research reports and data based on Frost & Sullivan’s own research database. Projected data was obtained from historical data analysis plotted against macroeconomic data with reference to specific industry-related factors. Unless otherwise noted, all of the data and forecasts contained in this section are derived from the F&S Report, various official government publications and other publications. The F&S Report was compiled based on the following assumptions: (i) China’s economy is likely to maintain a steady growth in the next decade; (ii) China’s social, economic and political environment is likely to remain stable in the forecast period from 2021 to 2026, which ensures the stable and healthy development of the China’s cloud service industries; and (iii) COVID-19 pandemic will affect the global economy stability in the short term. Our Directors confirm that after taking reasonable care, there has been no material adverse change in the overall market information since the date of the F&S Report that would materially qualify, contradict or have an impact on such information. The reliability of the F&S Report may be affected by the accuracy of the foregoing assumptions and factors.

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INTRODUCTION OF CLOUD SERVICE

Cloud services offer on-demand access to a shared pool of configurable computing and storage IT resources which can be readily deployed and easily scaled. It is one of the world’s fastest growing IT industries, according to Frost & Sullivan, with a growth CAGR of 20.8% from 2017 to 2021. As the world is marching towards the era of digital transformation, cloudization, which refers to the process of cloud adoption, becomes an inevitable process for enterprises and organizations. According to Frost & Sullivan, the market size of global cloud service increased from US\$260.2 billion in 2017 to US\$554.8 billion in 2021 and will further reach US\$1,323.0 billion in 2026. With the benefits of cloudization continuing to manifest in different industries, the cloud service market is expected to continue its strong growth in the future.

Historically, enterprises invested in in-house IT infrastructure and equipment to support the growing needs for computing, storage and delivery resources. However, these traditional IT models created massive complexity, cost, technical debt, and a tangled web of dependencies for enterprises. In recent years, with the trending of digital transformation, the enterprise-level technology industry has undergone a massive transition from in-house hardware and software to on-demand cloud services. This transition is driven by a wide variety of benefits that cloud service offers, compared with the traditional IT model:

- **Cost reduction.** Cloud services significantly reduce enterprises’ upfront capital expenditures and ongoing expenses for purchasing, installing, maintaining, and upgrading their own IT infrastructure. Instead of hiring, training, and managing professional staff that operate and maintain IT models, enterprises can entrust these tasks to professional cloud services providers and enjoy instant, reliable, and cost-efficient services on a pay-as-you-go basis.
- **Agility, scalability and reliability.** Enterprises’ storage and computing demand varies from time to time as they proceed to different development stages. Cloud services allow enterprises to scale up or down their capacity in response to their demands flexibly and timely. Instead of upgrading or downgrading their own IT infrastructure, which may be time- and cost-consuming, enterprises can rely on cloud service providers for ready-to-use cloud capacity that fulfills their varying commercial needs. Underpinned by the latest and secured IT resources, cloud service providers deliver consistent and reliable high-performance services with added benefits on data protection and disaster recovery.
- **Technological innovation.** Cloud technology is a new approach to create and build next generation applications, unlocking the potential for solutions that traditional IT models cannot offer, including big data analytics, machine learning, edge computing and beyond.

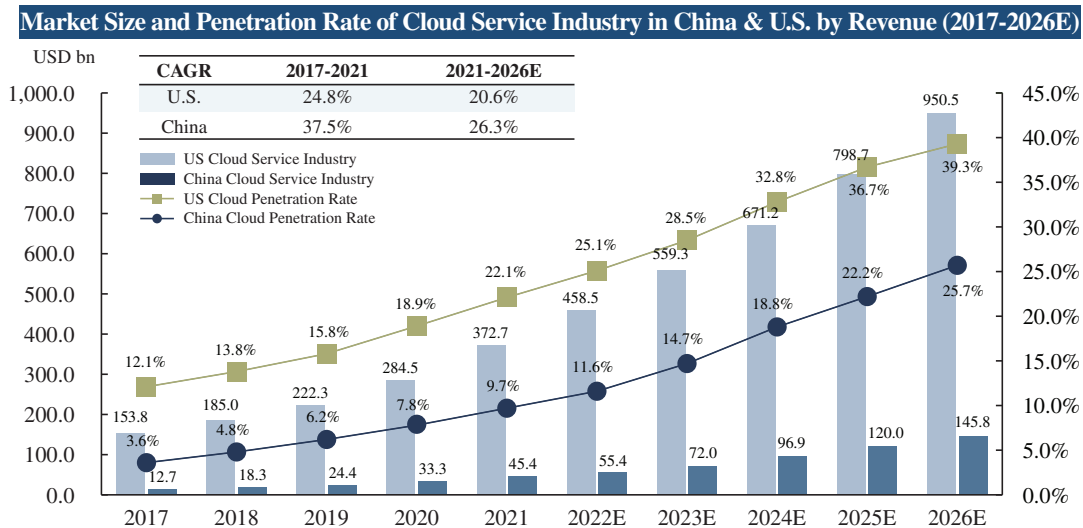
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OVERVIEW OF THE U.S. AND CHINA’S CLOUD SERVICE MARKET

The cloud service market has been undergoing strong and steady growth since 2014 with the U.S. being the largest market and China replacing European Union becoming the second largest market in the world since 2018, according to Frost & Sullivan.

Compared to the U.S. cloud service market, the Chinese market is still at a relatively early stage with tremendous potential, given its relatively lower cloud service penetration rate and multi-cloud deployment rate and, as a result, its smaller market size. According to Frost & Sullivan, the size of U.S. cloud services market increased from US\$153.8 billion in 2017 to US\$372.7 billion in 2021, representing a CAGR of 24.8%, and is expected to reach US\$950.5 billion in 2026, representing a CAGR of 20.6% from 2021 to 2026. The Chinese market size increased from US\$12.7 billion in 2017 to US\$45.4 billion in 2021, representing a CAGR of 37.5%, and is expected to reach US\$145.8 billion in 2026, representing a CAGR of 26.3% from 2021 to 2026. While the cloud services as a percentage of total IT spending in the U.S. was 12.1% and 22.1% in 2017 and 2021, respectively, and is expected to reach 39.3% in 2026, the same percentage in China was 3.6%, 9.7%, respectively, and is expected to reach 25.7% in 2026.

The below chart shows the market size and penetration rate of cloud service in the U.S. and China:

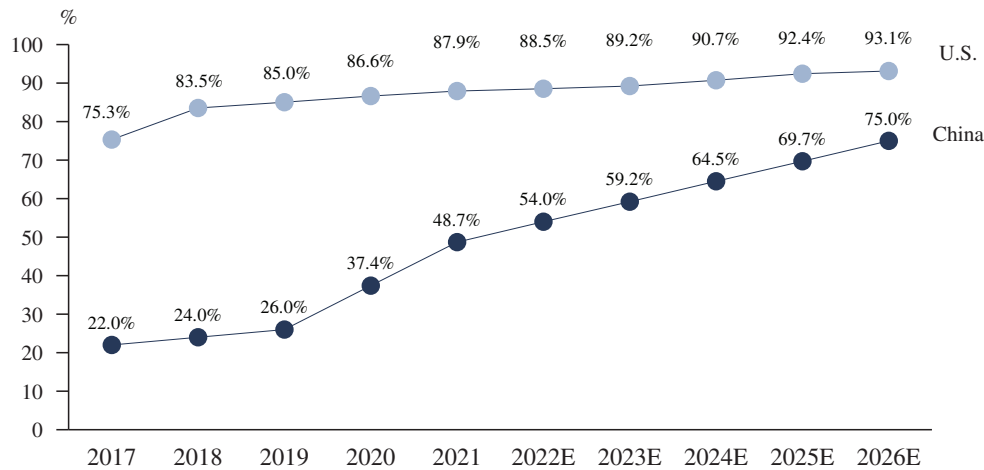


Source: Frost & Sullivan Report

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Driven by the need to prevent data loss and downtime due to localized component failure in a single cloud, to ensure continued high-quality performance, to reduce latency by geographical distribution of processing requests and to minimize the dependency on a single cloud service provider, and in light of the evolving regulatory environment, multi-cloud deployment becomes an essential trend in China. In 2021, while 87.9% of enterprises with over 1,000 employees deployed multi-cloud in the U.S., only 48.7% of those in China were doing the same. China’s multi-cloud deployment rate is expected to further increase to 75.0% in 2026, approaching that in the U.S., being expected at 93.1%.

Multi-Cloud Deployment Rate of Cloud Service Industry in China & U.S. (2017-2026E)



Source: Frost & Sullivan Report

Note: Multi-cloud deployment rate is calculated among enterprises with over 1,000 employees.

According to Frost & Sullivan, the key difference between the cloud service markets of China and the U.S. in development is the maturity level of IT infrastructure. While the U.S. developed its cloud service market with a first mover advantage, building on its relatively mature IT infrastructure with low telecommunication costs, high network penetration, high broadband penetration, and advanced R&D integration, China started to construct its IT infrastructure and cloud service market simultaneously at a relatively later stage with a higher demand for dedicated and local cloud deployment. However, as cloud service markets in both the U.S. and China are driven by fast development of the internet industry and digital transformation of enterprises (initially internet enterprises, currently also traditional enterprises and public service organizations), the two cloud service markets present certain similarities:

- Cloud infrastructure businesses, such as computing and storage, are the primary business of leading cloud services companies in the U.S. and China, with similar growth rates and long-term steady-state margins.
- Public cloud contributes the bulk of growth, with an overall trend towards multi-cloud deployments.

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- The scale of dedicated deployment of cloud service continues to grow as traditional industries deepen their digital transformation, becoming a focus for cloud service providers.
- Leading cloud service vendors have accumulated their market shares, and are expected to continue to acquire market shares, especially for public cloud.

In summary, China’s cloud service market resembles the technical and macro-environmental foundations similar to that of the booming U.S. cloud service industry and is developing rapidly.

CHINA’S CLOUD SERVICE MARKET

According to Frost & Sullivan, based on the industries and verticals of customers, China’s cloud service market could be divided into (i) services for internet enterprises, or internet cloud service market, and (ii) services for non-internet enterprises, mainly traditional enterprises and organizations.

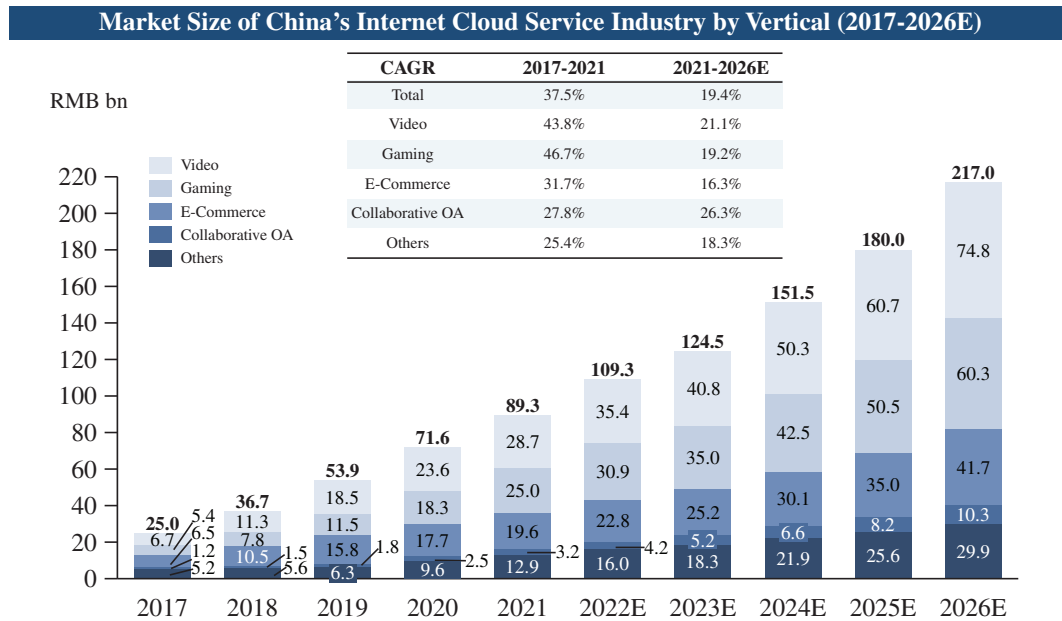
China’s Internet Cloud Service Market

Internet cloud refers to cloud services provided to internet companies, including video, gaming, e-commerce, collaborative office automation and others. The massive data demand of the internet industry is one of the main drivers of China’s cloud service market. The internet enterprises adopt cloud services early, and the percentage of companies choosing cloud service is higher than that of other industries. The cloud service penetration in enterprises is measured by the number of enterprises that have implemented cloud service (either private or public) divided by the total number of enterprises.

The internet cloud service market in China grew from RMB25.0 billion in 2017 to RMB89.3 billion in 2021, with a CAGR of 37.5%. With the increasing number of internet companies adopting cloud services and the growing expenditure on cloud computing, the internet cloud service market in China is expected to reach RMB217.0 billion in 2026, representing a CAGR of 19.4% from 2021 to 2026.

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The following chart sets forth the market size and growth of China’s internet cloud service market and its sub-sectors:



Source: Frost& Sullivan Report

Note: Due to rounding, numbers may not add up precisely to the totals.

China’s Non-internet Cloud Service Market

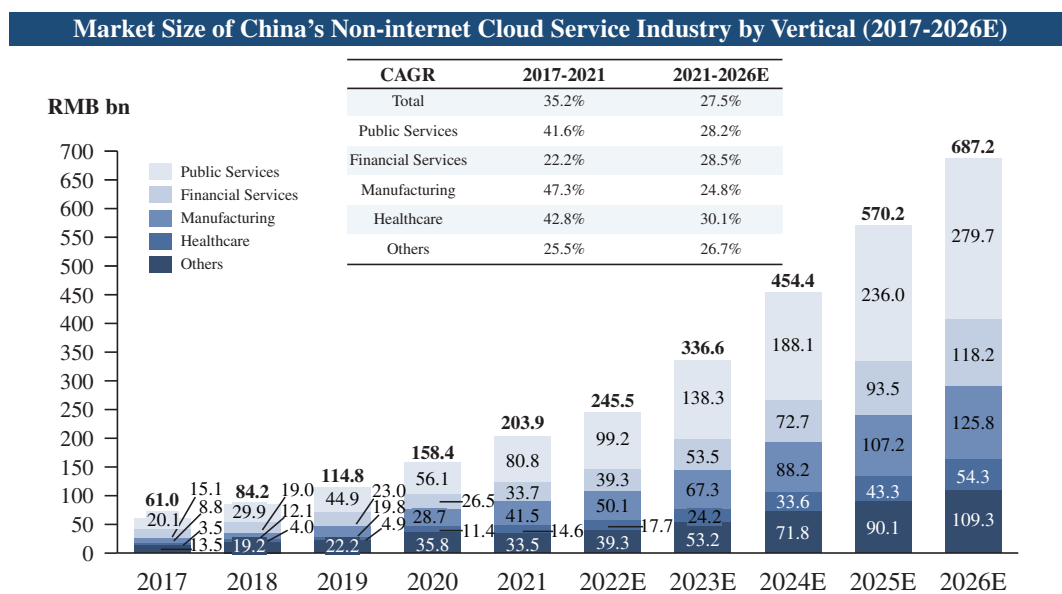
Non-internet cloud service mainly refers to the utilization of cloud technology to aid traditional non-internet enterprises and organizations in carrying out digital transformation. Due to their complicated operation structure and process, they generally have higher demand for compatibility, reliability, privacy, and security on cloud products with dedicated services and customized local deployment.

Since 2015, the State Council of the People’s Republic of China and Ministry of Industry and Information of the People’s Republic of China have published various policies and instructions to facilitate cloud technology and cloudization in China, especially for traditional enterprises and organizations. Following the deepening process of digital transformation, cloud technology continues to integrate with the daily operations of traditional enterprises and organizations, and the adoption of dedicated services provided by cloud vendors evolved as an inevitable trend for their digital transformation. To seize the opportunities of this trend, cloud service providers must be able to migrate, build, manage, and operate the exclusive cloud service in multiple regions for traditional clients and to satisfy their strong demand for data security and advanced technical support. As China’s non-internet enterprises start to embrace cloudization, cloud service providers with dedicated and full-stack deployment capacity have become customers’ primary choice.

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In 2021, the cloud service penetration rate among non-internet enterprises in China was only 26.8%, as compared to 93.5% among internet enterprises. As traditional non-internet industries, such as public services, financial services, manufacturing, and healthcare, start to tap into the agility, flexibility and scalability of cloud service, the massive demand further drives the development of the non-internet cloud service market. The market size increased from RMB61.0 billion in 2017 to RMB203.9 billion in 2021, representing a CAGR of 35.2%, and is expected to reach RMB687.2 billion in 2026, representing a CAGR of 27.5% from 2021 to 2026.

The following chart sets forth the market size and growth of China’s non-internet cloud service market and its sub-sectors:



Source: Frost & Sullivan Report

Note: Due to rounding, numbers may not add up precisely to the totals.

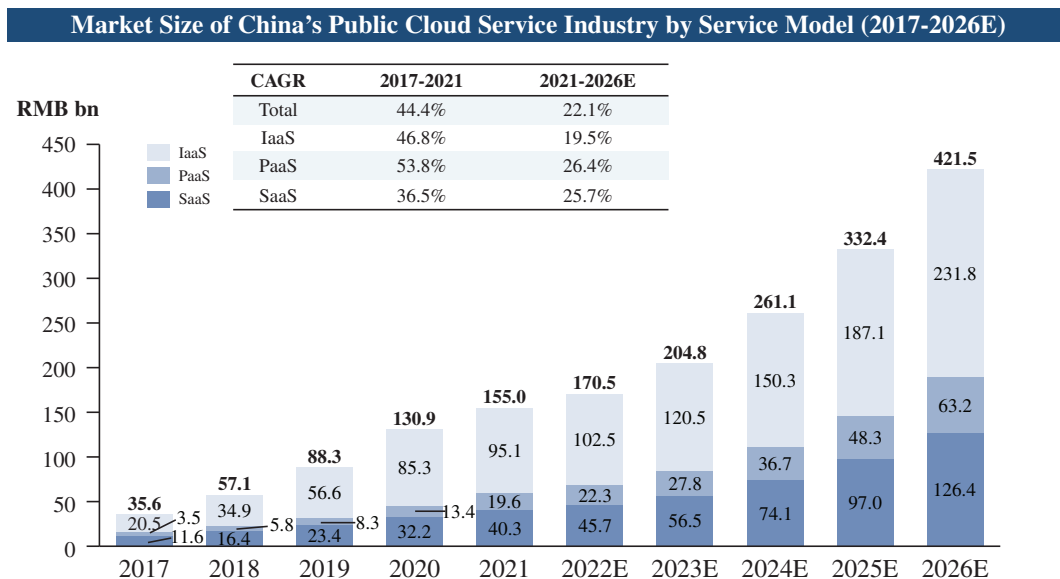
China’s Public Cloud Service Market

Public cloud is a crucial part of China’s overall cloud service market and has been experiencing significant growth since 2014, primarily due to the rapid growth and expansion of Chinese internet enterprises. According to Frost & Sullivan, it is one of the fastest growing cloud service markets in the world in terms of market growth CAGR from 2017 to 2021. The market size of public cloud in China has increased from RMB35.6 billion in 2017 to RMB155.0 billion in 2021, representing a CAGR of 44.4%, and is expected to reach RMB421.5 billion in 2026, representing a CAGR of 22.1% from 2021 to 2026.

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The public cloud service market can be further divided into three sub-sectors, namely Infrastructure-as-a-Service (“IaaS”), Platform-as-a-Service (“PaaS”) and Software-as-a-Service (“SaaS”). China’s cloud service market is still fast growing with tremendous number of enterprises migrating from traditional IT models to cloud services. As a result, IaaS has experienced significant growth in the past few years and forms the largest part of the public cloud service market in China. Looking forward, as enterprises demand higher level of digital transformation services, essential demand for IT infrastructure and IaaS remain as a main growth driver of China’s public cloud service market. Leading IaaS players, leveraging their extensive infrastructure, advanced cloud technology, and transferrable customer base, are better positioned to extend their spectrum of services to PaaS market and the above application layers.

The following chart sets forth the market size and growth of China’s public cloud service market and its sub-sectors:



Source: Frost & Sullivan Report

Note: Due to rounding, numbers may not add up precisely to the totals.

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KEY GROWTH DRIVERS OF CHINA’S CLOUD SERVICE MARKET

The following factors are expected to drive the development and growth of China’s cloud service market, according to Frost & Sullivan.

- ***Massive, high-growth demand from internet verticals.*** The internet penetration has been increasing in China, with an increasing number of mobile users. A wide spectrum of business is transforming themselves to offer internet-based services to their customers. In particular, verticals such as video, gaming, and e-commerce have been rising, driving further demand for cloud resources. Demands for internet cloud services in these verticals are expected to continue to grow in the future.
- ***Increasing penetration in traditional enterprises and organizations.*** Cloud service penetration is expected to increase in traditional enterprises and organizations. Customers in traditional industries in China are starting to recognize the benefit of cloud services and are incentivized to migrate to the cloud given the advantages of cost-saving, security and productivity. According to Frost & Sullivan, in 2021, while 56.7% of traditional enterprises and organizations in the U.S. were using cloud services, only 26.8% of those in China were doing the same. As digital transformation continues in traditional industries such as healthcare, manufacturing and automobile, cloud service providers in China are well positioned to seize the significant opportunities brought by the migration to cloud of traditional enterprises and organizations. Notably, China’s automotive industry is booming demand for cloud services, with the increasing cloud service penetration in automobile manufacturing, autonomous driving, and R&D. According to Frost & Sullivan, the market size of China’s cloud service market by intelligent automotive industry was RMB1.8 billion in 2021 and will reach RMB36.3 billion in 2026, representing a CAGR of 81.8% from 2021 to 2026.
- ***The large-scale launching of new technologies like 5G, AI, VR/AR and IoT.*** The deployment of 5G technology provides internet and mobile users with significantly higher transmission speed and considerable reduction of latency. Such improvement empowers the wide adoption of AI applications by enabling the large amount of data computing and processing involved in the development of deep learning and application of AI functions to terminal devices. Together, the new technologies become the driving force for IoT as they allow fast data transmission, elastic computing resource, great interconnectivity and control of devices, therefore creating demand for cloud services.

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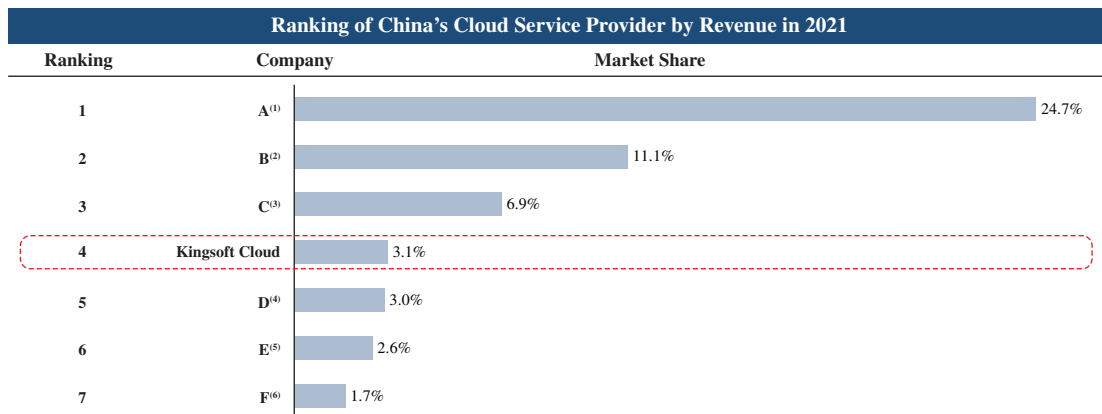
- ***Requirement for dedicated industry specific cloud services.*** Chinese enterprises have strong demand for cloud products with dedicated services. As cloud service vendors start to provide customized and full-stack cloud deployment, a higher demand of vertical-specific cloud services has evolved. Well-architected vertical-specific cloud solutions that can serve clients’ requirement from IaaS, PaaS to higher application cloud layers, with full-stack, stable, flexible, dedicated, and local customized local cloud deployment capacity will continuously capture the market.
- ***Favorable government policies for the development of cloud services.*** The Chinese government has prioritized the development of cloud services in recent years, according to Frost & Sullivan. Since the beginning of the 12th Five-Year Plan (2010-2015), a huge amount of investment has been made in cloud service industry, and is expected to further increase during the 14th Five-Year Plan (2021-2025). In 2019, the Chinese government promoted the concept of Internet Plus public service, encouraging public service organizations to adopt cloud services in their digital transformation, which once again recognized the strategic importance of cloud services to China’s economy.
- ***Higher requirement on data compliance, data loss prevention, and non-conflict of interest.*** Policies such as Cybersecurity Review Measures promulgated by the CAC and several other PRC governmental authorities in December 2021, and officially implemented in February 2022, have accelerated enterprises’ increasing adoption of cloud applications to fulfill the core demands of data compliance and security, expanding the deployment of cloud services to a wider range of industries in China. Meanwhile, requirement on neutrality and data loss prevention will further drive the market through increasing needs for dedicated and multi-cloud deployment.
- ***Demand for internet infrastructure construction.*** With the continuous optimization of network infrastructure construction to support enterprises’ internet related development, more cloud applications are in turn to be involved. In 2018, the Central Economic Work Conference firstly promoted the New Infrastructure Construction to facilitate the development of IT infrastructure including cloud computing. In December 2021, the Chinese government released the Digital Economy Development Plan in the 14th Five-Year Plan period (2021-2025) to enhance the construction of digital infrastructure to achieve the world’s leading level. These policies and investments will further stimulate the growth of China’s cloud service market.

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- Accelerated digitalization amid COVID-19.** Since 2020, the global outbreak of COVID-19 has fundamentally transformed the way people live and the way enterprises operate. The pandemic accelerates the digital transformation and therefore facilitates enterprises to prioritize their IT expenditure on cloud services. As a result, a faster than expected trend of offline to online deployment emerged among enterprises will further accelerate the development of the cloud service market.
- Overseas expansion.** As Chinese enterprises tap into overseas markets, cloud network and infrastructure will expand globally as well. Given the relatively intense competition environment in the U.S. and Chinese market, emerging markets become the new focus of Chinese enterprises’ overseas expansion, representing significant growth potentials for cloud service providers in China.

COMPETITIVE LANDSCAPE

With the presence of a few major players, the cloud service market in China is relatively concentrated. The total market size by revenue of cloud services in China reached RMB293.3 billion in 2021. The aggregate market share of the top seven players in China’s cloud service market was 53.0% in 2021. Among all the players, Kingsoft Cloud ranked largest independent cloud service provider in China and fourth largest cloud service provider in China with a market share of 3.1%. Independent cloud service providers refers to service providers that do not belong to any large-scale conglomerates that are involved in a wide range of businesses where they could potentially compete with their customers.



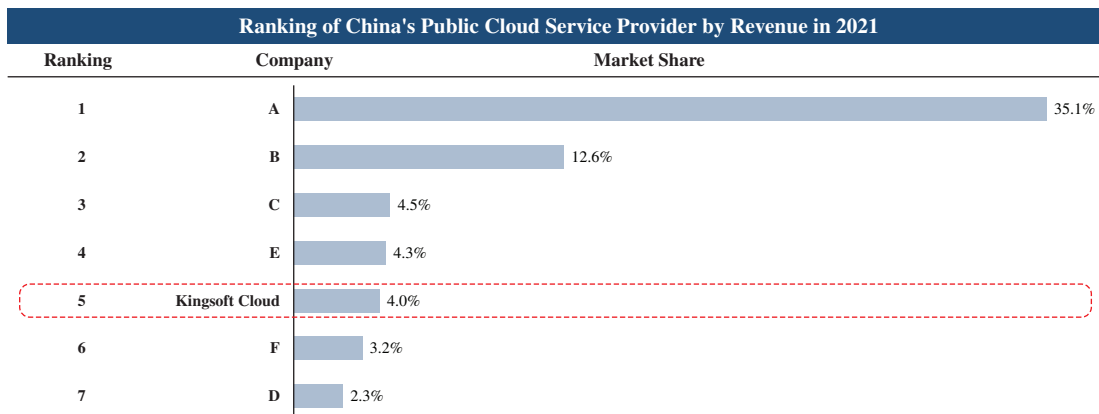
Source: Frost & Sullivan Report

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Notes:

- * Kingsoft Cloud is the only independent cloud service provider among the top seven players in China’s cloud service market in 2021, according to Frost & Sullivan. The other six players are generic internet and/or technology companies that offer a broader suite of products and services including cloud services.
- (1) Company A, headquartered in Hangzhou, is a leading technology company specializing in retail, consumer services and technology solutions. Its cloud business primarily consists of cloud computing solutions providing based on cloud server, cloud database, and cloud storage.
- (2) Company B, headquartered in Shenzhen, is a leading technology company that provides internet-related services and solutions that cover areas including entertainment, artificial intelligence and other technologies. Its cloud sector mainly includes cloud computing, big data and industry-specific solutions.
- (3) Company C, headquartered in Shenzhen, is a leading technology company which primarily designs, develops and sells telecommunication solutions and consumer electronics. Its cloud segment mostly provides products including elastic cloud server, cloud database, and scenario-based solutions.
- (4) Company D, headquartered in Beijing, is a leading telecommunication company. Its cloud business principally offers cloud computing services including cloud hosting, CDN, big data, and industry-based solutions.
- (5) Company E, headquartered in Beijing, is a leading internet platform specializing in internet-related services and AI solutions. Its cloud segment mostly focuses on cloud computing and provides services related to cloud server, cloud hosting, cloud storage, and CDN.
- (6) Company F, headquartered in the U.S., is a leading technology company specializing in retail, consumer services and on-demand technology services, including compute, storage, database, analytics, machine learning, and other services. Its cloud business chiefly offers cloud computing and cloud-based solutions.

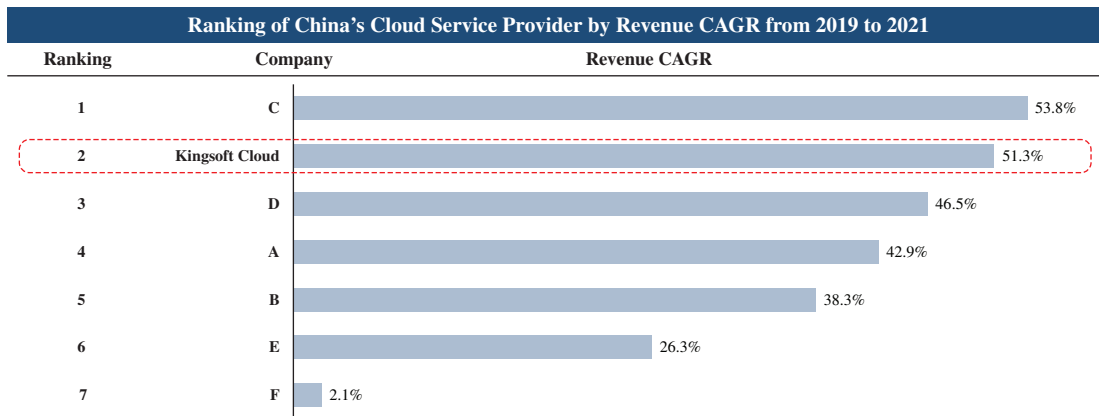
In terms of public cloud service, Kingsoft Cloud ranked the top five largest public cloud service provider with the second fastest public cloud revenue CAGR and increasing market share from 2019 to 2021, according to Frost & Sullivan. In 2021, the market size of China’s public cloud reached RMB155.0 billion. The aggregate market share of the top seven players in China’s public cloud service market in terms of revenue was 66.0% in 2021. Among all the players, Kingsoft Cloud ranked the fifth largest public cloud service provider with a market share of 4.0% in 2021 and the largest independent cloud service provider.



Source: Frost & Sullivan Report

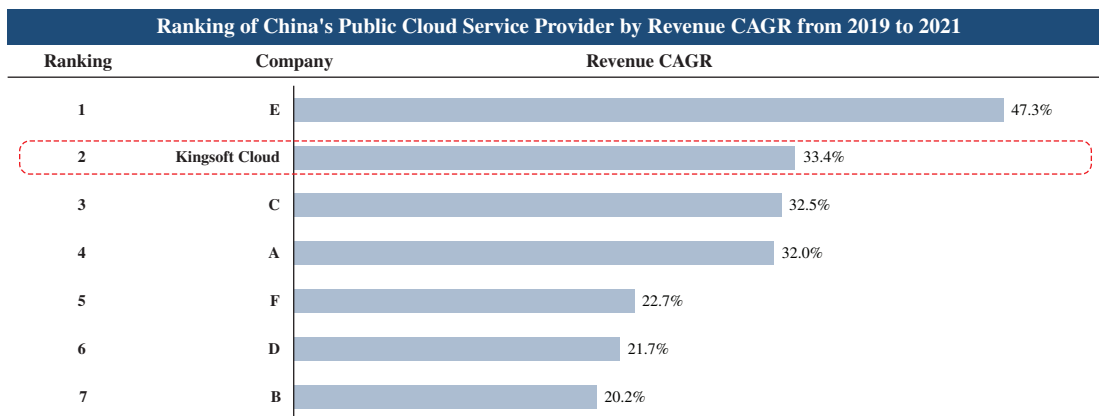
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In terms of total cloud service revenue CAGR from 2019 to 2021, Kingsoft Cloud ranked as the second, with a CAGR of 51.3% among major leading cloud service providers in China.



Source: Frost & Sullivan Report

In terms of public cloud service revenue CAGR from 2019 to 2021, Kingsoft Cloud also ranked as the second, with a CAGR of 33.4% among major leading public cloud service providers in China.



Source: Frost & Sullivan Report

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KEY ENTRY BARRIERS

Similar to the U.S., the cloud service market in China has been undergoing consolidation. Incumbents have established significant competitive advantages against potential entrants. According to Frost & Sullivan, key entry barriers include:

- ***Ability to serve enterprise customers and enhance customer stickiness.*** Scaled players have built the capability to serve enterprise customers which are generally sticky. The capability is continuously underpinned by knowledge of client industry, premium service delivery, advanced technology, and extensive infrastructure qualification. Enterprises are likely to stick with their existing cloud service provider and increase procurement as business grows to avoid potentially significant transfer and adaption costs associated with changing cloud service providers.
- ***Capacity to provide in-house cloud-native technology and solutions.*** Cloud-native technology is one of the core entry barriers of the industry. The ability to provide cloud native services with in-house products and solutions has become increasingly important to acquire customers. Companies that are well armed with cloud-native technology to provide tailor-made in-house cloud solutions to its clients will continuously win the market.
- ***First-mover advantage.*** Incumbents of the cloud service market have accumulated valuable technology and industry know-how, constructed well-developed cloud infrastructures and gained customer relationships, brand value, product capabilities and business scale, which takes years to build. New and potential entrants have difficulties in building the scale in a short period of time.
- ***Technology know-how.*** The cloud service market is heavily technology-based. Equipped with most of the talented personnel, technology know-how, patents and operational excellence, incumbents have built technology moats against potential entrants.
- ***Industry know-how.*** Demand for vertical-specific cloud services has evolved as one of the key growth drivers of China’s cloud service market. Experienced cloud service providers with in-depth view of specific verticals are better positioned to capture this opportunity and to optimize customer experiences by providing dedicated industry specific cloud services, compared with new entrants.
- ***High capital investment.*** Economies of scale are one of the main characteristics of the cloud service industry. The cloud service market requires large upfront capital investment to construct cloud infrastructures, to build research and development capability, and to expand sales channels. This requisite significantly weakens the competitiveness of smaller players in the cloud service market.