

## INDUSTRY OVERVIEW

*Certain information and statistics presented in this section and elsewhere in this document were derived from official government publications and other publicly available sources as well as from the Frost & Sullivan Report, a market research report prepared by Frost & Sullivan, an independent market research and consulting company that was commissioned by us. We believe that the sources of the information in this section and elsewhere in this document are appropriate sources for such information and reasonable care has been taken in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information from official government sources has not been independently verified by us or any other parties involved in the [REDACTED], or any of our or their respective directors, officers, or representatives, and no representation is given as to its accuracy. For discussions of risks relating to our industries, see “Risk Factors—Risks Related to Our Business and Industry.” Our directors confirm, after making reasonable enquires and exercising reasonable care, that there is no adverse change in the market information since the date of publication of the Frost & Sullivan Report that would quality, contradict or have an impact on the information in this section.*

## SOURCE OF INFORMATION

We commissioned Frost & Sullivan to conduct a detailed research and analysis of the pharmaceutical market in China. Frost & Sullivan is an independent global market research and consulting company which was 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 agreed to pay a fee of RMB850,000 to Frost & Sullivan in connection with the preparation of the Frost & Sullivan Report. We are of the view that the payment of such fee does not impair the fairness of the conclusions drawn in the Frost & Sullivan Report. The commissioned report was prepared by Frost & Sullivan independent of the influence of the Company and other interested parties. We have extracted certain information from the Frost & Sullivan Report in this section, as well as in the sections headed “Summary,” “Risk Factors,” “Business,” “Financial Information” and elsewhere in this document to provide our potential [REDACTED] with a more comprehensive presentation of the industry in which we operate. Except as otherwise noted, all of the data and forecasts contained in this section are derived from the Frost & Sullivan Report.

Frost & Sullivan prepared its report based on its in-house database, independent third party reports and publicly available data from reputable industry organisations. Where necessary, Frost & Sullivan contacts companies operating in the industry to gather and synthesise 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 analysed 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.

During the preparation of the Frost & Sullivan Report, Frost & Sullivan performed both primary and secondary research, and obtained knowledge, statistics, information on and industry insights into the pharmaceutical markets in which we operate. Primary research involved interviewing key industry experts and leading industry participants. Secondary research involved analysing data from various publicly available data sources. The Frost & Sullivan Report was compiled based on the

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## INDUSTRY OVERVIEW

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following assumptions: (1) the overall social, economic, and political environment in China is expected to remain stable during the forecast period; (2) relevant key drivers are likely to drive the continued growth of China’s pharmaceutical market throughout the forecast period; and (3) there is no extreme force majeure or unforeseen industry regulations in which the industry may be affected in either a dramatic or fundamental way. All forecasts in relation to market size are based on the general economic conditions as of the Latest Practicable Date, which would be adjusted if the COVID-19 outbreak persists or escalates and has an unpredicted negative impact on the general economy.

### OVERVIEW OF CHINA’S HEALTHCARE INDUSTRY

China has one of the largest healthcare markets in the world. According to Frost & Sullivan, the total healthcare expenditure in China reached RMB7.6 trillion in 2021, ranked the second highest globally, and is expected to achieve and maintain a stable growth in the future at a CAGR of 9.5% and reach RMB13.0 trillion in 2027.

According to Frost & Sullivan, China’s healthcare expenditure is mainly driven by:

- *Rising per capita disposable income.* Against the backdrop of continuing economic development and urbanisation, the per capita disposable income in China is expected to grow at a CAGR of 7.5% from RMB36,883 in 2022 to RMB52,851 in 2027. Rising per capita disposable income leads to increasing purchasing power of Chinese citizens which in turn continuously boosts the growth of healthcare-related demand.
- *Ageing population.* China has become an ageing society with declining birth rates and increasing life span. Chinese population over 65 years old is estimated to increase from 211.3 million in 2022 to 273.6 million in 2027, approximately 14.9% in 2022 and 19.0% in 2027 as a percentage of the total population. As the elderly generally have more demand for disease management and treatment, ageing demographics is expected to create huge market opportunities in pharmaceutical and healthcare services.
- *Prevalence of typical chronic diseases.* Chronic diseases, such as diabetes, hepatitis and chronic nephritis, are closely related to lifestyle and an ageing population and have become prevalent in China. The percentage of healthcare expenditure in relation to chronic diseases to total healthcare expenditure in China increased from 57.3% in 2018 to 69.9% in 2022, and is estimated to further grow to approximately 75.1% in 2027. The prevalence of typical chronic diseases is boosting the demand for pharmaceutical products and health management from patients.
- *Favourable regulations and policies.* China has issued a series of policies to encourage the development of the healthcare industry. According to the *Healthy China 2030 Planning Outline*, promulgated by CPC Central Committee and the State Council and effective in October 2016, healthcare service capabilities are expected to be improved significantly by 2030 through a combination of favourable policies and implementation, including the establishment of a high-quality and efficiently integrated healthcare service system and a comprehensive public health service system, the further enhancement of the health insurance system, leadership in healthcare technological innovation, and considerable improvement in the quality of healthcare services. In addition, the *Implementation Plan to Build a Quality and Efficient Healthcare Service System Under the 14th Five-year Plan*, promulgated by the National Development and Reform Commission and National Health Commission and effective in June 2021, provides that a high quality and efficiently

## INDUSTRY OVERVIEW

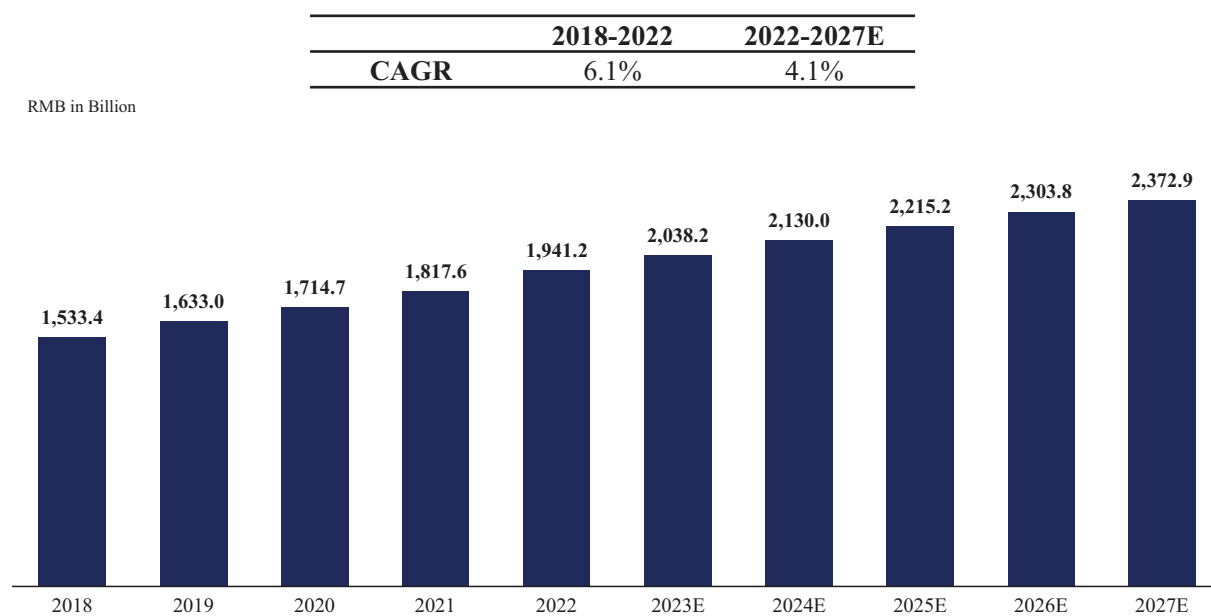
integrated healthcare service system will be established by 2025, leading to a comprehensive system, reasonable systematic design, clear division of labour, complementary functions, close collaboration, efficient operation and economic resilience. The development of the healthcare industry in China has become a focus at the national level, which has greatly fuelled the sound development of the industry.

### OVERVIEW OF CHINA’S PHARMACEUTICAL MARKET

#### Market size and industry value chain of China’s pharmaceutical market

China’s pharmaceutical market has witnessed a stable growth driven by the diversified pharmaceutical supply and growing pharmaceutical demand. According to Frost & Sullivan, China’s pharmaceutical market reached RMB1.9 trillion, in terms of retail sales value, in 2022. The retail sales value is expected to grow at a CAGR of 4.1% from RMB1.9 trillion in 2022 to RMB2.4 trillion in 2027.

China’s Pharmaceutical Market, by Retail Sales Value (2018-2027E)



Source: Frost & Sullivan

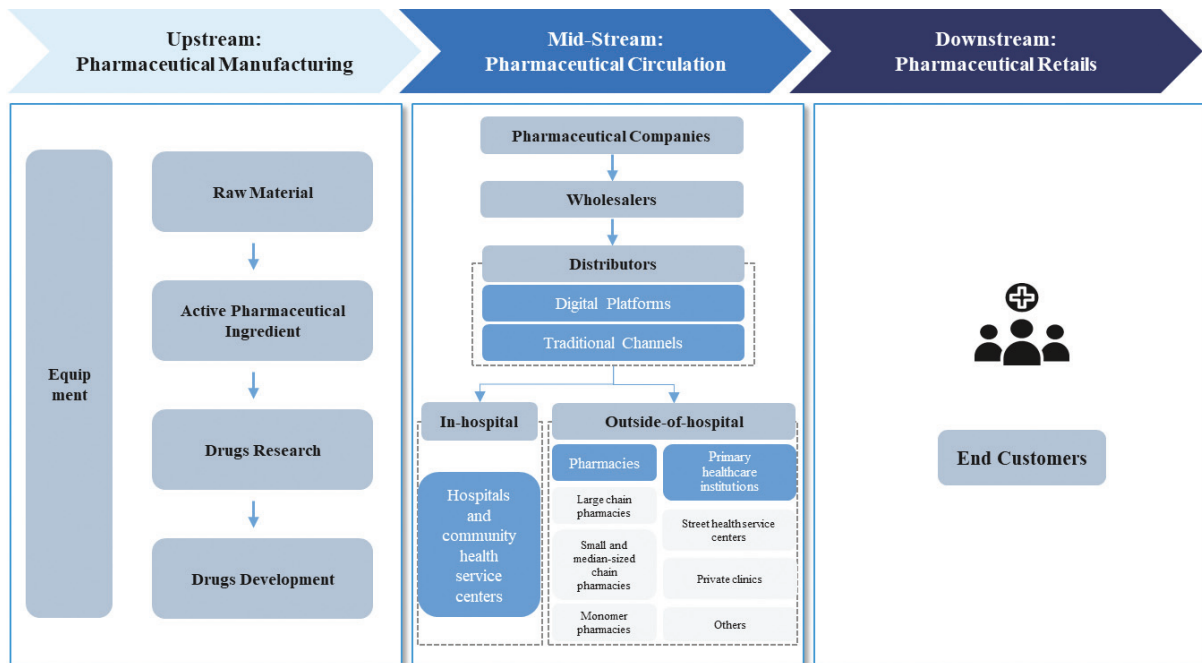
China’s pharmaceutical industry value chain mainly consists of three parts, namely pharmaceutical manufacturing, pharmaceutical circulation, and pharmaceutical retail. Pharmaceutical manufacturing is the process where pharmaceutical companies purchase raw materials and packing materials to manufacture pharmaceutical products. Pharmaceutical circulation is the process where pharmaceutical distributors and vendors procure pharmaceuticals from upstream pharmaceutical companies, and sell to other pharmaceutical distributors and vendors, downstream hospitals, pharmacies and other retail terminals. Pharmaceutical retail is the process where end customers purchase pharmaceuticals from the retail terminals.

The pharmaceutical market can be divided into the in-hospital market and the outside-of-hospital market, based on the types of retail terminals. In-hospital terminals mainly include hospitals at various levels, and outside-of-hospital terminals mainly include pharmacies and primary healthcare institutions. Based on the size and operating model, pharmacies can be further categorised

## INDUSTRY OVERVIEW

into large chain pharmacies (with 500 and more stores), small and medium-sized chain pharmacies (with less than 500 stores) and monomer pharmacies. Primary healthcare institutions can be further categorised into health service centres/stations (at street level and township level), village clinics and private clinics. Given that small and medium-sized chain pharmacies, monomer pharmacies and primary healthcare institutions are usually located in lower tier cities, remote areas, or uptown areas and provide services to address the pharmaceutical demand from the primary level, they are collectively named as outside-of-hospital primary terminals.

### Overview of Industry Value Chain of China’s Pharmaceutical Market



Source: Frost & Sullivan

### Fragmented Outside-of-hospital Market

Compared with in-hospital terminals, outside-of-hospital terminals, especially the terminals at the primary healthcare level, are greater in number, smaller in size, and dispersed and fragmented. In addition, outside-of-hospital terminals can only serve the area within a limited radius, covering end customers within certain geographical areas. Therefore, pharmaceutical procurement by outside-of-hospital terminals features high frequency, small ticket size and scattered SKU demand. In the meantime, limited liquidity, low inventory level and fast turnover of outside-of-hospital terminals require prompt and in-time delivery. In addition, the capital turnover of outside-of-hospital terminals is usually higher than that of in-hospital terminals. Such capital turnover of outside-of-hospital terminals is typically within one month. The chart below demonstrates the main difference between the in-hospital and the outside-of-hospital market.

## INDUSTRY OVERVIEW

### Comparison of In-hospital Market and Outside-of-hospital Market

	Downstream Terminals	Upstream Suppliers	SKU	Procurement Frequency	Requirement on Delivery	Capital Turnover
In-hospital Market	<ul style="list-style-type: none"> <li>Class I hospitals</li> <li>Class II hospitals</li> <li>Class III hospitals</li> </ul>	<ul style="list-style-type: none"> <li>Large nationwide pharmaceutical distributors</li> </ul>	<ul style="list-style-type: none"> <li>Prescription drugs</li> <li>OTC drugs</li> </ul>	<ul style="list-style-type: none"> <li>Low frequency with large demand on amounts for each order</li> </ul>	<ul style="list-style-type: none"> <li>Low requirement with low difficulties</li> </ul>	<ul style="list-style-type: none"> <li>3-6 months</li> </ul>
Outside-of-hospital Market	<ul style="list-style-type: none"> <li>Pharmacies</li> <li>Primary healthcare institutions</li> </ul>	<ul style="list-style-type: none"> <li>Large nationwide pharmaceutical distributors</li> <li>Regional median- and small- sized distributors</li> </ul>	<ul style="list-style-type: none"> <li>OTC drugs (Primary)</li> <li>Prescription drugs</li> <li>Non-pharmaceutical health products</li> </ul>	<ul style="list-style-type: none"> <li>High frequency with low demand on amounts for each order</li> </ul>	<ul style="list-style-type: none"> <li>High requirement with high difficulties</li> </ul>	<ul style="list-style-type: none"> <li>0-3 months</li> </ul>

Source: Frost & Sullivan

On the supply side of the outside-of-hospital market, as of the end of 2022, China had approximately 14,000 pharmaceutical distributors, with the top three in aggregate representing around 27% market share, far lower than that in the U.S. which is more than 65% market share. According to Frost & Sullivan, although the number of pharmaceutical distributors in China is not expected to experience a notable growth in the next five years, the market will continue to stay highly fragmented for a certain period of time.

On the retail side of the outside-of-hospital market, the main terminals are pharmacies and primary healthcare institutions. On the pharmacy front, as of the end of 2021, China had a total of 600,000 pharmacies, 21.0% of which were large chain pharmacies and 79.0% of which were small and medium-sized chain pharmacies and monomer pharmacies. The top 20 pharmacies only account for approximately 27% market share in 2020, lower than that of 50% in the U.S. For primary healthcare institutions, as of the end of 2021, China had around 977,790 primary healthcare institutions, largely located in lower tier cities and remote areas. According to Frost & Sullivan, the number of outside-of-hospital terminals is expected to maintain a stable growth momentum in the near future, with the number of pharmacies growing at a CAGR of 7.4% from 2020 to around 928,000 in 2027, and the number of primary healthcare institutions growing at a CAGR of 1.3% from 2020 to around 1,064,000 in 2026.

### Growing pharmaceutical circulation market driven by the outside-of-hospital segment

Following similar trajectory of the retail market, China’s pharmaceutical circulation market experienced meaningful growth in the past five years from RMB1.3 trillion in 2018 to RMB1.8 trillion in 2022, representing a CAGR of 6.9%. In the next five years, the pharmaceutical circulation market is estimated to maintain a stable growth at a CAGR of 4.1% and rise from RMB1.8 trillion in 2022 to RMB2.1 trillion in 2027.

The outside-of-hospital pharmaceutical circulation market is expected to be an important driver of the growth in the overall pharmaceutical circulation market. The outside-of-hospital pharmaceutical circulation market grew from RMB371.6 billion in 2018 to RMB639.7 billion in 2022 at a CAGR of 14.5%, and the corresponding percentage of the overall pharmaceutical circulation market grew from



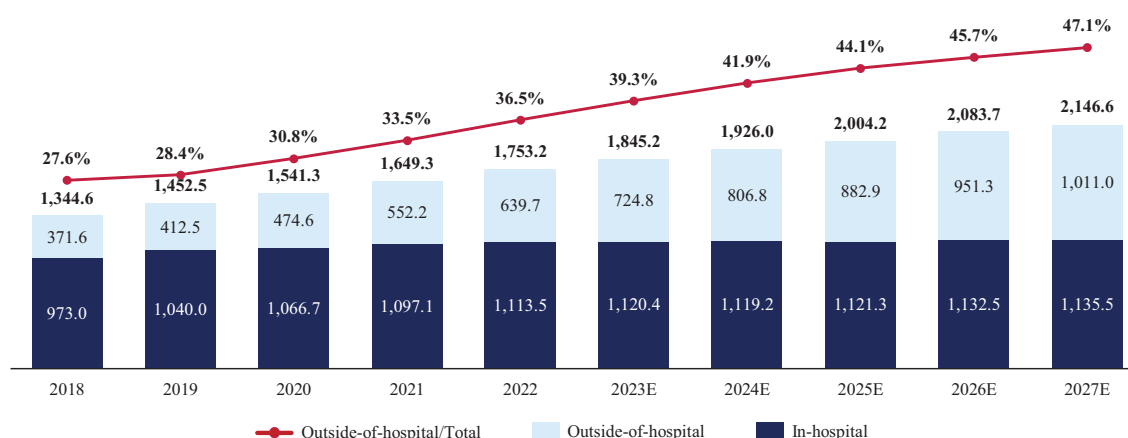
## INDUSTRY OVERVIEW

27.6% in 2018 to 36.5% in 2022. Over the next five years, the outside-of-hospital pharmaceutical circulation market will grow further from RMB639.7 billion in 2022 to RMB1.0 trillion 2027 at a CAGR of 9.6%, increasing the penetration rate of the overall circulation market from 36.5% in 2022 to 47.1% in 2027.

### China’s Pharmaceutical Circulation Market, by GMV (2018-2027E)

	CAGR	2018-2022	2022-2027E
<b>Total</b>		<b>6.9%</b>	<b>4.1%</b>
Outside of Hospitals		14.5%	9.6%
In Hospitals		3.4%	0.4%

RMB in Billion



Source: Frost & Sullivan

### Key drivers of outside-of-hospital pharmaceutical circulation market

- Favourable policies on the prescription outflow.* Sale of pharmaceuticals has historically been the major revenue model of public hospitals in China. In the past, patients with a doctor’s prescription could only purchase prescription drugs from the dispensary of a hospital. In 2014, the Ministry of Commerce, together with the other five ministries and commissions, jointly published the *Notice on the Implementation of the Key Tasks of the Healthcare Reform of 2014 to Enhance the Service Standards and Efficiency of Pharmaceutical Circulation* (“The Notice”). The Notice requires that retail pharmacies to take responsibility for services provided by the outpatient dispensary of public hospitals as well as other professional services. In addition, *The Key Tasks for Deepening the Reform of the Medical and Health System in 2016*, issued by the State Council in 2016, prohibited hospitals from restricting the outside-of-hospital circulation of prescription drugs, providing patients with the discretion to purchase prescription drugs from the outpatient dispensary of a public hospital or from a retail pharmacy. *The Key Tasks for Deepening the Reform of the Medical and Health System in 2017*, issued in 2017, proposed to explore the interlinkage and real-time sharing of information about prescriptions, medical insurance settlements and the retail sales of pharmaceuticals among healthcare institutions. These measures have been driving the outflow of prescription drugs from the in-hospital market to the outside-of-hospital market, leading to increasing sales of prescription pharmaceuticals in the outside-of-hospital market.
- Ever-rising threshold for introduction of new drugs to the in-hospital market.* The national government has long been vigorously supporting the R&D and promotion of new drugs,

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## INDUSTRY OVERVIEW

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and an increasing number of innovative drugs have been added to the *National Drug Reimbursement List*. However, pharmaceutical companies are faced with difficulties of introducing innovative drugs to the in-hospital market. According to Chinese Pharmaceutical Association, of the innovative drugs for tumour treatment that were added to the *National Drug Reimbursement List* in 2018-2019, only 15% to 25% had made their way into the in-hospital market as of the third quarter of 2020. The rising entry threshold for new drugs into hospitals is expected to drive those new drugs to flow to the outside-of-hospital market, leading to a greater selection of SKUs that can be purchased by end customers through pharmacies.

- *Limited incentives to supply pharmaceuticals to the in-hospital market.* In 2018, the National Healthcare Security Administration published the *Document on the Centralised Procurement of Pharmaceuticals in 4+7 Cities*, designating 11 cities, including Beijing, Tianjin and Shanghai, as the first batch of cities to pilot the programme of centralised pharmaceutical procurement, and the healthcare institutions were required to prioritise the use of pharmaceuticals that were centralised procured. The first batch of drugs under the centralised procurement scheme had their prices reduced by 52% on average, with the sharpest price drop being over 90%. As of February 2022, the national government had included seven batches of drugs into the “centralised procurement” (集中採購) scheme, including as many as 290 SKUs. The consensus belief is that the centralised procurement will become a norm, being implemented at a quickened pace and on a wider scale. The centralised procurement will shift the business strategy focus of pharmaceutical companies lean towards the outside-of-hospital market as a new distribution channel.
- *The trend towards medical resources being increasingly allocated to the primary level.* The development of primary healthcare resources has always been of the utmost importance in China’s medical system reform. The *Guiding Principles on the Implementation of the Building of a Graded Diagnosis and Treatment System*, issued by the General Office of the State Council in 2015, requires to improve the graded diagnosis and treatment system with a focus at the primary healthcare level. More detailed policies at both the national level and local level were introduced afterwards. Despite favourable policies, only about 50% of the patients in China had their diagnostic and treatment demands fulfilled at primary healthcare institutions in 2022, indicating significant room for growth at the primary healthcare level. These unmet demand resulted in patients travelling to better equipped but exceedingly congested tertiary hospitals in higher tier cities, exacerbating resource mismatch. As an integral part of the outside-of-hospital market, primary healthcare institutions will play an increasingly important role in residents’ medical consultations, medicine purchases, medical tests, treatment and other areas.
- *Technologies and new business models that facilitate the development of the outside-of-hospital market.* Advancements in the internet, big data, cloud computing, AI and other technologies have injected new fuel to the traditional pharmaceutical circulation industry. Digital pharmaceutical transactions have lifted geographical barriers, and the management and application of transaction data have enhanced the efficiency of the pharmaceutical supply chain. Compared with the in-hospital market, which is more centralised and highly regulated, outside-of-hospital terminals are more flexible in terms of the application of technologies and business models. Furthermore, outside-of-hospital

## INDUSTRY OVERVIEW

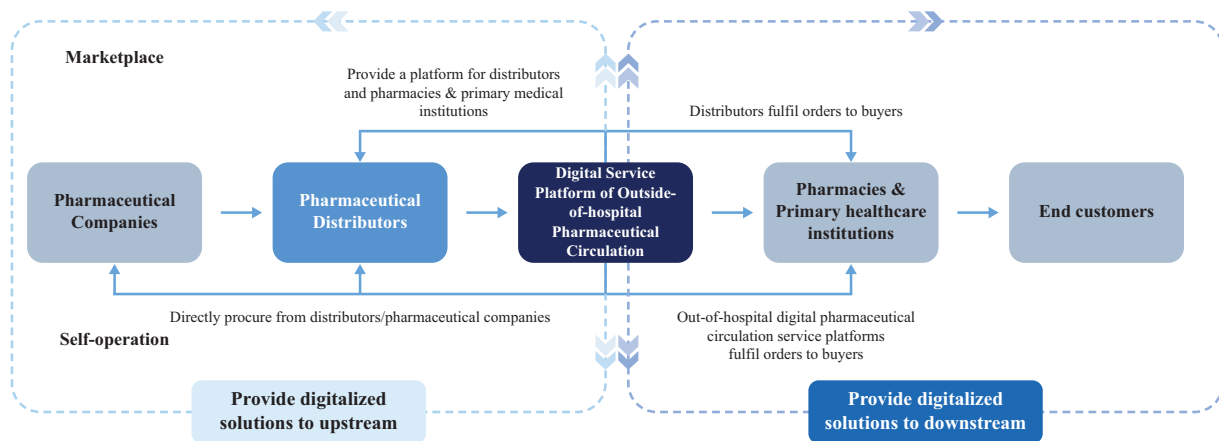
terminals are relatively fragmented and small in scale, meaning that they are in desperate need of efficiency enhancement mechanisms enabled by technology.

### OVERVIEW OF CHINA’S DIGITAL MARKET OF OUTSIDE-OF-HOSPITAL PHARMACEUTICAL CIRCULATION SERVICES

#### Overview of China’s digital market of outside-of-hospital pharmaceutical circulation services

Development in the internet and big data has been digitalizing services for businesses outside-of-hospital. Technologies are applied not only to facilitate online pharmaceutical circulation, but also to empower the outside-of-hospital market players with digital solutions. Digitalised pharmaceutical circulation can be divided into two business models, namely the marketplace and the self-operation. Under the marketplace, a platform acts as a marketplace to bridge upstream pharmaceutical sellers and downstream pharmaceutical buyers, and facilitate pharmaceutical transactions online. Under the self-operation, a player develops and operates a self-owned supply chain, directly supplying pharmaceuticals to outside-of-hospital terminals in the form of digital commerce transactions on a platform.

#### Business Model of Digital Market of Outside-of-hospital Pharmaceutical Circulation Services



Source: Frost & Sullivan

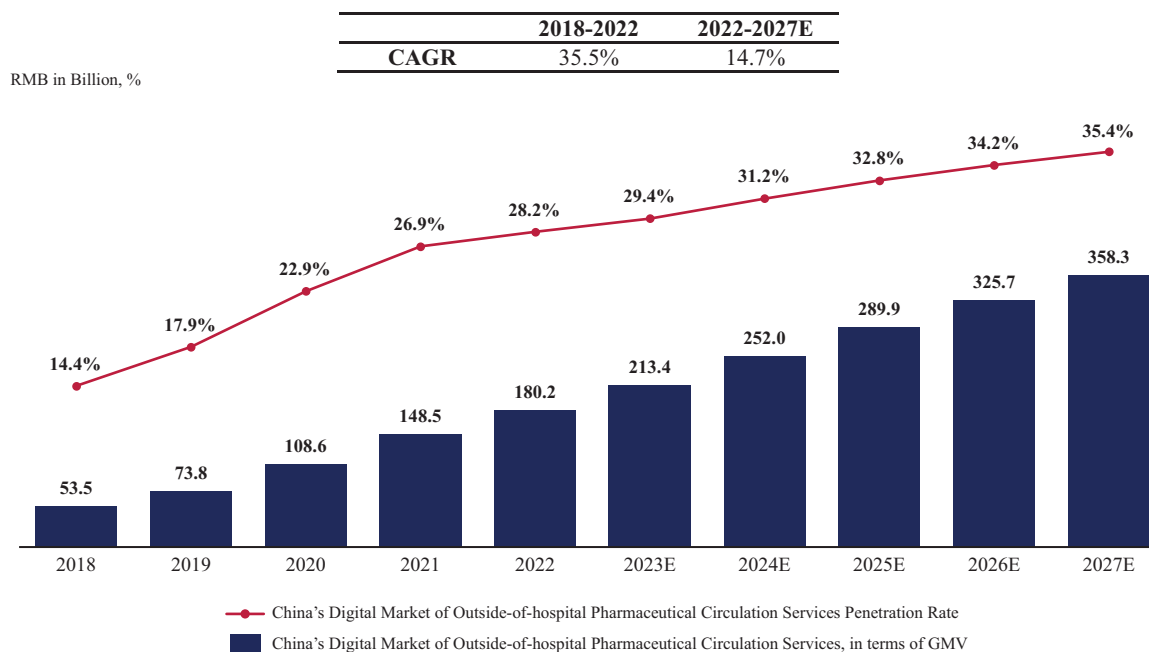
China’s digital market of outside-of-hospital pharmaceutical circulation services has experienced rapid growth in recent years. According to Frost & Sullivan, the market size of China’s digital market of outside-of-hospital pharmaceutical circulation services in terms of GMV grew from RMB53.5 billion in 2018 to RMB180.2 billion in 2022 at a CAGR of 35.5%. However, the digitalization of outside-of-hospital pharmaceutical circulation is still at an early stage. The digitalisation of China’s outside-of-hospital pharmaceutical circulation started in around 2008 to 2010 and was mainly personal computer-based. Mobile-based digitalisation mode started in around 2014 to 2015, along with the sound development of information technology, such as 4G and 5G. As of 2022, the penetration rate of China’s digital market of outside-of-hospital pharmaceutical circulation services to the overall outside-of-hospital pharmaceutical circulation market, in terms of GMV, was merely 28.2%, while the percentage for the U.S. during the same period was over 35%, representing a considerable headroom for further growth. According to Frost & Sullivan, the market size of China’s digital market of outside-of-hospital pharmaceutical circulation services in terms of GMV is expected to reach RMB358.3 billion in 2027 at a CAGR of 14.7%, when the penetration rate of China’s digital



## INDUSTRY OVERVIEW

market of outside-of-hospital pharmaceutical circulation services to the overall outside-of-hospital pharmaceutical circulation market, in terms of GMV, is expected to achieve 35.4%.

China’s Digital Market of Outside-of-hospital Pharmaceutical Circulation Services, in terms of GMV (2018-2027E)



Source: Frost & Sullivan

### Challenges faced by traditional outside-of-hospital pharmaceutical circulation market

There exist challenges in China’s outside-of-hospital pharmaceutical circulation industry, especially at the primary healthcare level, in particular:

- *Fragmented market with supply and demand mismatch.* China’s outside-of-hospital pharmaceutical transaction and service market is fragmented and regionalized. Large pharmaceutical sellers lack the incentives to serve the demand, especially the long-tailed SKUs, of the small and scattered buyers. Small pharmaceutical sellers may be unable or unwilling to meet certain downstream demand due to lack of scale and resources. As a result, buyers are underserved in many aspects, such as the choice of SKUs, the quantity and quality of products, complicated procedures leading to slow fulfilment and delivery, and the lack of pre-sale advices and after-sale services.
- *Multi-layered market with high transaction costs and low efficiency.* Pharmaceutical circulation market is multi-layered in China, which is especially true at the primary healthcare level. The multi-layered structure leads to low efficiency, high transaction costs and unsatisfactory experience for buyers. Moreover, sellers lack the effective technological means to quickly identify and locate market demand and thus they could not always realise potential sales opportunities.
- *Opaque pricing and product tracking difficulties.* A highly fragmented and multi-layered market leads to asymmetric information among the industry players, leading to problems

## INDUSTRY OVERVIEW

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such as opaque pricing, difficulties in tracking products, unfair competition, etc., and jeopardising the interests of the participants along the pharmaceutical value chain and the overall safety of pharmaceutical transactions.

- *Lack of digital management tools at the primary healthcare level.* Lack of digital management tools leaves basic management and operational needs, such as supply chain management, in-store management and skill training, largely unsatisfied at the primary healthcare level.

### **Emerging trends of digital service in the outside-of-hospital pharmaceutical circulation market**

- *Online platforms to overcome geographical barriers and connect businesses upstream and downstream seamlessly.* Online transaction platforms have become the dispensable solution to address the low efficiency and high costs of traditional pharmaceutical circulation, caused by the mismatch between supply and demand and the multi-layered circulation system. Online platforms enable sellers to, at a low cost, reach buyers not sufficiently covered by traditional models, thus bringing in the incremental sales opportunities. Meanwhile, the platforms enable downstream small and medium-sized buyers to procure a more diverse selection of SKUs to satisfy their long-tail demand. Online platforms replace the traditional multi-layered circulation system and allow buyers to form a virtual alliance, thus increasing their bargaining power and lowering procurement costs. Furthermore, certificate exchange platforms have brought the traditional offline certificate exchange process online, minimising human effort, reducing the time required for the compliance with regulatory requirements, and improving the accuracy of the information stored and exchanged.
- *Digital solutions to improve the operating efficiency.* The application of digitalised tools is penetrating into every aspect of the operation and management of outside-of-hospital market players. For pharmacies, SaaS solutions can help them achieve better inventory management, shelf management, marketing and membership management, GSP compliance and other aspects of daily operations. For pharmaceutical distributors, the empowerment brought by technologies can significantly enhance their supply chain capabilities, enabling them to achieve more precise procurement, more standardised inventory management and better logistic solutions. This can in turn lower the cost of products and increase the efficiency in fulfilment, resulting in better experience in downstream transactions and therefore better buyer engagement.
- *Data insights to identify and monetise more business opportunities.* The accumulation of transaction data on online platforms provides foundation for digital marketing. With sophisticated big data analytic tools, service providers can offer valuable data insights to upstream players, allowing them to accurately capture downstream demand so that they can promote their products tailored for such demand. In addition, industry players also create digital marketing means, such as group buy and livestreaming, allowing upstream players to access and interact with the target downstream more effectively.

## INDUSTRY OVERVIEW

### COMPETITIVE LANDSCAPE AND ENTRY BARRIERS OF CHINA’S DIGITAL MARKET OF OUTSIDE-OF-HOSPITAL PHARMACEUTICAL CIRCULATION SERVICES

#### Competitive landscape

The players in China’s digital market of outside-of-hospital pharmaceutical circulation services, in terms of the business model of digitalised pharmaceutical circulation business, can be divided into two types. Type one concerns pure online platforms and type two concerns traditional offline pharmaceutical distributors who establish and operate online platforms. The market is dominated by type one players, whose business models mainly include online marketplace that matches upstream supply and downstream demand and charges a commission, and self-operation business that builds and operates self-owned supply chain and directly sells to the downstream in the form of digital commerce transactions. The online platforms also provide digital solutions as value-added services to the upstream and downstream. Such initiative allows the platform to integrate transaction information among the platform and the terminals, enabling sellers and buyers to transact on the platform more conveniently and efficiently. In addition, by introducing digital solutions that can help improve operating efficiency, platforms are able to enhance user engagement and promote brand recognition. According to Frost & Sullivan, currently the competition in China’s digital market of outside-of-hospital pharmaceutical circulation services is concentrated, with the five leading major players accounting for over 63.5% of the market share. The following table presents the major players in China’s digital market of outside-of-hospital pharmaceutical circulation services:

Company <sup>(1)</sup>	GMV (RMB million for the twelve months in 2022)	Market Share (Calculated based on GMV)	Market Ranking (Calculated based on GMV)	MAB (Monthly average for the twelve months in 2022)	Market Ranking (Calculated based on MAB)	Percentage of GMV in 2022 from marketplace model	Percentage of GMV in 2022 from self-operation model
YSB Inc.	37,833	21.0%	1	308,000	1	59.8%	40.2%
Competitor A <sup>(2)</sup>	23,000	12.8%	2	120,000	4	99.0%	1.0%
Competitor B <sup>(3)</sup>	20,000	11.1%	3	230,000	2	100%	0
Competitor C <sup>(4)</sup>	17,969	10.0%	4	175,000	3	25.4%	74.6%
Competitor D <sup>(5)</sup>	17,101	9.5%	5	110,000	5	<5%	>95%

Source: Frost & Sullivan

Notes:

- (1) Identities of the major players are commercially sensitive information. Disclosure of such information might negatively impact our operations.
- (2) Competitor A is a pharmaceutical wholesale platform officially launched in 2017 and offers the nation-wide pharmaceutical circulation service to terminals, including pharmacies and primary health institutions. Company A could also provide digital solutions, such as ERP system, to improve its clients’ business efficiency.
- (3) Competitor B is a pharmaceutical services company founded in Wuhan in 2015, primarily providing B2B pharmaceutical circulation services under marketplace model, with digital medical training services provided as part of its innovated businesses.
- (4) Competitor C is a listed pharmaceutical e-commerce company in NYSE, founded in Shanghai in 2013, primarily providing B2B pharmaceutical circulation services under both marketplace model and self-operation model.
- (5) Competitor D is a listed pharmaceutical services company in Shanghai Stock Exchange, founded in Wuhan in 1999, primarily providing B2B pharmaceutical circulation services in self-operation model, pharmaceutical logistics services, pharmaceutical retailing services and pharmaceutical manufacturing services.

#### Entry Barriers

- *User base and engagement.* The scale and engagement of users are important to online platforms. The flywheel effect is created when a larger buyer base attracts more sellers to the platform, while more sellers provide a wider variety of products, which can further attract more buyers. In addition, comprehensive value-added services provided by platforms can cultivate the consumption habit of users, further improving the user

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## INDUSTRY OVERVIEW

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engagement. The first mover advantage of leading platforms allows them to develop a diverse and loyal user base and thus create high entry barriers for the new entrants. Unless a large amount of subsidies is provided, users on existing platforms are reluctant to switch. Furthermore, given the fact that platforms provide users with digital solutions to improve their working efficiency in daily operation and management, the costs for them to switch platforms would be high.

- *Product quality and brand awareness.* Pharmaceutical circulation is highly regulated, and product quality is particularly important considering the nature of pharmaceuticals. Therefore, downstream terminals, when choosing a platform, have stringent requirements on product quality and fulfilment capability. Leading platforms existing in the industry for years have accumulated important know-how, resources and experience, thus could cultivate strong brand awareness and trustworthy partnership with users. In contrast, it would take a long time for new entrants to initiate the relationship, accumulate experience, create a standardised management system, and ultimately build a trustworthy brand image.
- *Data analytical and technological capabilities.* Data is core to digitalised transactions. Data analytical capability is a key competitive edge of a platform. In addition, it is also crucial for platforms to develop and commercialise advanced technologies. Leading platforms have accumulated massive transaction data, and have made long-time investment in acquiring and training information technology talents and improving technologies. The deep data insights, industry know-how and technological barriers they have built make it difficult for new entrants to copy and surpass them in the short term.

## OVERVIEW OF AND OUTLOOK FOR CHINA’S INDEPENDENT CLINICAL LABORATORY (ICL) MARKET

Independent clinical laboratories (“ICLs”) are allowed to provide independent clinical testing or pathological diagnostic services without involving hospitals. Hospitals outsource their tests and diagnostic tasks to ICLs to achieve meaningful economies of scale. The large-scale operation and professional division of labour of ICLs have significantly enhanced testing efficiency.

According to the *Notice by the State Council on the Issue of the “Fifteenth Five-year Plan” for the Deepening of the Reform Plan for the Pharmaceutical and Healthcare System* launched in 2016, the national government encouraged the establishment of professional medical testing institutions, and would promote the recognition of the testing results among medical institutions of the same tier and between medical institutions and ICLs. Later on, the national government introduced a series of policies to encourage and regulate the orderly development of the ICL industry. According to Frost & Sullivan, the market size of ICL in China had reached RMB40.6 billion in 2022, having achieved a strong CAGR of 22.3% over the past five years. Over the next five years, the market is expected to continue to maintain a stable growth, reaching a market size of RMB57.4 billion in 2027.

The primary healthcare market has a surging demand on independent medical testing and diagnostic services. Following the implementation of a graded diagnosis and treatment system, the testing demand of patients will gradually flow downwards to primary healthcare institutions. However, the primary healthcare market lacks sufficient medical resources, sophisticated technological capabilities, and especially professionals in pathology and testing. Meanwhile, it is not economically feasible for most primary healthcare institutions to make one-off investment in testing and diagnostic equipment. Their IT infrastructure and management capability are also relatively underdeveloped. As a

## INDUSTRY OVERVIEW

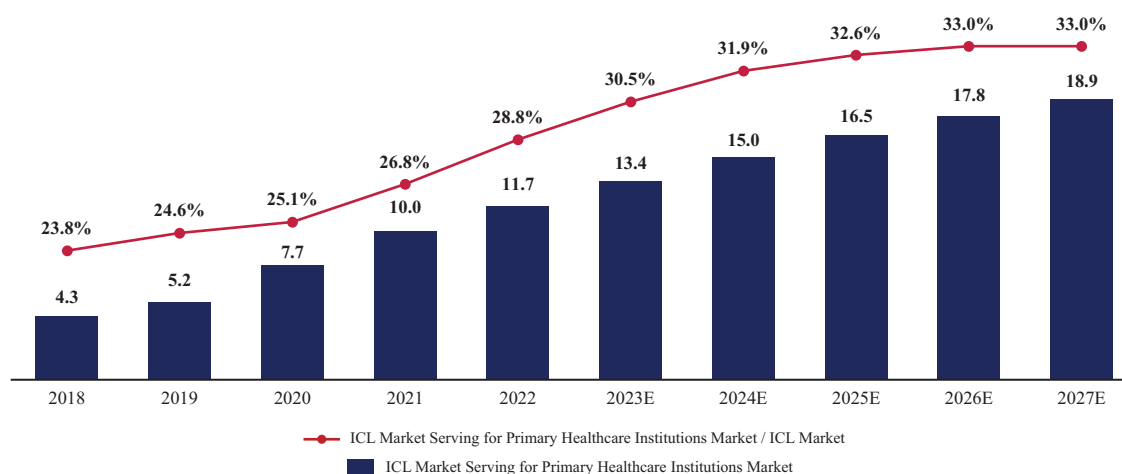
result, it is difficult for primary healthcare institutions to cope with the rapidly growing testing demand from the patients, thus resulting in the deficiency of testing services at the primary healthcare level.

ICL has become the solution to the problems faced by primary healthcare institutions. They can take over part of the demand on testing services and thus alleviate primary healthcare institutions from building their own testing capabilities, as well as enhance testing efficiency and service quality. According to Frost & Sullivan, the penetration rate of ICL market serving for the primary level of the overall ICL market is expected to grow from 28.8% in 2022 to 33.0% in 2027.

### Independent Clinical Laboratories Market Serving for Primary Healthcare Institutions Market in China, by Revenue (2018-2027E)

	2018-2022	2022-2027E
<b>CAGR</b>	28.4%	10.2%

RMB in Billion, %



Source: Frost & Sullivan

## OVERVIEW OF AND OUTLOOK FOR CHINA’S SMART UNMANNED PHARMACEUTICAL BOOTH MARKET

Pharmacies are critical to provide basic healthcare products and services to end customers. Pharmacies, particularly small and medium-sized ones, have increasing needs to improve their performance to address the challenges arising out of the stiff competition in the industry, such as low level of smartization, limited productivity, and expansion of large chain pharmacies.

Smart unmanned pharmaceutical booth is an important hardware in pharmacy smartization, where companies across industries have been increasingly employing digitalization and smart technologies to enhance operating efficiency and improve customer experience. Smart unmanned pharmaceutical booth can provide end customers with convenient pharmaceutical shopping experience by occupying only seven to eight square metres of ground space. Apart from the convenience of shopping experience, a smart unmanned pharmaceutical booth can provide 24-hour unmanned and uninterrupted services, thereby extending the operating hours of pharmacies during night time. Smart unmanned booths also help enhance operating efficiency, especially in that it improves the sales per square metre or per employee, during day time. Furthermore, compared with the shopping experience



## **INDUSTRY OVERVIEW**

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at traditional pharmacies, shopping at smart unmanned pharmaceutical booths provides end customers with a more private setting for carrying out their medication purchases.

China’s smart unmanned pharmaceutical booth market is still at its early development stage. However, with the optimization of product design, smart unmanned pharmaceutical booth is becoming a more prevailing option for pharmacies. Apart from the basic functions of pharmaceutical sales, other functions have been developed to cater to the diversifying demand of end customers, such as online consultation, and link with health insurance records. According to Frost & Sullivan, the GMV of transactions carried out through smart unmanned pharmaceutical booth is expected to reach RMB80 billion to RMB100 billion, and the penetration rate to the overall GMV in the outside-of-hospital pharmaceutical market is expected to reach over 10% in the next decade. It is estimated that pharmacies expect to invest RMB170 billion in purchasing smart unmanned pharmaceutical booths in the next decade.