

2024 CEC Capital
China Healthcare Industry White Paper
Core Perspectives

2024.04

I. Conclusion

Market Size:

In our previously released "**2023 CEC Capital China Healthcare Industry White Paper**", we estimated that China's healthcare industry was a market worth RMB 12 trillion (approximately \$1.7 trillion) in 2022. Among this, the market size related to pharmaceuticals (from the perspective of pharmaceutical manufacturers) was approximately RMB 2.9 trillion; the market size related to medical devices and diagnostics (from the perspective of device manufacturers) was approximately RMB 1.1 trillion; and the entire healthcare services market, from the perspective of medical services, digital healthcare, and pan-health market participants directly facing end consumers, was approximately RMB 8.3 trillion (including pharmaceuticals and devices sold to end consumers through medical service institutions). Excluding duplicated calculations, the overall market size of China's healthcare industry in 2022 was roughly between RMB 9-10 trillion (\$1.3-1.4 trillion).

In 2023, as China emerged fully from the COVID-19 pandemic, considering factors such as domestic centralized procurement policies and medical anti-corruption, we estimate that China's healthcare industry will be a market worth RMB 13.3 trillion (approximately \$1.84 trillion). Among this, the market size related to pharmaceuticals remains largely the same as in 2022, at approximately RMB 3 trillion; the market size related to medical devices and diagnostics has increased slightly compared to 2022, at approximately RMB 1.2 trillion; considering the continued aggravation of China's aging society, the market size of medical health services in the medical services, digital healthcare, and pan-health markets has increased to approximately RMB 9.1 trillion. Excluding duplicated calculations, we estimate that the total market size of China's healthcare industry in 2023 is roughly between RMB 10.5-11 trillion (\$1.4-1.5 trillion), representing a 7-8% increase compared to 2022.

Primary and Secondary Market Performance:

In 2023, the market capitalization of healthcare companies listed on the A-share and Hong Kong stock markets generally showed a downward trend, with the decline in Hong Kong-listed healthcare companies being particularly significant. According to Wind data, as of the end of 2023, there were 512 A-share healthcare listed companies, with their total market capitalization falling from RMB 7.6 trillion at the beginning of the year to RMB 7.1 trillion at the end of the year, representing an overall decline of 6.5%. Meanwhile, the CSI Medical Service Index fell 23.8% from the beginning to the end of 2023. There were 232 Hong Kong-listed healthcare companies, with their total market capitalization falling from RMB 2.8 trillion at the beginning of the year to RMB 2.2 trillion at the end of the year, representing an overall decline of 21.4%. Simultaneously, the Hang Seng Healthcare Index fell 26.3% from the beginning to the end of the year.

In 2023, the valuation system of the A-share and Hong Kong stock market healthcare

sectors underwent significant adjustments. Represented by the CSI Medical Service Index, the PS TTM (trailing price-to-sales ratio) decreased from 6.9 times at the beginning of the year to 6.4 times at the end of the year, a decline of 6.2%. During the same period, the PE TTM (trailing price-to-earnings ratio) increased from 24.3 times at the beginning of the year to 33.5 times at the end of the year, representing a 37.9% increase. In contrast, the overall valuation system of the Hong Kong stock market healthcare sector continued to decline in 2023 with a more significant drop. Represented by the Hang Seng Healthcare Index, the PS TTM decreased from 1.6 times at the beginning of the year to 1.2 times at the end of the year, a decline of 29.1%. The PE TTM decreased from 138.0 times at the beginning of the year to 56.5 times at the end of the year, a decline of 59.0%.

In 2023, due to the decline in the secondary market and the tightening of IPO policies, the willingness and amount of transactions in the primary market dropped significantly, with the overall decline being greater than that of the secondary market. In 2023, the number of investment events in the primary market dropped to 1,440, representing a decrease of 28.7% compared to 2,019 in 2022. The total investment amount fell to RMB 93.23 billion, representing a decrease of nearly 50% compared to RMB 181.38 billion in 2022. There were significant changes in Series D and subsequent rounds of financing, especially a significant reduction in Pre-IPO investments, and a considerable decline in the total amount of mergers and acquisitions.

Based on our perception of the market, the valuations of healthcare companies in the primary market in 2023 underwent significant changes, and these changes were inconsistent across different sub-sectors. Specifically, the biopharmaceutical and synthetic biology industries exhibited a clear polarization: leading companies in sub-sectors maintained high valuations and were sought after by investors, while the valuations of other companies dropped significantly, exceeding the decline in the secondary market. Meanwhile, the valuations of companies in the medical device and healthcare services sectors generally declined. Among them, the decline in leading companies was relatively small, lower than that in the secondary market, but the decline in other companies was more severe, exceeding the decline in the secondary market.

The market no longer considers IPO as the most important exit path, and as a result, corporate valuations and asset prices have also adjusted downward. Investors are placing greater emphasis on a company's technological leadership, profitability, and long-term returns, rather than focusing primarily on equity appreciation and exiting through IPOs as in the past. There has been a significant change in the logic of transactions. RMB funds, especially those with state-owned and local government backgrounds, remain the main force in primary market investments.

From a series of policies introduced at the beginning of 2024 to support industrial integration and promote innovation in the healthcare industry, it is evident that the country will continue to support technological innovation, deepening hardcore innovation,

domestic substitution, and addressing "bottleneck" issues, while ensuring that companies prioritize their own operations and profitability rather than pursuing high valuations alone. Companies with core technologies and sufficient self-financing capabilities can still obtain sufficient financial support to weather the industry's winter.

II. Highlight of Key Points

1. China's natural population growth rate has remained negative for two consecutive years in 2023, and the fundamental changes in population structure continue to drive the sustained growth of the market size of China's healthcare industry.

In 2023, China's birth rate continued to decline, while the aging of society is also intensifying. According to the "2023 National Economic and Social Development Statistics Bulletin of the People's Republic of China," China's birth population decreased to 9.02 million in 2023, representing a 5.65% decline compared to 2022, with a natural growth rate of -1.48%, marking the second consecutive year of negative population growth. Meanwhile, the population aged 60 and above increased to 297 million, accounting for 21.1% of the total population, an increase of 1.3% compared to 2022; the population aged 65 and above was 217 million, accounting for 15.4% of the national total population, representing an increase of 0.5%. China's aging population trend is further intensifying.

Based on our analysis in last year's white paper, the proportion of China's population aged 60 and above is expected to increase from 21.1% today to 26.2% in 2030, 32.5% in 2040, 38.8% in 2050, and peak at 48.3% in 2080. That is to say, if no new external factors affect the current trend, in the next 60 years, China will transform from a society where "about one out of five people is aged 60 or above" to a highly aging society where "one out of two people is aged 60 or above" by 2080.

While the aging process poses significant challenges to social and economic development, it also presents immense market opportunities. Many human diseases are directly related to aging and the deterioration of body organs, such as tumors, cardiovascular and cerebrovascular diseases, chronic diseases like diabetes and hypertension, and geriatric diseases like Alzheimer's disease. The "silver economy" industry encompassing rehabilitation, daily care, assistive intelligent devices, social platforms, and entertainment for the elderly will become one of the essential pillars of China's economic development in the future. Simultaneously, fields such as assisted reproductive technology and eugenics, which aim to counter the aging trend and increase the birth rate, will also indirectly become significant branches of the healthcare industry in an aging society.

Therefore, against the backdrop of China's increasing aging population and declining birth rate, we believe that the market boundaries of China's healthcare industry will continue to expand, and the overall market size will grow continuously.

2. The rapid development of China's healthcare industry in the past decade has benefited from the tripartite drive of "technology, policy, and capital." In 2023, the role of the policy wheel was particularly significant, with its influence far exceeding the other two wheels.

China's healthcare industry has achieved rapid development in the past decade thanks to the tripartite drive of technology, policy, and capital. In 2023, the role of the policy wheel was particularly significant, surpassing technology and capital to become the core force driving industry transformation. Medical anti-corruption, centralized procurement, and the slowdown of IPOs are the three policies that have had the greatest impact on the industry.

"Medical anti-corruption" was the medical policy event with the most profound influence and the highest level of attention in 2023. In May 2023, 14 departments, including the National Health Commission, jointly launched "medical anti-corruption," with extensive impact and a record number of departments involved, marking an unprecedented depth of governance in the pharmaceutical industry by the state. The subsequent actions, including self-examination by medical institutions, doctors returning kickbacks, pharmaceutical companies strengthening compliance measures, salary adjustments, postponement of academic conferences, and layoffs, further demonstrated the profound influence of the policy wheel.

Meanwhile, with the normalization of national medical insurance negotiations and centralized procurement, the medical insurance negotiations and centralized procurement in 2023 still exhibited some new characteristics. In 2023, a total of 126 drugs were newly added to the national medical insurance drug catalog, with an average price reduction of 61.7%, which is roughly equivalent to the decline in 2022. However, in the 2023 medical insurance negotiations, the policy tilted towards rare disease drugs and innovative drugs, with a total of 25 innovative drugs participating in this year's negotiations, ultimately resulting in 23 successful negotiations, with a success rate of 92%. In the negotiations for winning bids, the pricing of innovative drugs included in medical insurance is no longer "soul bargaining," and the decline is relatively moderate. In response to the pricing mechanisms for truly innovative drugs and medical devices, domestic regulatory agencies have successively introduced policies in 2023 and early 2024 to explore market-based independent pricing mechanisms, protecting and incentivizing innovation. On December 15, 2023, the National Healthcare Security Administration issued a response letter regarding Proposal No. 02870 (Social Management Category 217) of the First Session of the 14th National Committee of the Chinese People's Political Consultative Conference, which explicitly encourages the inclusion of new technologies, drugs, and devices within the scope of protection, stimulating pharmaceutical companies' innovative research and development momentum. In the reform of payment methods such as DRG/DIP, full consideration is given to the application of new technologies, drugs, and devices. On March 4, 2024, the National Healthcare Security Administration released a response to Proposal No. 3298 of the Fifth Session of the 13th National People's Congress, which provides a clear response to representatives' proposals on further improving the DRG payment system, specifically regarding medical new technologies, further supporting the exemption of innovative medical devices from "DRG." On February 5,

2024, the National Healthcare Security Administration announced the "Notice on Establishing a Mechanism for Forming the Initial Price of Newly Listed Chemical Drugs to Encourage High-quality Innovation (Draft for Comment)," further clarifying that high-quality innovative drugs can explore reasonable independent pricing in the future.

The prosperity of the capital market has a significant impact on the development of China's healthcare industry. However, in 2023, with the significant slowdown in the pace of A-share IPOs and the continued downturn in the Hong Kong stock market, financing difficulties have become a common challenge for the entire industry. In 2023, the number of A-share IPOs related to the healthcare industry (excluding the Beijing Stock Exchange) dropped to 15, with a total fundraising amount of approximately RMB 20.9 billion, representing decreases of 67.39% and 71.70%, respectively, compared to the 46 IPOs and total fundraising amount of RMB 774.1 billion in 2022. Especially in the Science and Technology Innovation Board, there were only 4 IPOs in 2023, with only 1 meeting the five sets of standards for technological innovation companies with no revenue or profit, while in 2022, the number of IPOs on the Science and Technology Innovation Board reached 23, with 8 meeting the five sets of standards. For innovative biomedical and medical device companies raising funds through IPOs, especially through the five sets of standards on the Science and Technology Innovation Board, the environment in the A-share market in 2023 was not favorable to technological innovation companies. We look forward to policy inclinations and a turnaround in 2024.

We believe that the influence of the policy wheel will continue to exceed the "technology wheel" and "capital wheel" in 2024, having a decisive impact on the future direction and development speed of the healthcare industry.

3. "Localized common development" has emerged as a new trend for Chinese healthcare companies going global. Chinese medical enterprises are transforming from mere product exports to deep participation and localized operations in overseas markets, moving towards a new stage of deep integration with the global market.

In the process of internationalization, Chinese medical companies are surpassing simple cooperative relationships with local distributors and are deeply rooted in local markets, achieving common development with local industries. The uniqueness of the medical industry makes market access a high threshold. While obtaining FDA or CE certification usually meets the access standards of most countries, it is only the starting point for entering overseas markets. After-sales services for medical products, such as technical support for medical devices during clinical follow-up, and frequent academic promotion and interaction between industry players and local hospital doctors, require localization and development based in the local market.

In July 2023, to establish an overseas localized platform, Mindray Bio-Medical announced the acquisition of a 75% stake in DiaSys Diagnostic Systems, a well-known German company

with subsidiaries in North America, Europe, Latin America, and the Asia-Pacific region, as well as production bases in Europe, the Asia-Pacific region, and Latin America, serving terminal customers in over 140 countries worldwide. After the completion of the transaction, Mindray will fully utilize its past experience in cross-border mergers and acquisitions, integration, and management, gradually introducing and improving the supply chain platform for overseas IVD businesses such as chemiluminescence through DiaSys, strengthening capabilities in overseas localized production, warehousing, logistics, and services, laying a solid foundation for the comprehensive internationalization of IVD businesses. Currently, domestic medical enterprises are increasingly focused on rapidly exporting overall industrial capabilities to overseas markets, including the cultivation of upstream and downstream industries in the supply chain. This strategy is very similar to the approach adopted by European and American medical multinational companies in the Chinese market over the past two decades.

In addition, domestic medical enterprises have also undergone significant changes in their choice of overseas market destinations. With the drastic changes in global geopolitics and the promotion of China's Belt and Road Initiative, domestic enterprises are exploring new overseas market opportunities represented by the Middle East. Although European and American markets have always been the dream destinations for Chinese companies going global, sales growth in these markets has been difficult to achieve due to factors such as product positioning.

Since 2020, BGI Genomics has attached great importance to technological cooperation with Middle Eastern countries. Since 2020, BGI has established high-level public health laboratories in Saudi Arabia, the United Arab Emirates, Oman, and other countries. In 2023, BGI Genomics' wholly-owned Saudi subsidiary established a joint venture with Saudi Faisaliah Group to jointly develop the Saudi third-party medical testing market. As such cases increase, Chinese medical enterprises are rapidly transforming from traditional product exports to the overall export of technological capabilities. As companies transfer technology and patents to local markets, creating more job opportunities and cultivating more professional talent, growing together with local markets should become the long-term strategy for Chinese medical enterprises in overseas development.

4. In the next decade, the systematic opportunities for development in life sciences and healthcare will belong to artificial intelligence, and AI will bring profound changes to the entire healthcare industry.

ChatGPT was included in Nature's list of the top ten scientific figures of 2023, marking the first time a non-human entity was featured on the list. Since the end of November 2022, AIGC (Generative AI), the new generation of large language models represented by ChatGPT, has officially emerged and evolved to version 4.0 in less than four months. Today, Figure AI has recently released Figure 01, a humanoid robot infused with GPT, where the robot's seeing, hearing, speaking, moving, and even thinking are all accomplished through self-learning. AI is leading human technological development into a new stage, and we believe that the

systematic opportunities for development in life sciences and healthcare in the next decade will belong to AI, which will bring profound changes to the entire healthcare industry.

1)The new generation of generative large language model AI, represented by ChatGPT, will profoundly influence and change the way people access health consultations and medical services, making medical resources more accessible and inclusive, potentially empowering scientific research, medical services, elderly health, and payment fields comprehensively.

-- In scientific research, breakthroughs brought about by large language models and multimodal AI may usher in a new paradigm for scientific research. The recently released Claude 3 can combine textual and image modal data for joint thinking and reasoning, even conducting doctoral-level research. With its assistance, 出具 research results based on big data, interdisciplinary research, and solving complex problems beyond human intelligence will no longer be difficult for researchers and will become routine.

-- In patient services, AI is transforming traditional online and offline medical service diagnosis and treatment models, addressing issues such as scarcity of experts, inefficient interaction, and high prices, which hinder access to quality medical resources. Through "expert avatars" created by large language model AI, renowned doctors can provide online consultation services anytime, anywhere, at low prices, increasing the supply and efficiency of quality medical resources and covering patients' needs throughout the pre-diagnosis, diagnosis, and post-diagnosis processes.

-- In comprehensively and creatively improving the quality of life for the elderly, large language model AI will integrate technologies such as big data, non-invasive vital sign sensing, communication and positioning, the Internet of Things, and smart wearables to automatically detect, record, and assess vital signs, behavioral habits, and other medical indicators in real-time, providing tiered management services for the life safety and physical health of the elderly. Notably, elderly companion robots are an important development direction. Robots enhanced by generative large language models not only possess precise language recognition capabilities but can also understand human emotions, engage in dialogue and activities with the elderly, remind them of safety risks, and provide medication guidance, identifying over 40,000 types of medicine boxes and providing information such as drug names, effects, and expiration dates.

-- In healthcare payment, AI can provide precise healthcare fund regulatory solutions based on medical insurance big data. By extracting new rules and label propagation algorithms, intelligent analysis of data can identify more participants with consistent group behaviors, thus identifying key populations with abnormal medical insurance behaviors, proactively discovering abnormal points in population risk factors and healthcare expenditure settlements, and providing scientific decisions for regulatory departments.

2)The application of machine learning and deep learning AI has penetrated into all stages of drug research, development, production, and the diagnosis and treatment processes of medical equipment and devices.

-- In every aspect of drug research and development, the application of AI is becoming increasingly mature, with corresponding AI technologies involved in drug target discovery, virtual screening of compounds, prediction of druggability, and clinical trials.

The PandaOmics platform from Insilico Medicine for target discovery can discover new targets through multi-omics data comparison; Atomwise utilizes AI for structure-based drug design, quickly screening promising candidate drugs; ConcertAI has established the most extensive clinical network to provide evidence for new treatment methods; and the new generation AlphaFold model can predict the structure of almost any molecule in the Protein Data Bank (PDB). Additionally, in the drug production process, AI applications have optimized manufacturing processes, such as DaWan Bio providing process optimization services and culture media to pharmaceutical companies, significantly reducing production costs and accelerating drug launch cycles.

AI participation has shortened the average duration of preclinical drug development to 11-18 months, significantly reducing costs. According to MedMarket Insights, as of Q3 2023, about 40 pipelines of AI-related drugs have advanced to Phase II clinical trials, and nearly 10 pipelines have advanced to Phase III. It is expected that after 2027, AI drugs currently in Phases II and III of clinical trials will enter the market, ushering in a peak for the AI pharmaceutical market. AI pharmaceuticals may become normalized in drug development and production, further rewriting the paradigms and processes of the pharmaceutical industry, driving industry-wide transformation, and challenging the existing drug market with AI-supported low-cost new drugs.

-- In the diagnosis and treatment processes of medical equipment and devices, with the continuous iteration of deep learning capabilities, AI will significantly enhance their automation level, accuracy, and intelligence, improving patient treatment outcomes and achieving better economic efficiency.

Deep learning AI in the Medtech and diagnostic fields covers image AI-assisted diagnosis, pathological AI-assisted diagnosis, high-throughput sequencing AI analysis, hospital automation equipment, and AI monitoring. Medical personnel are using AI-enhanced intelligent navigation surgical robots, heart failure detection devices based on sensors and algorithms, and motor rehabilitation and brain disease treatment devices based on brain-computer interfaces. With the help of AI deep learning technology, automation levels continue to improve. Relying on deep learning and extensive historical data, robots can independently plan surgical strategies and automate operations, assisting doctors in precisely planning surgical paths and providing decision support.

Improved accuracy is another significant breakthrough in AI technology development. AI technology can more quickly locate lesions, shorten judgment times in ultrasound, CT, MRI,

and endoscopic image analysis. In high-throughput sequencing result analysis, AI improves sequencing accuracy and reduces overall sequencing costs through algorithms and optical signal processing.

By enhancing the speed and accuracy of analyzing complex biomedical data, AI is transforming the in vitro diagnostics (IVD) field, significantly improving economic efficiency. Roche Diagnostics and Path AI have collaborated to develop digital pathology algorithms for companion diagnostics, significantly reducing the time and cost of reagent development for Roche. Siemens Healthineers utilizes AI in digital pathology to automatically detect and quantify diagnostic indicators in tissue samples, accelerating and refining the diagnostic process.

5. Artificial intelligence and synthetic biotechnology are jointly driving the formation of a new trend in "biomanufacturing."

We believe that artificial intelligence and synthetic biotechnology will jointly lead the fourth industrial revolution of humanity. Over the past five years, globally, the only technological revolution that can be compared to large AI models and has the potential to change human destiny is synthetic biotechnology. With the continuous accumulation and iteration of multi-dimensional big data, artificial intelligence will become a key tool to promote innovation and iteration across the entire biomanufacturing industry chain. AI can provide accurate predictions, enabling effective reverse design. Its applications in the rational design of upstream nucleic acid/protein components, high-throughput screening of chassis cells, the construction of enzyme libraries, and precise prediction of enzyme activity, as well as in midstream production fermentation, separation, and purification, are all areas where AI excels, representing the perfect combination of the synergistic and mutually beneficial nature of these two technological platforms. Therefore, we believe that artificial intelligence and synthetic biotechnology are jointly driving the formation of a new trend in the biomanufacturing industry.

Whether it is for the purpose of reducing production costs and improving profitability for companies or for environmental protection, energy conservation, and emission reduction, the biomanufacturing industry has become an important focus globally this year and in the coming years. In 2023, from the explosive growth of applications such as "weight loss" using semaglutide in the healthcare industry to the approval of multiple biosynthetic food additives like HMO in the consumer market, to the production of fish feed protein using steel industry tail gas in the energy sector, innovations in synthetic biotechnology have infiltrated various industries, gradually forming and perfecting the industrial ecosystem of biomanufacturing. Theoretically, 60% of global material production in the future can be achieved through biomanufacturing, with an increasingly wide range of industries involved and an increasing number of products being "replaced." More importantly, bio-innovative products and manufacturing processes that do not rely on petroleum resources can significantly improve energy efficiency and reduce carbon emissions.

Similar to artificial intelligence, synthetic biology is not a single technology but a fundamental technological platform that can penetrate various aspects of human life, including healthcare, energy, materials, medical aesthetics, daily chemicals, and agricultural food. Based on this, synthetic biology has rapidly "evolved" from a platform technology to become the core of the biomanufacturing industry. Market attention has shifted from disruptive breakthroughs in technologies such as genetic engineering, enzyme engineering, and fermentation engineering to whether synthetic biology, an integrated innovative technology, can continuously provide "industrialized" products through "large-scale" production methods. Biomanufacturing has become an emerging industry closely integrated with industrialization.

6.The integration of China's healthcare industry is shifting from capital-driven to industry-driven.

We believe that industrial capital will play an increasingly crucial role in the industry integration of China's healthcare industry in the future.

Looking at the capital markets in Europe and the United States, waves of industry consolidation and mergers and acquisitions have emerged one after another. Although the driving factors vary each time, they are closely related to industry policies, industrial competition, and technological iteration. With each consolidation, new industry patterns and leading companies emerge.

During the decade of rapid A-share IPOs, the main driving force of the market was seller securitization and buyer market capitalization management. Mergers and acquisitions during this period were mostly "cross-border mergers and acquisitions" and "market capitalization management-oriented mergers and acquisitions," with industrial logic not being prominent. However, in recent years, the driving force behind mergers and acquisitions has significantly shifted, with more and more transactions showing a trend of industry dominance, and industrial players are playing an increasingly important role in mergers and acquisitions. The merger and acquisition market in China's healthcare industry is shifting from being dominated by market capitalization and securitization to being dominated by industrial logic.

According to Wind statistics, in 2023, among the mergers and acquisitions involving listed companies that passed review, industrial mergers and acquisitions accounted for over 80%, indicating a strong demand for industrial consolidation. Among the top ten minority equity financing projects in China's healthcare industry in 2023 in terms of transaction amount, including Hasten Biopharmaceutical (\$300million), WuXiXDC(\$300 million), Gen ProBio (\$200million), and Pharmaron(\$100 million), the logic behind these large transactions is primarily driven by industry players through the incubation, divestiture, or spin-off of leading companies within the industry. At the end of 2023, AstraZeneca, a multinational pharmaceutical company, announced its acquisition of Gracell Biotechnologies for \$1.2 billion, setting a precedent for multinational companies acquiring Chinese Biotech companies and sparking global pharmaceutical giants' attention to Chinese Biotech, kicking off a wave of global pharmaceutical companies coming to China for acquisitions.

Therefore, industry "big players" can not only empower and collaborate with innovative companies in various aspects such as research and development, management, cost control, and sales channels but can also simultaneously solve the exit dilemma of financial investors. Therefore, we believe that industrial capital will continue to play an extremely crucial role in China's healthcare industry in the future.

Since 2022, IPOs have no longer been the most sought-after exit path for investors. Due to policy tightening, the domestic market experienced consecutive months of "zero acceptance" in the second half of 2023, with the number of IPO applications on the main board and ChiNext declining by 52% year-on-year, and the actual IPO approval rate being less than 50%. In overseas markets, due to geopolitical factors, the IPO fundraising scale in the Hong Kong and US markets in 2023 declined by 60% compared to the same period in 2022, with the first-day underpricing rate of the biomedical sector exceeding 50%. China's healthcare industry is experiencing the combined impact of excessive 泡沫 in the primary market and the continued cooling of IPOs, resulting in persistent high volatility and low returns on IPO exits. For the first time, Chinese entrepreneurs and investors are facing the collapse of IPO beliefs, and mergers and acquisitions seem to be the only theoretical exit path. Therefore, mergers and acquisitions have become a hot topic of concern for founders and investors for a while.

Despite the widespread discussion of mergers and acquisitions in the market, actual market data reveals a sober reality. According to Wind statistics, in 2023, there were only 67 successful mergers and acquisitions announced by Chinese A-share listed companies, a decrease of nearly 60% compared to 164 in 2022. The average transaction amount was RMB 169 million, down 15% from RMB 201 million in 2022. We found that the willingness to transact among sellers in the current domestic M&A market is very strong, especially the "urgent exit" of financial investors, which has exacerbated the explosion of the seller's market for mergers and acquisitions. However, this seller market activity driven by a single capital factor will not lead to a significant increase in transaction volume in the short term.

Domestic buyers are experiencing rapid growth, with various listed companies starting to form scaled M&A teams, and localized RMB M&A funds are also being established and starting to explore and negotiate transactions. However, on the one hand, domestic buyers, whether in terms of size or number, still have a significant gap compared to mature markets. The US stock market has nearly 20 listed companies with a market capitalization of over \$100 billion, while the "market capitalization leader" in China, Mindray Bio-Medical, has a market capitalization of only RMB 350 billion, and the number of listed companies with a market capitalization of over RMB 100 billion in China is even more limited. On the other hand, during economic downturns, the market capitalization of domestic listed companies shrinks significantly, and they have insufficient funds and lack experience in mergers and acquisitions integration. Industrial buyers are very cautious, demanding both extremely low valuation levels and extremely high asset quality. Therefore, although from a data perspective, mergers and acquisitions in China's healthcare industry have not yet experienced explosive growth, we believe that with changes in the mindset of both parties and the gradual maturity

of transaction capabilities, industry-driven mergers and acquisitions integration will definitely explode in the future.

7. The focus of investments in China's healthcare industry, especially large-scale transactions, has formed significant differences from that of overseas healthcare industry investments.

In 2023, based on transaction amounts, 8 out of the top 10 financing projects in the global healthcare sector's primary market came from the healthcare services and digital healthcare tracks, with only 2 projects belonging to the life sciences/biopharmaceutical track. Among them, Smile Doctors, an American dental service provider, led the pack with a total single-round financing of \$550 million, becoming the startup with the largest financing scale in the global healthcare industry's primary market for the year.

In stark contrast to the global market, all the top 10 primary market financing projects in China's healthcare sector in 2023, ranked by financing amounts, came from the life sciences/biopharmaceutical track. Among them, Hasten Biopharmaceutical topped the list with a financing amount of \$320 million, indicating that domestic investors seem to pay more attention to product manufacturing companies. In comparison, there were few large-scale transactions in the healthcare services and digital healthcare sectors. The healthcare industry has always been valued by the market for its anti-cyclical nature, especially during economic downturns, when cash flow-healthy healthcare service companies are more likely to attract investors compared to high-risk biotech areas. However, the difficulty of IPOs for domestic healthcare service companies has limited the number of outstanding companies receiving attention. In 2023, only Banger Hospital's financing of over RMB 800 million highlighted the potential of the healthcare services industry. Meanwhile, there were only 16 financing events in China's digital healthcare sector in 2023, with a total amount of RMB 1.11 billion and an average financing amount of less than RMB 100 million, also indicating insufficient attention in this field.

Domestic medical industry investments are focused on products-driven companies, while overseas medical industry investments tend to favor service-driven or data-driven companies. This difference may stem from the US's payment system dominated by commercial insurance and its non-public healthcare service system, coupled with the relative downturn in the US stock market's biopharmaceutical sector in 2023, making healthcare services and digital healthcare more attractive to investors. In the long run, we believe that both types of companies have vast markets, with products providing treatment methods, services providing scenarios, and digital healthcare enhancing efficiency. We look forward to China's healthcare services and digital healthcare industries also becoming the focus of investors, promoting innovation and growth in these areas, and opening up new opportunities for industrial development.